Actionable Learning
A Handbook for Capacity Building Through Case Based Learning
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Introduction

This Handbook has been developed at the Asian Development Bank Institute, Tokyo, as a resource for capacity building programs in which the use of cases, as learning and teaching vehicles, form a central component. The Handbook has been created with designer, instructor and learner in mind. It presents a series of design frameworks, learning processes and instructional techniques, through which an actionable learning and case based approach to capacity building and training can be understood and creatively applied. Within this context, the Handbook is designed to serve a number of purposes:

- To provide a resource to instructors and trainers for the development of case materials and methods of case based teaching and learning.

- To introduce a number of techniques which assist in the analysis and presentation of findings in case based learning.

- To serve as a guide for the development of workshops, and other capacity building activities, in which an experiential model of learning is employed.

- To provide a framework within which the conceptual and technical skills linked to case based learning can be developed systematically and presented in multiple modes.

- To serve as a self-learning resource guide for trainers intending to use the case study approach in their programs.

- To link case based learning to the process of capacity building, both conceptually and in terms of program design and facilitation.

The Handbook is suggestive, rather than exhaustive, in its coverage of the elements of case study development and case based learning. The predominant emphasis is on capacity building within the public sector. For trainers, or others wishing to pursue the themes of the Handbook in more depth, a bibliography of further sources in the field is provided.

The title of this Handbook is Actionable Learning. The words are chosen deliberately to highlight what can be described as a holistic approach to learning and one that is tied to action. The Handbook is founded upon a view of learning as a multi-dimensional process involving, not only thought processes, but also emotions and behavior. Developing multi-dimensional learning capabilities, as the basis for improvement in human performance systems, is posited as one of the key ingredients of building capacity.
Gone is the day when only cognitive learning, undertaken in formal educational and training settings, will suffice as a foundation upon which to design and implement programs for strengthening policy and strategy, or crafting the basis for sustainable organizational improvement. The uncertainties and complexities of the world around us today demands a capacity by both individuals and organizations, to engage in multiple forms of learning, across diverse contexts and settings and, interacting with equally diverse people and interests. Underlying this diversity and multiplicity of learning modes, moreover, is a growing desire and pressure that learning not be inert, but be tied to building the capacity to act for improvement. The challenge of designing learning for capacity building is to provide reflective bridges to action. Hence the term actionable learning.

As the diagram below highlights, the framework of actionable learning links three domains of learning: emotion, thought and behavior, and underpins each with a growing capacity to learn how to learn. Specific learning capabilities are central to the capacity to learn within each domain. These capabilities are described briefly below, but elaborated much more comprehensively in various sections of the Handbook.
Learning to Feel

The capacity to be aware of and positively deploy one's emotional sensitivities and values.

- Learning to Sense
  The capacity to be in touch with one's feeling and the feelings of others.
- Learning to Empathize
  The non-judgmental capacity to take the role of the other and examine ideas, situations and problems from that point of view.
- Learning to Care
  The critical capacity to be aware on one's values and the values of others and to elaborate and interrogate moral points of view.
- Learning to Commit
  The capacity and willingness to act according to one's principles in pursuit of the common good.

Learning to Think

The capacity to reason through analytic, systemic and creative problem solving and decision-making processes.

- Learning to Observe
  The capacity to acquire, order, and seek patterns in empirical evidence of various forms
- Learning to Assess
  The capacity to analyze information and draw defensible conclusions within various conceptual frameworks
- Learning to Reflect
  The capacity to make and derive meaning from events, situations, myths, symbols and interactions
- Learning to Create
  The capacity to explore and invent through open mind alternative possibilities and patterns.

Learning to Do

The capacity and willingness to act upon the world reflect upon action and energize reflective action in others.

- Learning to Adapt
  The capacity to shape and modify one's behavioral repertoire in light of changes in the environment.
Learning to Change
The capacity to undertake and deploy new behavioral repertoires in light of discontinuous change.

Learning to Collaborate
The capacity to engage in constructive dialogue with others in work and life situations.

Learning to Transform
The continuous capacity to reinvent one's perceptual frames of reference and archetypal responses in light of ongoing changes and new experience.

**Learning to Learn**

The capacity to be conscious of personal modes of learning and to continually expand, differentiate and deepen the range and scope of one's learning capabilities.

Actionable learning draws upon, and elaborates, all of these dimensions of learning and, in so doing, develops a person's capacity to learn how to feel, think, do and learn.

Problems and challenges in capacity building, today, are not presented in a linear sequence, nor are they confined to issues of information and ideas alone. This point has been amply demonstrated in recent efforts to change and reform systems in developing countries. Many “good ideas”, presented crisply and confidently in conferences of experts, never see the light of day in the working world of people in developing countries, no matter what the force behind their prescription might be. The explanation for this is reasonably clear: new ideas, or even old ideas in new packages, require, for implementation, commitment and willpower. New ideas generate a host of reactions and impacts: they energize and disturb emotions and attachments, they demand new ways of acting, they perturb systems and make life uncomfortable for many, they call for change in what are often change aversive situations and most importantly they often call for new modes of learning.

In development, “people count”, if an over used metaphor can be applied, and people are exceedingly complex. What people should do is one thing. What people want to do, are willing to do, and can do is quite another matter. While much of capacity building currently stresses what people should do, the dispositional dimension deserves to be brought more to the center stage. The reason for this suggestion is not to replace the value of good ideas, but to enhance the possibility that they will see the light of day through people. So-called “soft skills,” in other words, exert “hard impacts.” This is the ultimate rationale for the actionable learning framework.
This Handbook addresses case based learning in the context of developing capacity building initiatives for individuals, groups, organisations and systems. The linkages between capacity building and case based learning are central to the approach taken. Cases, and case based learning designs and methodologies are described, not as stand alone techniques, but as knowledge engendering components of an evolving view of capacity building that involves multi-level change in human systems and learning processes. In this context, we turn first to capacity building and its linkages to actionable learning processes and knowledge development.

The Human Performance System

The actionable learning framework for capacity building is directed toward improving human performance. It does so by adopting a systems perspective on human performance improvement and establishing adaptive learning, as both the goal and means of change. It blends the quest for optimization with the development of capabilities and systems that enable change. Capacity building, as a result, is judged on the degree to which human performance evidences sustainable improvement.

The diagram opposite describes human performance as a system involving several interacting layers. The framework is an adaptation, to the public sector, of a model developed by Ander-
son Consulting. Just as it is the case that a doctor, when treating patients, must understand the interacting effects of different systems contained in the human body, so too, in capacity building it is necessary to understand the entire human performance system and the interacting sub systems that affect its degree of overall performance.

The Human Performance Framework is a system composed of a number of interacting layers:

- **The Environment**
  A set of influences and drivers over which the state does not have direct control, but which affects its capacity and ultimately the performance of its people.

- **The Policy and Strategy**
  In this layer, there resides the policy direction and strategies of the government, as well as sub organizational units within it.

- **The Operations**
  This is the throughput layer in which the real work of most people takes place.

- **The Organization**
  In this layer we find the structure of the organization and the programs and other actions designed to influence people and direct their work.

- **The Individual**
  In this layer is the individual acting alone, or as member of a team, being influenced by the capabilities and motivational set they possess.

- **Learning**
  The learning process ties the layers together to form a system and it is this process that provides the system with its adaptive capability.

Improving the overall functioning of the Human Performance System is one of the cardinal objectives of capacity building. As explained in later sections of this Handbook, many efforts at capacity building, historically, have tended to focus upon the development, or reform, of capacities in one of the layers of the overall human performance system operating in a given context. The assumption has been that a focused and targeted effort at change was what was needed. A second assumption is that new capacities, built in one area of the human performance system, will be contained within the target layer and that only positive diffusion and transfer of capacities and skills occur. Adopting a systems approach to human performance

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improvement challenges both of these assumptions.

In the process of designing interventions and programs to improve human performance, it is critical to be aware of the fact that specific interventions, in one area of the human performance system, often generate reverse side effects in other layers. Moreover, efforts to develop new capacities in one of the layers of the human performance system often depend upon capacities being developed in other layers. Equally important is the challenge of designing capacity building initiatives that have the power to penetrate the multi layers of the human performance system and alter its basic mode of functioning. The human performance system framework makes it clear that there is no magic bullet for building capacity and improving performance.

The actionable learning framework developed in this Handbook is built upon a recognition of the need to adopt a whole systems view of capacity building. In this context, it concentrates on the processes of learning as the channels through which the influencing systems, in each layer of the human performance system, interact and exert impact. Learning processes provide the glue that creates the “stickiness” necessary to congeal and align the components of human performance systems. It to this framework that we now turn.

Capacity building is a term, which is used frequently in the world of development, but rarely given clear definition. The term emerged, in part, because an earlier focus on providing people with knowledge and skills, alone, did not seem to produce organisational results, beyond the individual who benefited from the new knowledge and skills. Training, in other words, is not capacity building, although it certainly is a component of it.

Capacity building can best be seen as a process to induce, or set in motion, multi-level change in individuals, groups, organisations and systems. Ideally, capacity building seeks to strengthen the self-adaptive capabilities of people and organisations, in order that they can respond to a changing environment, on an on-going basis. Capacity building is a process and not a product. In particular, capacity building is a multi-level learning process, which links ideas to action. Capacity building, in this view, can be defined as actionable learning.

As actionable learning, capacity building encompasses a number of linked learning processes, the cumulative impact of which enhance the prospects for individuals and organizations to continuously adapt to change. These adaptive processes, in this Handbook, are described as the Five C’s framework.

As noted above, capacity building centers on the process of change in human performance and the actionable learning framework exists within this larger change framework. This larger change framework is outlined in the diagram.
Capacity Building as Actionable Learning for Change

- **Change goals**
  Establish clear goals for and indicators of change

- **Change demands**
  Assess the knowledge, skill and organisational demands implied in change

- **Change readiness**
  Assess current state of readiness to meet the knowledge and skill demands of change

- **Change gaps**
  Determine knowledge, structural and skill gaps between current and goal state

- **Actionable learning Strategies**

  - **Conceptualization**
    Knowing That

  - **Capacity**
    Can Do

  - **Consideration**
    Knowing Why

  - **Concern**
    Knowing Self

  - **Capability**
    Knowing How

  - **Change monitoring**
    Monitor movement toward or away from change goals

  - **Re-changing**
    Anticipate and be prepared to change the change strategies

As the diagram illustrates, the development of capacity building initiatives, within an actionable learning framework, embeds program design within a larger schematic that addresses change. The key elements in this change framework for capacity building are as follows:

- **Change Goals**

  The starting point in program design is to establish the change goals for capacity building and to set the key result indicators for each goal. A number of key questions guide this process.
What new capacities are expected to result from the capacity building initiative? How will you know that the people and organisations concerned are working toward or achieving goals? In this regard, how will the change goals be set: by outsiders, insiders or collaboratively? Finally, what process will be used to establish the goals: consensus, managerial decision, policy congruence, conditionality, negotiation, research? The diagram opposite provides a simple template to display ideas in this phase.

<table>
<thead>
<tr>
<th>Change Goal:</th>
<th>Key Result Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
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<tr>
<td>2.</td>
<td></td>
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<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
</tr>
</tbody>
</table>

The process of setting change goals, objectives and key result indicators, particularly when it draws into the process stakeholders and interest groups, often is the first spark that ignites the change process.

● Change Demands

With the goals in place, the next step is to assess the knowledge, skill, attitudinal and organisational capacities that are required by, or implied in, the change goals. In other words,
in order to work toward, or achieve the goals, what knowledge, skills, perceptions, attitudes and organizational capacities must be possessed by people? Moreover, as the chart opposite illustrates, to what extent does this bundle of knowledge, skills, attitudes and capacities require a reframing of how people perceive and respond to their environment? The focus given to key elements and types of learning will be strongly influenced by answers to these questions. Knowledge and skill demands that require reframing cannot be addressed through learning processes that center only on information, new concepts or action. They require deep reflection and transformative learning processes.

### Change Readiness

With a clear understanding of the knowledge and skills required to achieve the change goals, the next step is to assess the degree to which these are in evidence among the people and target organization. To what degree, in other words, is there a readiness to effectively engage the change being proposed? Dave Ulrich has developed what he terms a CFC, or Capacity for Change, analysis (see box chart and graph) which can be usefully applied in the design of an actionable learning framework for capacity building.\(^2\) This is depicted in the diagram and the key questions used to conduct the readiness assessment. Based upon answers to these questions, an organization or systems capacity for change can be profiled. This profiling allows for a more strategic approach to the design of interventions.

### Profiling Questions for Capacity to Change: CFC Analysis

<table>
<thead>
<tr>
<th>Leading Change</th>
<th>To what extent does the change have a clear champion/leader?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating a Need</td>
<td>Do people essential to success of change feel a need for change that exceeds resistance to it?</td>
</tr>
<tr>
<td>Shaping Vision</td>
<td>To what extent do we know the desired outcome from the change?</td>
</tr>
<tr>
<td>Commitment</td>
<td>To what extent are key stakeholders committed to the change?</td>
</tr>
<tr>
<td>Systems</td>
<td>To what extent have we institutionalized the change through systems and structures?</td>
</tr>
<tr>
<td>Monitoring</td>
<td>To what extent are indicators in place to track our progress on the change effort?</td>
</tr>
<tr>
<td>Resources</td>
<td>To what extent are key resources in place to support the change effort?</td>
</tr>
<tr>
<td>Implementation</td>
<td>To what extent do we have an action plan for getting change to happen?</td>
</tr>
<tr>
<td>Contingency</td>
<td>To what extent do we have the capability to respond to unforeseen events in the change process?</td>
</tr>
</tbody>
</table>

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Change Gaps

With the change readiness assessment complete, the next step is to return to the goals and determine the gaps between existing readiness and the goals for each knowledge, skill and organisational capacity area identified. The template below is a guide to the conduct of such a gap analysis.

### Change Readiness: Gap Assessment

<table>
<thead>
<tr>
<th>Change Goal</th>
<th>Change Objective #1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Capacity</td>
<td>Current</td>
</tr>
<tr>
<td>Leading Change</td>
<td></td>
</tr>
<tr>
<td>Creating Need</td>
<td></td>
</tr>
<tr>
<td>Shaping Vision</td>
<td></td>
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<tr>
<td>Systems</td>
<td></td>
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<td>Implementation</td>
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<td>Contingency</td>
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</table>
Change gap analysis should be further supplemented by what Robert Fritz has termed structural tension analysis. As is the case in natural systems, Fritz posits the idea that organizations, in their flow, follow the path of least resistance; that is, as they move from their current state toward a desired state, or goal, and the energy to get them there takes the path with the least obstacles. Like a river in a riverbed, the structural dynamics of systems move them toward the path of least resistance.

All systems, thus, have contained within them what Fritz describes as structural tension, defined as the difference between current reality, where they are now, and the desired state, or where they want to be. Systems tend to want to resolve this discrepancy and move toward equilibrium, or balance. In this resolution process two possible outcome patterns are possible: oscillation and advancement.

Oscillation results when the structural dynamics are such that the system returns to its original state when perturbed by new actions intended to move it toward a desired state. The reason is that the actions are not aligned properly or do not fit the goal desired. Advancement occurs when the actions deployed to move from current to desired reality fit the goals, with the result that the change in the system builds upon itself and advances the direction of the system toward the new goals.

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Structural tension analysis is a process for assessing the structural dynamics in play in systems, whether natural or human, and setting in motion strategies and actions that will advance a system toward its goals. This is done by creating the conditions for structural tension by establishing clear relationships between goals, current reality in relation to the goals and action plans to move the system toward the goals. Fritz's work is of great value in capacity building which is, in many ways, an effort to establish conditions in organizations and other systems to move the system toward preferred goals and to weaken the tendency of the system to revert to a state of no change.

Structural tension analysis involves probing systems by asking the following questions:

- **What are the current goals of the system?**
  - Are these the goals that people want/should to create?
  - Are the goals measurable?
  - Are the system results clearly specified?
  - Are results being created or is the system merely in a problem solving mode?
  - Do the goals describe and actual result or are they really descriptive of the processes designed to achieve them?

- **What is the current reality in relation to the goals?**
  - Have goals been used as the reference point in describing current reality?
  - Is the whole picture of current reality developed?
  - Is the story of current reality clear and told without exaggeration?
  - Is current reality stated as it is or just how it got to be that way?

- **What actions are being undertaken to move the system from its current state toward its desired state?**
  - What actions are actually being undertaken to move toward each specific goal?
  - Are these actions across the system aligned to the goals and each other?
  - Can you answer yea to the following question: If these steps are taken then the goals will be achieved?
  - Does every action have a due date and a person or group accountable for it?

- **What is the resultant pattern of the system: oscillation or advancing?**
  - Does the system tend to balance the forces of change through the actions steps in such a way that it return to its original unchanged state?
  - Does the system tend to advance toward goals and build upon this advancement overtime?

The way that a system tends to be resolving the tension between its current state and goal state dramatically affects the capacity building strategies or interventions that can and should be designed.
If the pattern observed in the STA is one of advancement, then the capacity building strategies should be designed to build upon this change and strengthen, diffuse and broaden the momentum and the forces driving it. If the pattern observed is one of oscillation, then the capacity building strategies call for a redesign of the structures and dynamics within the system itself.

Capacity building as strengthening and capacity building as redesign are dramatically different strategies calling for entirely different skills and knowledge. STA allows one to know precisely what the focus of the strategies in capacity building should be to avoid applying the wrong type of interventions to a system. Strengthening oscillating systems, as is far too often the case in capacity building efforts, merely insures that the process of change will be temporary and not sustained over time. The converse is of course also true: redesigning advancing systems risks the implantation of dynamics and structures that will actually work against the change in progress.

### Actionable Learning Strategies

The next step in the process involves the application of the Five C’s actionable learning framework to design the specific capacity building strategies.

The Five C’s framework highlights the fact that, in the overall process of capacity building, that is in designing for actionable learning, there are different types and levels of learning and knowledge involved in the process. These types of learning and knowledge can be seen as a set of interdependent, and linked phases, in an overall cycle of actionable learning. Each phase rests upon the learning and knowledge obtained in the preceding phase. Different individuals, groups and organisations will be at different points in the cycle depending upon the change goals established, the readiness for change and the substantive domain of these changes. For some people, groups or organisations, there may exist well-developed capabilities for conceptualization and consideration, but a weakness in capacity and concern. For others, there may be highly developed concern and conceptualization, but a weaknesses in capacity and capability. Still others may, because of the scale and domain of change being contemplated, be weak in all phases of the actionable learning cycle. In such cases, the design must encompass the complete cycle.

The purpose of the actionable learning cycle, as a design framework, is to facilitate the development of learning strategies that are tailored to the demands of change and the degree of readiness of individuals and organisations to engage these changes. Because the framework is linked to capacity building as a process of change, it forces the designer to craft strategies that also tie learning to change. Since the cycle is composed of interlinked and interconnected
phases of different types of learning and knowledge, it also encourages the designer to ensure that prior, or prerequisite knowledge and skills, are developed, rather than assumed. Because it is a cycle, it allows the designer to provide customized opportunities for individuals, groups and organisations to engage in appropriate learning at the point at which they must and need to know. Finally, because it is multi-dimensional, in its approach to linking learning to action, it increases the probability that change will, not only occur, but also be sustained.

The phases of the actionable learning cycle are described below:

■ **Conceptualization**

Conceptualization refers to the basic need in capacity building for new knowledge and skills not currently possessed by the target individuals or organisations. It is a process of “knowing that”. If there is a desire to change budgeting processes in an organisation from cash based to accrual accounting, for example, and individuals in the organisation do not know what accrual accounting is and how it can be used, then the primary need in capacity building, at this point, is for the provision of core knowledge about accrual accounting. Developing an understanding of the basic concepts and knowledge base in a domain of activity is the primary goal of the conceptualization phase, and only when this is built, can larger change efforts be undertaken.

But conceptualization is also a change process, to the degree to which it alters the knowledge base of the person and the organisation. Far too often in capacity building, core conceptual knowledge is assumed, and other larger scale change processes are focused upon, with the result that change flounders on the rocks of misunderstanding, or lack of awareness. In the conceptualization phase of the cycle, the basic question to be addressed is: What knowledge and skills are required and demanded by the proposed change goal and to what degree are these possessed by the individuals and organisation? The development of the conceptual knowledge base entails systematic learning, training and assessment.

■ **Consideration**

Consideration is the second phase in the actionable learning cycle. It refers to the degree to which individuals and organisations know why particular conceptual knowledge and associated practices are important and the value they add. Knowing why is critical in altering behavior, since it leads to what is often described as reflective practice. If one does not know why specific knowledge and skills are important and of value, then the result will be habitual and ritualistic following of rules and procedures. In the world of development, it is often the case that people can recite on demand the new vocabulary associated with such concepts as governance while possessing little if any deep understanding of their meaning and implications.

All knowledge, when applied in different contexts, requires adjustment and modification. In this regard, not knowing why knowledge is important, or how it is structured, means that the
capacity to adjust and adapt knowledge to changing circumstances falters. It also means that one is not in a position to evaluate the impact of new knowledge on attaining change goals, since one is unaware of the initial linkages. If, for example, a person, group or organisation acquires knowledge about performance indicators in the management of public programs, but has no idea why such indicators are used, in terms of their linkage to the strategic objectives of an organisation, then they will not be in the position to modify the indicators, or strategically use the information, which flows from their use.

Knowing why is a matter of perspective building and entails, not only an understanding of the rationale for the acquisition of knowledge and skills, but also demands a grasp of the strategic directions and values of the organisation in which they will be applied. This latter point is often overlooked in capacity building, in which theoretical rationales for knowledge and skills are developed, while the local rationales operating in the context of application are ignored. Consideration addresses the following questions: Why are we making the proposed change and what roles, in that process, are played by new knowledge and skills? How will we know whether we are succeeding in the change? To what degree does the new knowledge fit or conflict with theories in use in the targeted contexts?
Capability

Capability is the phase in the actionable learning cycle, in which there is a movement from conceptual knowledge toward action. Capability addresses the issue of knowing how. Knowing how essentially involves the ability to apply and adjust knowledge and skills to the demands, affordances and constraints in different contexts. While knowing how can be partially built through practice and simulation, ultimately, it involves a form of tacit and contextually based learning which occurs through such processes as modeling, practice, mentoring, experimentation and habituation. The diagram opposite illustrates this power of context by providing a skeletal model of the forms of learning that occur within the context of work organizations and linkages between human capital inputs and outcomes.

The learning and work framework illustrates the processes through which human capital inputs are transformed into such outcomes as increased income, GDP, productivity, etc. It attempts to open up the “black box” that explains how the transformation actually works. The framework suggests that human capital assets are made active when they are linked to four learning processes in the work setting: cultural, structural, process and technological learning. For each process different types of knowledge are acquired and different types of learning processes are engaged. Human capital assets make their real impact through the learning processes in the work setting. The impact of human capital in organizational and systems effectiveness is, thus, a function of the structure of work settings and the degree to which they engage people in the four types of learning processes. This explains why countries with similar human capital assets produce different results or outcomes. The key variables are nested in the transformative learning processes and organizational structures of work settings.

As has been noted by other observers, “knowing how” means coming to grips with “how we do things around here”. While one might have a good conceptual grasp of accrual accounting, and know why it helps an organisation meet its strategic objectives, the actual practice of accrual accounting, in given contexts, may vary widely. Understanding this variation in practice, and developing, as a result, real “know how,” means that learning must occur, to a large degree, in the context of application and over a reasonably extended time frame.

Again, in far too many capacity building initiatives, the assumption is that knowledge and skills, acquired and mastered through training, will transfer automatically to a variety of contexts. The context of application, in this mode of thinking, is seen to be benign, when in fact the context will shape and structure application. In knowing how, the challenge is to find the fit between knowledge and skills and the context in which they are to be applied. In this search for a fit, it is almost axiomatic that the knowledge and skills acquired will be re-sculpted somewhat. This is what actionable learning means: in the process of acting on learning knowledge is transformed.

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In the capability phase of the actionable learning cycle, the questions which are addressed are as follows: What adaptations to the knowledge and skills are required to fit the context of application? What new learning processes and skills are required to make that fit? How best can one learn to make these adaptations?

**Concern**

What is often ignored in capacity building is that people are simultaneously the objects, constructors and vehicles of change. People matter! As volumes of research is beginning to make clear, the attitudes, values, emotions, beliefs, motivations, commitments and perceptions of people cannot be ignored in change processes of any kind. In the Five C’s model, the concept used to describe this constellation of human factors in change is concern. The concerns, and the sources and bases of that concern, of people, in the broadest sense of that word, must be incorporated in any approach to capacity building.

Concern entails locating and understanding oneself in the flow of change. Change makes demands on an individual’s values, beliefs, emotions, motivations, commitments and attitudes. Change makes similar demands on groups and organisations. The capacity to make change hinges, in part, on understanding these impacts and being in a position to adapt and redefine oneself in that context. In an actionable learning approach to capacity building, developing personal efficacy and resilience in the context of change is a paramount goal and an important phase in the actionable learning cycle. Failure to address this matter, often leads to people knowing that, knowing why and knowing how, but being afraid, unwilling or unable to act on that knowledge. The human willingness to engage change is, perhaps, the single most important variable in making change happen. Without it, nothing really ever changes.

Daniel Goleman, in his ground-breaking work in the area of emotional intelligence, has observed that the rules for work are changing. We are being judged by what he calls a new yardstick: not just how smart we are, or by our training and expertise, but also by how well we handle each other and ourselves. The new rules also link strongly to effective performance. The new rules tend to assume intellectual ability and technical expertise, perhaps a mild oversight, and focuses instead on personal qualities such as empathy, adaptiveness, leadership and persuasiveness. There is, in Goleman’s words, another way of being smart. Expertise is a baseline competence—you need it to get the job done and to get the job in the first place. However, it is the other competencies that you bring to your expertise that determines performance. Since capacity building is ultimately concerned with changing, that is improving performance, these other competencies that are applied to expertise become critical and form a key element in the actionable learning cycle.

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Goleman calls these new rule competencies, emotional competencies which he defines as a learned capability, based upon emotional intelligence, that results in outstanding performance in work. Emotional intelligence describes the potential, which we all have for learning the practical skills of emotional competence. Our emotional competence describes the degree to which we have translated our emotional intelligence into on the job capabilities.

Emotional intelligence competencies, like their cognitive competency cousins, possess a set of defining characteristics. They are:

- Independent: Each makes a unique contribution to job performance

- Interdependent: Each draws to a degree on certain others with strong interactions

- Hierarchical: The emotional intelligence capacities build upon one another

- Necessary But Not Sufficient: Having an underlying emotional intelligence capability does not mean that people possess automatically the emotional intelligence competencies associated with it

- Generic: Emotional intelligence competencies are generic in the sense that they apply to work in all settings and contexts

Emotional intelligence competencies cluster into groups based upon a common underlying capacity. The chart below describes the emotional competencies framework developed by Goleman.

**The Emotional Competence Framework**

**Personal Competence**

*These competencies determine how we manage ourselves*

**Self-Awareness**

*Knowing one’s internal states, preferences, resources, and intuitions*

- **Emotional awareness**: Recognizing one’s emotions and their effects
- **Accurate self-assessment**: Knowing one’s strengths and limits
- **Self-confidence**: A strong sense of one’s self-worth and capabilities
- **Self-regulation**: Managing one’s internal states, impulses, and resources
- **Self-control**: Keeping disruptive emotions and impulses in check
- **Trustworthiness**: Maintaining standards of honesty and integrity
Conscientiousness: Taking responsibility for personal performance

Adaptability: Flexibility in handling change

Innovation: Being comfortable with novel ideas, approaches, and new information

Motivation
Emotional tendencies that guide or facilitate reaching goals

Achievement drive: Striving to improve or meet a standard of excellence

Commitment: Aligning with the goals of the group or organisation

Initiative: Readiness to act on opportunities

Optimism: Persistence in pursuing goals despite obstacles and setbacks

Social Competence
These competencies determine how we handle relationships.

Empathy
Awareness of others’ feelings, needs, and concerns

Understanding others: Sensing others’ feelings and perspectives, and taking an active interest in their concerns

Developing others: Sensing others’ development needs and bolstering their abilities

Service orientation: Anticipating, recognizing, and meeting customers' needs

Leveraging diversity: Cultivating opportunities through different kinds of people

Political awareness: Reading a group’s emotional currents and power relationships

Social Skills
Adeptness at inducing desirable responses in others

Influence: Wielding effective tactics for persuasion

Communication: Listening openly and sending convincing messages

Conflict management: Negotiating and resolving disagreements

Leadership: Inspiring and guiding individuals and groups

Change catalyst: Initiating or managing change

Building bonds: Nurturing instrumental relationships

Collaboration and cooperation: Working with others toward shared goals

Team capabilities: Creating group synergy in pursuing collective goals
The idea of emotional competencies provides but one example of the importance of concern and knowing oneself in the actionable learning approach to capacity building. Work in the area of efficacy, leadership, moral development, helping skills, mediation, consciousness development provide other rich sources of ideas for the development of concern. While these competencies are often described as “soft skills”, and for that reason are largely ignored in capacity building initiatives, the reality is that it is through such skills that real change is energized and sustained. The most elegant analytical and technical models of systems and institutions remain just that, unless they are linked to the human willingness to perceive the world anew and to act on that perception in a sustained way. And for that reason, the phase of concern in the actionable learning cycle addresses the following question: How can we develop the conditions that will engender a willingness on the part of people to consider change and the courage to act on that perception?

■ Capacity

A person, group or organisation can possess the knowledge base required for change, understand why that knowledge is important, know how to practice the associated new behavior in real contexts, and be willing to engage in change itself, but still face a situation in which change does not happen. The explanation for this circumstance rests with the fact that settings and contexts can be structured and controlled, in such a way, that people do not have the opportunity to try out change. In other words, there does not exist the organisational capacity to allow change to proceed. Capacity, the opportunity to try change, is stymied, blocked and resisted, with the result that people “can’t do change”. This is, perhaps, one of the greatest challenges facing efforts at capacity building and must be addressed in any effort to build capacity.

Opening up developmental spaces, within organisational and other contexts, in which change can be undertaken, tested, tweaked, experimented with and potential explored, is an essential aspect of building capacity. But how to do this? There is no magic answer to this question. Change strategies that focus on giving people new knowledge and skills abound. What is lacking are change strategies that address the creation of maneuverability within organisational settings.

Some say that the emergence of crises provides such an opportunity for creating change spaces. Undoubtedly, this is partially true, but there are countless examples of crises that have developed, and yet been ignored, by people who cling to a head in the sand and business as usual approach. Others, say that leadership at the top is critical. This is also true, but there are also countless examples of leaders who are so far out in front of their organisations that resistance to change develops as a dominant response, rather than the embracing of a new vision. Still others, say that the basic incentive structures need to be changed for contexts of maneuverability to open up, but exactly what types of incentives need to be introduced and how? Finally, there are those who, in recent years, have suggested that the riddle of change in
organisations is to be found in the magic that market forces are assumed to spark. Even in this increasingly pervasive ideology, however, there are cracks in both logic and practice. Some efforts in the privatization of public services and organisations, for example, have not changed monopolistic practice, but merely shifted that practice from state to private control.

It may not be possible, given the current state of knowledge, to be definitive about an exact change strategy. It is possible, however, to map the elements, that need to be addressed in the effort to create developmental spaces for change. The chart opposite provides one such map, as it applies to change of complex systems.

One thing which this map makes clear, is the importance of adopting systems a view of change. For this reason, there is increasing interest in the adoption of a view of change as the development of a learning and innovating organisation; one that has the self organizing capacity to adapt to change on an ongoing basis.6 Providing opportunities for people to “do change”, no matter how small, is essential to any long term success in capacity building. While the technology of change in human systems is in its early stages of development, one can look to a variety of emerging approaches to this challenge in the design of capacity building initiatives: action learning, search conferences, benchmarking, innovation cells, knowledge management, building social capital, demonstration projects, mentoring, 360 degree feedback, workouts etc. A number of these approaches are explored later in this Handbook. In the capacity phase of the actionable learning cycle, the following question is central: How can we develop the enabling conditions so that people with new knowledge, skills, and a willingness to try can change?

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The actionable learning approach to the design of capacity building provides a framework through which to think seriously about the design of capacity building initiatives. It suggests that capacity building involves multiple types of knowledge and multiple processes of learning; all of which are essential elements to success in change and continuous improvement in human performance, the ultimate goals of the effort. Each phase in the cycle is important and a failure to address a phase, given the interdependencies among the elements, will mean that change will either not occur, partially occur or not stick over time.

**Actionable Learning and the Knowledge Creation Cycle**

The actionable learning cycle provides contexts for and channels through which to create knowledge. Knowledge is often wrongly associated with command over information and facts. It is perceived to be “knowledge about” something, as if to have knowledge one must be at a distance from that which is to be known. Another way to view knowledge is to see it as existing on a continuum from the possession of factual information about something, through knowing how to do things in various contexts, to taking reflective action. This view of knowledge underpins the actionable learning framework for capacity building. By moving through the actionable learning framework, moreover, one is not only involved in learning, but also the creation of knowledge. This is illustrated in the diagram.
The knowledge creation cycle portrays capacity building in the actionable learning framework as a constantly escalating process that builds upon the experience base of the person, or group, to create a cycle of personal and organisational knowledge creation. All learning is built upon prior experience and the knowledge creation cycle recognizes this fact. But people can be trapped by their experience, particularly in a world in which change is rapidly emerging. In this instance, there is a need for perspective: a new frame within which to learn from and through experience. The actionable learning cycle, as discussed earlier, provides, through its learning phases, an ever widening and multi-dimensional approach to developing perspective on experience. If the person’s individual learning is to be converted into knowledge—a permanent part of the person’s repertoire and an integrated element in an organisation’s collective knowledge—more must be done. Converting learning into knowledge, at both the individual and organisational levels, entails what Vicere and Fulmer call “linking.”

Far too many efforts in capacity building stop at the point of individual learning. Linking, as the term suggests, involves connecting learning to organisational and other contexts of work and practice. In the actionable learning framework, linking occurs in the phases of capability and capacity. New knowledge, once developed and embedded in practice, also requires continual challenge through engagement in the knowledge creation cycle, such that continuous learning, and relearning, becomes the norm. Actionable learning provides a map to guide the never-ending journey of knowledge creation and the tools and techniques to keep you on course.

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PART 2
The Purpose is Learning

This Handbook asserts a simple, but oft neglected, aspect of using cases in training and capacity building: the purpose is learning. The entire rationale for the development of cases is to enhance the learning of those who interact with them, both the trainee and the trainer. This point needs to be emphasized because, far too often, case writers, and case teachers, become so enamored with the complexity, or elegance, of the case itself, and the content within it, that they forget that the case is a vehicle through which to spark a learning process. In this regard, the ultimate judgment of the effectiveness of a case rests on the degree, range and depth of learning evidenced by those who studied, assessed, discussed and debated the case. In this section, we explore the processes of learning and those enabling conditions that increase its effectiveness. We place the case experience squarely within a learning paradigm and draw out the design implications.

Adult Learning

Learning is a process, which flows from the need to make sense out of experience, reduce the unknown and uncertain dimensions of life and build the competencies required to adapt to change. It is a natural process, linked very much to the fact that humans are meaning-making organisms. In this regard, the basic problem confronting a facilitator is not how to initiate
learning, since learning is an ongoing natural process. Rather, the challenge is how to avoid setting up obstacles and disincentives to learning. The role of the facilitator is to find enabling ways in which to encourage, further stimulate, deepen and enhance the learning process.

Learning is an interactive process:

- We receive meanings from others, either directly or through artifacts and ideas
- We develop meanings from our own and vicarious experiences
- We integrate both sources of meaning into a dynamic and constructed whole

As Mackeracher has aptly observed, a learner functions on many levels:

- Dependence reflects the degree to which we adopt unchallenged the meanings provided by others
- Independence is a function of the degree to which we are willing and able to create meanings for ourselves without reference to others
- Interdependence reflects the degree to which we are prepared to develop shared meanings in interaction with others.

To varying degrees, we all exhibit the qualities of dependence, independence and interdependence in our approach to learning. Moreover, all three dimensions are necessary to develop a truly integrated approach to learning throughout our lives. And, so too, in case based learning. All three dimensions need to be reflected in the content and process of the case learning activity.

In recent years, there has been an avalanche of research into the processes and nature of adult learning. It is impossible in this Handbook to summarize all conceptual frameworks and points of view, which pervade this research. There are, however, some general principles of adult learning and facilitation, which recur with such frequency in the research, to make them safe generalizations, as a basis for the design and facilitation of case based learning. Based on the work of Mackeracher, the following principles of adult learning have particular relevance to case based learning:

Adults learn best:

- What has relevance for them as determined by their prior knowledge, current models of reality, needs, tasks roles and personal interests
- When they are responsibly treated in ways which are consistent with their conceptions of their self and efficacy
When others respect and acknowledge them and their past experiences and personal knowledge

When they have some sense of where they are going in the learning process, how they will get there and how they know when they have succeeded

When their past experience is used by both learners and facilitators as a resource for learning

When they can assess their own learning needs, goals and directions for change

When they are in a learning environment free from threat and supportive of personal change

When they have an opportunity in the learning process to talk about and share experiences

When learning activities support opportunities to organize, understand and integrate new knowledge into existing knowledge

When learning activities include opportunities for direct instruction in required competencies and involvement in activities which require these competencies

When feedback is provided immediately, or as soon after the behavior displayed as possible

When ideas are presented and represented in many forms and using many media

When learning style preferences are accommodated in the design of learning activities

When the degree of structure in the learning context and process matches the learning style and level of cognitive complexity of the learner

When thoughts and emotions are integrated in the learning process

Given the range of learning styles of adults, there is no one dominant or perfect style of facilitation of adult learning. Or case based learning for that matter. Rather, a good facilitator has, at his/her command, a set of facilitation styles, which can be brought to bear on the learning process and changed as the content focus, goals, learners or context changes. In this regard, there are at least five facilitation styles, that can be employed, in appropriate contexts, in case based learning.
Directing

The directing mode of facilitation calls upon facilitators to:

- Define and structure content
- Structure activities which will constitute the learning process
- Provide feedback and reinforcement to learners
- Provide support, encouragement and guidance when called upon

The responsibility for these functions rest largely with the facilitator. The directing mode assists learners in the following ways:

- Acquisition of specific skills and competencies
- Works best with material, whether by social convention or professional standards, is prescribed for certain roles
- Works best with material which can be neatly segmented into manageable parts and then organized into sequences or hierarchies to form a whole
- Is optimal when learning is constrained by time pressures or deadlines
- Requires that there be someone, an expert, who sets objectives, develops materials and assesses outcomes
- Requires the provision of immediate feedback
- Can be self paced in a programmed learning context

Enabling

The enabling mode of facilitation calls for facilitators to:

- Act as a catalyst
- Provide content and process resources
- Serve as a reflective mirror or alter ego
- Act as a co-inquirer with learners
- Provide support guidance and encouragement

The responsibility for these functions can be solely with the facilitator, or shared with the learners. The structure, objectives and nature of the learning activities are negotiated with the learners.
The enabling mode assists learners in the following ways:

- Proceeds through dialogue providing opportunities for learners to generate personal meanings
- Works best with material which does not have to be learned in a logical sequence or through a hierarchy
- Works best when there are few time constraints on the learning process
- Requires that someone, a facilitator have the knowledge and skills to design and manage the process dimension of learning
- Requires that time be spent upon building trusting relationships between facilitator and learner and among learners

**Collaborating**

The collaborating mode requires that learners and facilitators share, as co-learners, in the discovery and creation of new meanings and understandings.

The collaborating mode:

- Works best with material in which all learners have a stake and through which they jointly solve problems
- Rest upon negotiated content and learning processes
- Often functions well in skill based activities approached as a form of apprenticeship
- Requires detailed attention to the norms and processes used by groups
- Requires high levels of trust

**Modeling**

In the modeling style of facilitation, the facilitator, or learners, model or demonstrate the competencies and skills to be developed either through performances or role-plays.

The modeling style works best:

- When a complete skill is the focal point of the learning process
- When trial and error learning is required with the need for on going correction and readjustment
When know how is the focal point of the learning process

- When time is not a problem and an extended period of observation can be arranged
- When the skill to be mastered or knowledge to be learned is highly context or domain dependent

**Observation and Interpretation**

In this style of facilitation, the role of the facilitator is to observe behavior and provide interpretations, or other types of insights, to those participating in the process. Simulations provide an excellent example of this mode of facilitation.

The observation and interpretation style works best:

- When the context of an activity is a crucial element
- When there is a diversity of roles entailed in the learning process
- When a time sequence of activities and reactions are a critical component of the learning process
- When skills in relating and negotiating are central to the learning process

The choice of facilitation style, in case based learning, requires that attention be paid to a number of variables: the nature of the learners, the capabilities of facilitators, the type of content, the focus of the learning process, the structure and location of the context for learning, the outputs sought and the outcomes hoped for. These options are sketched in the diagram following which portrays facilitation from a learning systems perspective.

As the diagram opposite illustrates, in designing for facilitation, one is attempting to align inputs, processes, and context to achieve outputs and outcomes. In using this framework, as a heuristic design of case based learning, one moves from preferred outcomes backward to inputs and from inputs toward outcomes in a dialectical process. The meeting place of these two movements, or flows, is a point at which negotiation, dialogue and discovery are energized, as the processes through which a match or synergy is created. There is no magic formula for the creation of synergy, since learning is a highly personal, social, cultural and subjective process. For that reason alone, negotiation, dialogue and discovery must permeate the process from its inception to completion.

All cases, whether intentional or not, reflect, in their designs, a model of human learning, from which flows a model of teaching. Those who see human learning as a form of rational
and logical information processing will design their cases to flow in a logical and rational sequence, with built-in decision points and choices, that can be evaluated using a logical and rational process. Complete, rather than bounded rationality, to use Herbert Simon’s term, will govern such cases and the learner will be seen as a rational optimizer. The instructor, in such case based learning contexts, will see it as his/her purpose to emphasize rational decision making and evaluate the degree to which participants evidence it in their approach to the case.

Those who see learning as a continuous process of constructing knowledge, and creating meaning, will design their cases to allow for open exploration of ideas, including extensive discussion of what the case is really about. In this context, the instructor will see his/her role as enlarging the perceptual field of the learner constantly stressing alternative viewpoints and resisting any ideal optimal solution. The core purpose of this form of case based learning is the creation of meaning using the case as a vehicle of that construction process. In this framework, the case is never closed.

Those who see learning as a social process, undertaken in and through others in different settings, will design their cases as vehicles to set in motion group discussion and problem solving processes. The case, in this perspective, is a vehicle for developing group problem solving skills, teamwork and other forms of collaborative skills. Instructors, in this type of case, serve as process managers building group capacities.

With this general orientation to learning and facilitation styles, we turn next to a more detailed examination of the case based learning process.

**Experience and Case Based Learning**

Since all case designs reflect a model of learning, this Handbook is not an exception to the rule. In this regard, the Handbook begins by stressing the importance of experience in the process of learning. As John Dewey, in his classic volume *Experience and Education* noted, learning is experience and the continuous reconstruction of it. Dewey also suggested, in this regard, that not all experiences were educative; in that not all experience leads to the deepening and widening of understanding. Constant and rote memorization of facts can be construed as a form of experience that blocks certain learning processes and is, therefore, potentially miseducative.

Dewey emphasized that continuity and interaction were two critical dimensions in the development of experiences as educative engagements. By continuity, Dewey meant that the meaning derived from experience should be built progressively from prior learning forming an ever more complex scaffold of knowledge and understanding. The second attribute, noted by Dewey, was interaction. Active engagement with the human and physical environment, in this context, is a crucial dimension of the educative experience. Through interaction with the environment, as Jean Piaget has emphasized, the dual developmental processes of accommodation and assimilation are energized. Assimilation involves incorporating knowledge within pre-existing conceptual categories of the mind. Accommodation entails a process of changing these very conceptual structures in light of knowledge that does not neatly fit within these mental structures.

The role of experience in learning has been researched extensively since Dewey’s speculation on its value to learning. One of the more fruitful outcomes of this research has been the articulation of a theory, or framework, for experiential learning. David Kolb has developed such a framework most intensively in his theory of experiential learning. The present Handbook is also built, in part, upon an experiential learning framework, with modifications and extensions that adapt it to case based learning.

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9 J. Dewey, *Experience and Education* (Norton, 1963)
Learning from experience demands five different kinds of abilities:

- An openness and willingness to involve oneself in new experiences (concrete experience).
- Observational and reflective skills so that these new experiences can be viewed from a variety of perspectives (reflective observation).
- Analytic, creative and empathic abilities so integrative ideas and concepts can be created from observation (abstract conceptualization).
- Decision making and problem solving skills so these new ideas and concepts can be useful in actual practice (active experimentation).
- Metacognitive skills (mindfulness) so that a person can reflect upon and learn about his/her approach to thinking, learning and acting as a basis for continual improvement in their efficacy (intellectual self management)

A Model of Experiential Learning

These capabilities function as interrelated phases in an ever recurring cycle; a learning wheel if you like. Case based learning, when designed with these principles in mind, functions as just such a learning wheel, in which a person is opened to new experiences, called upon to view situations from a variety of perspectives, required to analyze issues, engage in decisions and choices, enter into discussion and dialogue with others, and in the process, reflect upon
how they have been learning and thinking. Good cases take participants through the entire set of phases, as a function of content design and the instructional and group interactive processes that underpin the case learning process. Cases, that are designed to explore only one facet of the phases in this cycle of experiential learning, betray the idea of experiential learning and its powerful impact on practice.

Thinking Skills In Case Based Learning

Providing learning experiences, that energize both assimilation and accommodation, leads over time to the development of more integrated and higher order thinking. Higher order thinking as Resnick has suggested involves “the active mental effort to make meaning of our world by carefully examining thought in order to better understand content”.

Higher order thinking exhibits the following characteristics:

- Higher order thinking is non-algorithmic. That is the path of action is not fully specified in advance.
- Higher order thinking tends to be complex. The total path is not visible mentally speaking from any single vantage-point.
- Higher order thinking often yields multiple solutions, each with costs and benefits, rather than one unique solution.
- Higher order thinking involves nuanced judgement and interpretation.
- Higher order thinking involves the application of multiple criteria, which sometimes conflict with one another.
- Higher order thinking involves self-regulation of the thinking process.
- Higher order thinking involves imposing meaning, finding structure in apparent disorder
- Higher order thinking is effortful involving considerable mental work and energy

Thinking By Design

Case based learning can be seen as a process of thinking by design. In this regard, case based learning pursues six purposes simultaneously:

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Content Mastery
Developing an understanding of the substantive content dimension of the case at hand and of the relevant concepts and theories which illuminate that content

Collaborative Learning
Learning to work and learn in collaborative modes with others

Thinking Skills
Developing thinking skills which can be generalized and transferred to other cases and real life tasks and problems

Communication Skills
Developing the skills of communicating orally, in writing, and using various media in different settings and contexts

Research Skills
Developing research and analysis skills, which can be transferred to other cases and real life issues, problems and tasks

Action Skills
Developing the skills to transfer, translate, test, and transform knowledge in different contexts in order to pursue and achieve purposes, goals and outcomes.

This Handbook will explore all of these dimensions of case based learning. At this point, we focus on thinking skills, as one of the key dimensions of case based learning. To a degree, thinking skills underpin all of the other dimensions of case based learning and it is the potential to transfer these skills to real life settings that guides much of case based learning.

But what precisely do we mean by thinking skills in the context of case based learning? In this regard, we do not mean the development of particular analytic skills, apart from other skills or the context in which they are practiced. In the Handbook, thinking skills are treated in an integrated manner combining critical, creative and complex cognitive and effective processes.

Case based learning is a form of experience, both in terms of the concepts and information nested within the substantive content itself, and the processes of learning surrounding it. To be educative, in Dewey’s sense, then, case based learning should be built, and draw upon, the prior learning experiences of participants and provide a context for learner interaction with the content of the case, other learners and the processes used to interrogate the case. Case based learning should also be designed to provide learners with, both new knowledge to as-
similate and also concepts, information and experience which challenge their pre-existing conceptual structures.

The diagram following depicts the central elements of integrated thinking. It sketches thinking skills as an interactive system, not a collection of separate skills. This framework incorporates three basic components of integrated thinking: complex thinking, critical thinking and creative thinking. One of the objectives of case based learning is to develop higher order and integrative thinking skills in learners. These skills do not automatically emerge from the mere
fact that a case is presented or discussed. Integrative thinking skills must be embedded in both
the design of cases and inform the instructional techniques and learning processes developed
as the supporting structures of case based learning.

Critical Thinking

Critical thinking entails the dynamic reorganisation of knowledge in meaningful and useable
ways. It involves three general skills: evaluating, analyzing and connecting.

Evaluating

Evaluating involves making judgments about something by measuring it against a standard. It
entails using criteria in subtle and crisp ways. Evaluation in case based learning involves
exercising such skills as:

- Assessing information for its reliability, validity and usefulness and discriminat-
ing between relevant and irrelevant information
- Setting criteria for judging the merit and worth of ideas or products
- Prioritizing options and assessing their relevance
- Recognizing fallacies and errors in reasoning and data analysis
- Verifying arguments and hypotheses

Analyzing

Analyzing entails separating a whole into its meaningful parts and understanding the interre-
lationships among those parts. It calls for the following skills:

- Recognizing patterns
- Classifying things and ideas into categories
- Identifying stated or unstated assumptions
- Identifying main ideas in texts and discussion and their link to subsidiary ideas
- Finding sequences in argument and information

Connecting

Connecting involves determining, or creating, relationships between the wholes that are be-
ing analyzed. Connecting compares and contrasts things and looks for cause-effect relation-
ships. It energizes the following skills:

- Comparing and contrasting
Logical thinking

- Deductive inference from generalizations or hypotheses
- Inductive inference from empirical data
- Causal analysis and prediction

Creative Thinking

Creative thinking entails going beyond the information given or accepted knowledge, to generate new knowledge or innovative practice. Creative thinking, while deploying critical thinking processes, places these often within more subjective frames, such as intuition, playfulness and metaphor. The major components of creative thinking are: synthesizing, imagining and elaborating.

Synthesizing

Synthesizing means to put together whether it be ideas, ways of accomplishing tasks or solving problems. It calls upon the following types of skills:

- Thinking analogically through the use of simile and metaphor to make information more meaningful
- Summarizing main ideas in one’s own words and from the frame of reference of others
- Hypothesizing about relationships between events and actions and predicting future patterns
- Planning processes

Imagining

Imagining calls upon intuition, visualization and fluency in thinking. It generates the need for the following types of skills:

- Expressing ideas fluently or generating a range of ideas quickly
- Predicting events or actions that are caused by a set of conditions and then changing those conditions to generate new predictions
- Searching for possibilities and solving “what if” problems
- Visualizing and creating mental images of possibilities and problems
- Using intuition to explore possibilities
**Elaborating**

Elaborating entails adding personal meaning to information or building upon and deepening an idea. The following skills come into play:

- Expanding upon information by adding details or other ideas
- Modifying or changing ideas for different purposes and goals
- Extending ideas by applying them in different contexts and for different purposes
- Shifting categories of thinking by assuming different points of view or frames of reference
- Concretizing general ideas by giving examples of alternative uses

**Complex Thinking**

Complex thinking skills combine critical and creative thinking skills into action-oriented processes. The components of complex thinking are: problem solving, designing and decision-making.

**Problem Solving**

Problem solving involves moving the present state, a given situation, toward an ideal or preferred state or goal. The following types of skills are involved in problem solving:

- Sensing the problem: determining its nature and boundaries
- Researching the problem
- Formulating the problem by specifying its key dimensions and main issues
- Generating alternatives to solve the problem
- Choosing the solution path from among the alternatives
- Building acceptance by others of the problem definition and preferred solution

**Designing**

Designing involves inventing or producing new ideas in a particular form or structure. The following skills are employed:

- Imaging a goal
- Representing the goal using various forms
- Inventing ideas
- Assessing ideas
Testing and prototyping ideas

Revising ideas and designs

Decision-Making

Decision making entails selecting among alternatives in a rational or at least systematic way. The following skills are central to decision making:

- Identifying an issue and framing it within a context
- Generating alternatives
- Developing decision choice criteria
- Assessing the consequences of selecting alternatives
- Choosing among alternatives and developing a rationale for the selection
- Making a choice
- Evaluating the impact of the choice

Interrogating a case calls for the exercise of integrated thinking skills: critical thinking to break the case down into its key components, creative thinking to generate new patterns among the components and complex thinking to apply the resultant understanding to problem solving, decision making and action. In case based learning, it cannot be assumed that learners have completely developed integrated thinking skills, that can be applied to the case at hand. For this reason, the need to apply such skills must be, both embedded in the design of the case, and also form a key component in the instructional techniques and learning activities, which support the case learning process. In this Handbook, therefore, thinking by design is treated as a core competency of both case writing and case based learning.

Toward Communities of Practice in Case Based Learning

All learning occurs in context and context is critical to the effectiveness of the learning process. Etienne Wenger, in his detailed examination of what he terms communities of practice in work settings, has enunciated a set of key learning principles that make this point in a clear and telling fashion.\(^\text{13}\)

\[\text{13} \quad \text{E. Wenger, Communities of Practice (NY: Cambridge, 1998)}\]
Learning is inherent in human nature and not a special kind of activity separable from the rest of our lives.

Learning involves the negotiation of new meanings in which the whole person is involved in a dynamic interchange between people and settings.

Learning creates emergent structures, which press for the renegotiation of meaning.

Learning is fundamentally social involving our own experience of participation as well as competencies demanded by the contexts in which we participate.

Learning transforms our identities and our abilities to participate in the world.

Learning means dealing with boundaries between our life spaces.

Learning is a matter of engagement and depends upon opportunities to contribute actively to the practices of communities that we value.

All contexts vary in their structures, the roles, which people engage in as a result of these structures and the processes, which link the structure, and the roles. These features of contexts generate two types of learning. First, there is explicit learning of information and concepts that we consciously absorb and reflect upon. Second, we learn from the context itself. A person working in a mass production factory on an assembly line, not only learns the content for doing the particular task, but also learns about power, authority, freedom, other people and their roles. What one learns in an extended family is different from what one can learn in the context of a nuclear family. Within all contexts, in other words, there exists a hidden curriculum composed of the knowledge, skills and attitudes developed, or demanded, by the structures, routines and roles that are afforded by the setting.

In their research into the knowledge generating capacity within firms, Nonaka and Takeuchi have illustrated this “hidden curriculum” within contexts. Based upon the distinction between two forms of knowledge, tacit (the taken for granted knowledge we carry within us) and explicit (the more formal codified forms of knowledge), the authors have suggested that there are at least four forms of knowledge transaction within firms:

- Tacit to Tacit: Informal ways of knowing passed to others in informal ways through observation and socialization.

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Tacit to Explicit: Informal knowledge carried in people’s heads and experience, which is later codified through diagrams, designs and models.

Explicit to Tacit: Formal knowledge, which through constant application becomes codified in operating procedures.

Explicit To Explicit: Formal knowledge passed on in formal ways through training and direct instruction, or operating manuals.

The knowledge generating capacity of a firm, and to a degree its competitiveness, they suggest, depends upon the unique ways in which these knowledge transactions are managed and how contexts are created to allow the various forms of transactions to flourish.

Case based learning occurs in a context and the design of the context is as critical to the learning process as the design of the content and instructional techniques. Gilbert Ryle, the philosopher of the mind, noted that there are two forms of knowing: knowing that (information, data etc. about things) and knowing how (using information and knowledge to accomplish a goal). Jerome Bruner has made a similar distinction between learning about (knowing that) and learning to be (knowing who).  

Knowing how does not flow automatically from knowing that; that is, through the accumulation of information. Knowing how emerges from practice. Through practice we learn to be. These distinctions explain why the same stream of information directed at people does not necessarily produce the same knowledge. Similarly the same knowledge does not produce the same level of “knowhow.” If different people are engaged in different practices, if they are learning to be different kinds of people, then they will respond to the information in different ways. Practice shapes the assimilation of information.

Case based learning is a form of practice and the structure of the context is a critical element in the design of case based learning. If one designs a case using the actionable learning phases outlined earlier, but sets the case in a context in which authority of position rules, or where discussion and engagement is limited, then the context will overpower the content of the case constraining what people actually learn.

Practice, as a result, both shapes and supports learning. One of the opportunities afforded by case based learning is the development of what has been called a community of practice: a shared, and frequently tacit way, of approaching issues and problems and developing the collaborative skills requisite to that approach. Communities of practice serve as powerful learning contexts for the professions, but they also function in other work settings. People accomplish goals and work in communities of practice. This, of course, begs the question as

to what structural features, processes and norms one would want to develop as the governing
principles of a community of practice in case based learning. From the vantage-point of this
Handbook, part of the answer is that the community of practice, for case based learning,
should be built upon things, which nurture the process of experiential learning.

Another part of the answer is nestled within the communication processes, that are so much a
part of effective case based learning. Far too often, case based learning is seen as a form of
communicative and intellectual combat, in which there are winners and losers, or those that
shine and those that recede into the backdrop. While hardheaded analysis is, indeed, a virtue
in case based learning, it alone should not dominate the process. This is particularly so when
one sees case based learning as an opportunity to develop the conditions for a community of
practice to emerge and thrive.

The idea of developing a community of practice, through case based learning, provides a link
between cases and capacity building. By developing engagement processes around cases,
through which people come together to jointly solve problems, perhaps in the process develop-
ning their own routines and decision making approaches, case based learning can spark the
development of a community of practice. A community of practice, moreover, can extend
beyond the actual examination of the cases and spillover into the real world, providing a
collaborative resource for group problem solving and action. But to accomplish this goal, in
case based learning as much attention must be paid to learning and group processes, as to the
substantive issues in the case itself. The transfer of skills, acquired in case based learning, to
real life and work situations, which is the larger goal of the entire enterprise, is to be found, in
other words, not solely in the new knowledge and skills acquired in the case learning process,
but also in the community of practice which can potentially evolve as part of case based
learning. We turn to this dimension next.

Dialogues in Case Based Learning

In developing a community of practice through case based learning, the process of dialogue
serves as a vital resource. What is dialogue and is it any different from discussion, open
argument, debate and conversation? Imagine, for a minute, when you sit with good friends or
family and talk knowing that all you say will be heard, internalized and valued. Imagine
talking with people who have very different perspectives, and rather than arguing about what
is right or wrong, good or bad in these perspectives, the people were more interested in the
larger picture that might emerge from this diversity of viewpoints. Imagine being able to
interact with people at work in this way. If you can imagine these things, then you have a “feel
for dialogue”. Dialogue is one process through which it is possible to create, what can be
called a contemplative community of practice, which opens up new avenues and collective resources for the capacity building process.

David Bohm, the physicist, traced the roots of the word dialogue to the Greek dia (through) and logos (meaning). Dialogue, thus, is a process of seeking to understand the meanings we share; to learn to reason and think together. William Issacs elaborates the idea of dialogue as the free flow of meaning. Dialogue is a form of disciplined collective inquiry and is increasingly seen as a foundational process for creating new infrastructures of learning within organisations.

Dialogue probes the tacit knowledge, that we carry with us, and brings that knowledge to the surface level through a process of examining assumptions and exploring perspectives. At the tacit level, people hold specific strategies of thought of which they are unaware and which create fictitious ways of thinking and counterproductive actions. Prominent among these strategies is fragmentation of tacit thought: the habit of thought that reduces the world into parts. Some of the variables that affect fragmentation of thought include: objectification, rigidity, and literalness. Fragmentation in thought leads to “hot inquiry”: a focus on the nature of parts and their relationship to each other. Opposite to hot inquiry is “cool inquiry”: a focus on the whole and the way it organizes the parts.

As the chart below illustrate, dialogue differs in its focus from discussion and debate.

<table>
<thead>
<tr>
<th>Dialogue</th>
<th>Discussion/Debate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeing the whole that encompasses the parts</td>
<td>Breaking issues/problems into parts</td>
</tr>
<tr>
<td>Seeing connections and relationships</td>
<td>Seeing distinctions and differences</td>
</tr>
<tr>
<td>Inquiring into assumptions</td>
<td>Justifying/defending assumptions</td>
</tr>
<tr>
<td>Learning through inquiry and disclosure</td>
<td>Persuading, selling, telling</td>
</tr>
<tr>
<td>Creating shared meaning among many</td>
<td>Choosing one meaning among many</td>
</tr>
</tbody>
</table>

Quantum physics has postulated that there is a holographic basis to all life, wherein all of the parts contain the whole and the whole is made up of all of the parts. If we use this holographic metaphor in thinking about human systems, then information becomes vital and communication between the parts, that is dialogue, is essential. Chaos and complexity theory teach us that organisations functions in non-linear but patterned ways. To tap into the non-linear power of organisations, again, dialogue becomes important. And research into cognitive development

has shown that a state of what Susan Langer calls mindfulness, thinking about one’s own thinking process, is a source of creativity and innovation.\textsuperscript{17}

Leaders of dialogue, in William Issac’s view, are convenors. The word convene means to assemble with others; to come together. Instructors in case based learning can function as convenors when a dialogue mode is being used in the context of a case.\textsuperscript{18} And, in this regard, the instructor, as convenor, will need to have the capacity to lead dialogue by being able to understand and manifest the following types of behavior:

👉 **Clarify Personal Intentions:** How a dialogue leader sees the situation is critical. Do you have a deficit model in mind; that is, do you feel that the participants lack something and you are going to fix it or fill the gap? If so, then you will likely have a problem in facilitating shared inquiry.

👉 **Join Each Person Differently:** Each person in a dialogue is different and each one speaks in his or her own unique voice. Each one has a different story and way to make meaning. Listening carefully to each voice matters a great deal in creating the conditions of dialogue.

👉 **Dare People to Suspend:** Essential to dialogue is the capacity to suspend judgement. This may be the most profound challenge facing not only learners but also instructors. Making room for perspectives that are neither conventional nor part of your own worldview takes extensive practice and for some people self control.

\textsuperscript{17} E. Langer, *Mindfulness* (NY: Norton, 1998)
Make It Safe for Opposers: In dialogue it must be legitimate for people to oppose what is happening not only in the conversation, but also the learning process itself.

Facilitate Cross Model Conversation: Part of the challenge of dialogue is to listen to different views, to take the view of the other and see the world from that perspective. Instructors need to develop ways of facilitating this cross model conversation.

Reflect on the Whole Process: The purpose of dialogue is to grasp a sense of the whole being created by often very diverse individuals. Bringing people’s attention to this whole system perspective while they are in the process of dialogue is important and ongoing task of the convenor.

Dialogue focuses as much on the people in the process, as the content being approached. Moreover, dialogue recognizes that, people, in a case based learning process, will play different roles at different times. In this regard, David Kantor, in his work in family systems therapy, has suggested that in all conversations there are four roles played. The mover who initiates an idea or action. The follower who agrees with what the mover has said or who takes his cue from the mover. The opposer who disagrees with what the mover has initiated. And the bystander who stands back and observes the dialogue and can offer a perspective on it at some point in the process. Instructors facilitating dialogue through case based learning, need to acquire the knowledge and skills, which allow them, to shift in these roles as the case evolves. So too, opportunities need to be provided for learners to engage the case from several different perspectives flowing from different roles.

True dialogue contains all of these roles and, at different times, different people play different roles, or combinations of roles. All of the roles offer a resource to enrich the dialogue. The problematic aspect of a rigidly followed role dimension in case based learning, however, occurs when people, in the course of a dialogue, become stubbornly attached to one or other role. In typical case based teaching, there is a tendency to overly focus upon the value of the mover, who is rewarded for his/her “performance”. This is a mistake, since it attributes to one role a contribution to the dialogue process, which is beyond what one role alone can contribute. It is a mistake, as well, since it places the attention on individuals in the dialogue, rather than the capacity of the dialogue to engender shared meaning and the creation of a new sense of the whole amongst all participants. The challenge of using dialogue in case based learning, ironically, is to shift attention, away from individuals, to the process of dialogue itself, as a way of deepening the understanding of the individual. This requires a paradigm shift in much of case based learning, but it is a shift which will bear remarkable fruit in linking learning to the capacity to act.

19 Issacs, ibid. pp. 120-170
There is a place in case based learning for debate and discussion. Issues do need to be broken down, into order to be put into new patterns. People’s views, not the people themselves, need to be critically assessed. People do learn from debate and discussion. This Handbook contains many frameworks and techniques to facilitate these very processes. Cases can be construed as holograms. To be understood, they need to be broken down into their constituent parts. Discussion and debate serve this purpose well. To derive the meaning from a case, however, the parts must be grasped in the context and frame of the whole. For this to occur, the process of dialogue is needed.

What dialogue brings to case based learning, moreover, is something of a higher order of magnitude: a willingness to listen with empathy, surface assumptions, respect a range of viewpoints, and most importantly to think together as a way of creating a new understanding of the whole. In today’s complex and globalized world, and its paradoxical process of fragmentation in both thoughts, sense of community, and commitment to the public good, new processes of understanding become critical. Dialogue is one such process and it can be applied creatively within case based learning. In fact, one can argue that the real challenge in case based learning is to help people move through the phases of debate, discussion and toward dialogue, without losing the skills and capabilities entailed in each process and knowing when their application is most desirable and effective.

This Handbook is designed to assist people and groups in their efforts to employ case based learning in capacity building activities and projects. What is the link between capacity building and case based learning? Firstly, capacity building is not merely the transmission of content and skills, as important an element as that may be. Certainly cases can help to do this. Capacity building entails the linkage of new knowledge and skills to the process of change in people’s life circumstances. Capacity building is about changing practices and building the capacity to take action. By using case based learning, not only as a context for the development of new knowledge, skills and the capacity to continuously learn how to learn, but also as a context for the creation of new communities of practice, the link between case based learning a real change is increased and strengthened. As was noted at the outset, cases are about learning: learning that, learning why, learning how, and learning together.

Not all forms of conflict are destructive. Developmental psychologists, for example, have long maintained that a disequilibria or dissonance within the cognitive structure of the person is the engine that sparks movement through stages of intellectual and moral development.\(^{20}\) Research in the field of motivation suggests that conceptual conflict can create what is described as epistemic curiosity that motivates the search for new knowledge and information, a

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process that is deemed to be essential to the reconceptualization of existing knowledge. Conflict depending upon how it is managed can have constructive outcomes.

Johnson and Johnson, in this context, have developed a framework for what they describe as constructive controversy that has direct applicability to the process of case based learning and is very much in the spirit of the approach to learning adopted in this Handbook. Constructive controversy, they argue, occurs when one person's ideas, information, conclusions, theories or opinions are incompatible with those of another and the two seek to reach an agreement. Deliberate constructive controversy differs from concurrence seeking, debate and individualism. Debate exists when two or more individuals argue positions that are incompatible with one another and a judge, or other third party, renders a decisions as to the winner. The decision presumably reflects the best position on the issue presented. Concurrence seeking occurs when members of a group inhibit discussion to avoid any disagreements or arguments. This is very close to what Irving Janis has called group think: the overwhelming desire to concur with the views of the members of a group, even in the face of compelling alternative evidence and argument. Individualistic efforts exist when people work on their own without interacting with or paying attention the views of others. Whether controversy results in positive, or negative consequences, depends on the conditions under which it occurs and how it is managed.

Cases are often developed to engender controversy among those involved in the learning process related to the situation in the case. Managing the process of engagement in controversy in a way that exerts positive developmental outcomes is one of the contributions to case based learning that flows from the constructive controversy framework.

Morton Deutsch has suggested that the context in which controversy is located affects the degree to which positive outcomes result. In this regard, he posits two structural conditions in which conflict can arise and be engaged with. The first is a competitive context which tends to promote close-minded disinterest and rejection of the ideas and judgments of an opponent. The flow, in this setting, is directed to confirming and strengthening ones own position, rather than understanding the views of others. Cooperative contexts are different. In these settings, constructive controversy induces feelings of comfort, pleasure, and helpfulness in discussing opposing positions, open-minded listening, the motivation to probe deeply into others views and the search for synthesis.

The difference between competitive and cooperative contexts does not reside in the quality of analysis and intellectual vigor displayed by discussants. Rather, it rests in the overarching purpose and motivation of the process itself.

For constructive controversy to be managed, or facilitated, participants and facilitators, Johnson and Johnson suggest, need collaborative and conflict management skills. These skills are essential in order to be able to internalize and adhere to key norms essential in constructive controversy. These norms are described as follows by Johnson and Johnson:

- I separate my personal worth from criticism of my ideas.
- I remember that we are all in this together and I focus on coming to the best decision possible rather than on winning.
- I encourage everyone to participate and master all of the relevant information in the situation.
- I listen to everyone’s ideas even if I do not agree.
- I restate what someone has said if it is not clear.
- I differentiate before I try to integrate by first bringing out all of the ideas and facts supporting both sides of the argument and clarify how positions differ.
- I try to understand the views expressed by others by viewing their arguments from their perspective.
- I change my mind when the evidence or force of the argument clearly indicates that I should do so.
- I follow that golden rule of conflict: act toward the opposition, as you would have them act toward you.
- I can disagree with another’s ideas while at the same time affirming their personal competence.

Based upon their extensive research and clinical practice Johnson and Johnson have developed a constructive controversy procedure that has direct applicability to the case based learning process. The procedure entails a number of steps:

- Step One: groups are formed and propose several courses of action that they believe will solve the problem under consideration.
- Step Two: the members of the group form advocacy teams. To insure that each course of action that was proposed receives a fair hearing. Each advocacy team, when given one of the proposed solutions, researches its position and prepares a persuasive presentation to convince other group members of its value and validity.
- Each advocacy team presents to the group without interruption the best case possible for their position.
- Open discussion follows including refutation and rebuttal.
- Next each advocacy team is given the position of another advocacy team and are required to further elaborate and present it to the group. This cycle continues until all advocacy teams have presented all positions.
The final stage is the attempt to reach an overall group consensus. This is undertaken in a variety of ways including a summary and synthesis of the best arguments for all points of view.

In the last step the group processes how well it functioned in the entire learning process and how it might improve in future.

Dialogue and constructive contravener frameworks speak directly to one of the underlying themes in this handbook and that is that many of the conflicts we observe and participate in within organizations and interpersonal relations are structural in nature. They are rooted in the design of contexts, including contexts of learning. They are not, as is so often assumed, problems. They are structures that are inadequate to accomplish our goals. As Robert Fritz puts it: “They are like rocking chairs; structures designed to oscillate. That is all they can do. If we found ourselves in a rocking chair but we wanted to travel downtown, we wouldn’t attempt to “fix” our rocking chair by putting wheels on it or by installing a motor, steering wheel and brakes. We would get out of the rocking chair and get into a car.”

When we are confronted with inadequate structures our initial inclination is to enter into a problem-solving mode and try to fix what we think is wrong. But fixing something ill defined to begin with does little to help us achieve our goals and aspirations. Fixing something means that we take what is there and repair it. Redesigning something means that we start from scratch and rethink the premises that guide us.

Capacity building, as a process, can be problem focused or invention-centered. In the problem solving orientation, the tendency is to take steps to make something go away; to eliminate it from a system. In the invention-centered mode, the focus is on taking action to bring something into being. To add a new dimension to the system. The processes are dramatically different.

A problem focused orientation leads to capacity building initiatives that are akin to swatting flies in the heat of summer over a dead carcass. The activity is frenzied, and may satisfy some innate need to be seen to be doing something, but as long as the carcass lies there dead, it will never end. The structure that generates the focus of the effort in the first place remains. An invention centered approach suggests that one step back and examine the structural conditions that are producing the unwanted flies in the first place. Through invention, we would bury the carcass and disinfect the surroundings leaving a space that enables new behaviors other than fly swatting to be possible.

The actionable learning framework is designed to provide the enabling conditions for the creation of new spaces and new designs for renewed and enhanced human performance. It is invention centered and many of the ideas, tools, models and techniques associated with it provide the enablers for the creation of new spaces and new designs.
Case Based Learning as Narrative Encounter

Cases facilitate learning, since they are essentially narratives, and narratives provide one of the central categorising mechanisms of the human mind. We think in categories, about categories and through categories. Man, woman, good, bad, efficient, wasteful, productive, strategic, leader, follower-these and countless others which could be named are categories. They represent aspects of reality and serve as containers for the meaning that a given culture assigns to them.

Categories save mental effort, help us deal with information, and provide receptacles of meaning. But categories also mask dimensions of reality and experience, blind us to different perceptions of reality, and form the basis of typing people. Categories are not found; they are created within cultural contexts and, thus, they are, to a degree, limited in their capacity to encompass all of human experience. All language, moreover, contains rules for categorisation.

When we approach and interpret the world around us, we often try to fit our perceptions to the categories in our mind. These categories structure our individual and collective sense of what counts as knowledge. When we move from knowing to telling, however, we do so through narratives or stories. When I attempt to share my view of the world with you, or convince you of one thing or another, more often then not, I will use a narrative or story to do the explaining. You then decide whether that story fits with your story and, if not, we will often engage in sharing stories, comparing stories, superimposing stories or denying stories. If out of this process a new story emerges that we both share, then we will re-engineer our pre-existing categories into the new story, or frame, out of which new meaning will emerge.

Case based learning is a learning strategy that energises the disposition of people to make sense of the world through narratives, or stories, and builds on that by developing encounters with new narratives which deepen and/or transform existing understanding.

As a narrative, or story, a case exhibits a particular structure:

- It has a cast of human characters being capable of willing their own actions, forming intentions, holding beliefs and having feelings
- It has a plot with a beginning, middle and end in which particular characters are involved in particular events
- The plot has a steady state grounded in the ordinariness of things

That state gets disrupted by a trouble caused by human agency or other factors

This trouble in turn evokes efforts at redress or transformation of the state

These efforts usually succeed or fail

With the result that the old state is restored or a new state is created through transformation

And the story concludes with lessons learned or other implications

Put another way, a narrative is a situation, which unfolds when our typical ways of dealing with the world, our scripts, breakdown.

How does the narrative structure of most cases stimulate learning? It does so, firstly, because it presents information in story form and new stories provide new ways of organising and giving meaning to experience. The new story provides a new category within which the mind can organise and store information. Moreover, given the structure of most cases as stories, the mind is confronted with dissonance or discrepancy: the typical scripts used to understand and cope with the world apparently are no longer functioning well. Resolving this discrepancy and dissonance requires that we examine our existing categories, and the specific stories attached to each, and to either modify them to account for the discrepancy, or internalise a new story.

The first action entails a process of elaboration of one’s understanding of the world and the concepts brought to bear in that process. The second process calls for a transformation in one’s worldview and the injection of new concepts to guide that process. Each process spawns new learning and greater understanding. Elaborative learning is a central process in any effort to strengthen existing capacities in individuals, group and organisations. Transformational learning underpins efforts to develop and build new capacities. Well-crafted cases, and case based learning processes, can be powerful ways to generate both elaborative and transformational learning which are the keys to strengthening and developing capacities and capabilities.

Building Learning Capacity

This Handbook treats case based learning as part of a larger framework for capacity building and training, rather than as an isolated and stand-alone activity. Designing for case based learning, as a consequence, entails the application of similar principles employed in the effective development of high performance training and learning activities. In this regard, one of the goals of the Handbook is to provide a framework, which enhances and accelerates learn-
ing. Improving the effectiveness of learning in case based learning begins with the recognition of a number of key principles for learning enhancement:

● **Learning Involves the Whole Mind and Body and All of the Senses**

Learning does not involve a disembodied mind operating on content. Rather, learning is a multi-sensory activity in which emotions, social interactions and bodily functions come directly into play. For example, stress, a key ingredient in learning, can be managed as a positive or negative factor generating high motivation, or withdrawal and fear of the unknown. Prior experience, a critical force that affects a person’s readiness to learn, is not merely the recollection of ideas acquired over time, but encompasses, as well, the emotional dimensions of that experience. Learning to feel and feeling to learn operate in ways, which can enhance or block learning.

● **Learning Is Creation Not Consumption**

Learning is often treated as a form of consumption, in which learners absorb content from a range of offerings. They “take it in”, in other words. Most recent research in the cognitive and learning sciences, however, challenge this prevalent view. Learning is increasingly seen as an act of creating meaning, transforming ideas and exploring emotions. This involves an active, rather than passive stance, on the part of the learner. Learners learn best when they can engage the content and the learning processes and transform each in the process. Learning activities which stimulate the construction of meaning, rather than serve as a content cafeteria in which various bits of pre-structured meaning are absorbed, are likely to positively impact the acquisition, transformation and transfer of learning.

● **Collaboration Aids Learning**

Human beings are social animals and, as such, derive much of their meaning and knowledge through interaction with others. Case based learning, of course, has a long tradition of recognizing this dimension of learning, through the use of small groups and open case discussion. If designed properly, case based learning can further increase a person and a group’s capacity to collaborate and share, which further enhances and accelerates learning.

● **Learning Takes Place on Many Levels Simultaneously**

As noted above, learning is a multidimensional process, not merely a cognitive one. In any learning setting, people learn at different levels simultaneously. While dealing with new ideas,

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learners are also dealing with the emotional tone of the ideas. Moreover, there are always unconscious processes in learning that also transform knowledge and experience. Some people actually daydream while learning and it is through the daydream itself that new ideas are born. Intuitive forms of knowing have also long been documented, particularly in research into creative thinking. No single piece of content, or theme in a case, in other words, will be approached by learners in strictly one-dimensional terms.

- **Learning Improves when There Is Feedback, Reflection, Immersion in Real Tasks**

  Human beings selectively perceive and respond to their environment and others within it. This is a basic adaptive mechanism used by human beings to navigate their changing environment. Learning encompasses the same processes of selective perception and response. In this regard, learners benefit enormously from timely feedback, as a basis upon which they can check the adequacy of their perceptions and adaptive responses. But learning also requires time for reflection, in which ideas can be placed within pre-existing cognitive structures and the remembered flow of experience. Thinking about one’s thinking is as important as the act of thinking itself. Reflection, rather than merely response time, is an important component to build into the processes of case based learning. Since learning entails the restructuring of prior experience, the nature of experiences offered in a learning task is critical. To a large degree, matching a learner’s desire, or need to know, with experiences and learning activities, which are real, enhances the learning process. Learning through experience, in other words, is quite different than learning about experiences.

- **Positive Emotions Enhance Learning**

  People feel while they think and vice versa. Learning is affected by emotional and motivational factors. A sense of personal efficacy, for example, has been found to positively influence a person’s willingness and capacity to learn. So too, does what might be called a “sense of will” or “stick-to-itness”. Emotions often affect the sustainability of learning and the willingness to confront dissonance and dilemmas. Positive sense of the self and interrelationships with others are powerful factors in the learning equation.

- **Learning Is Enhanced when Knowledge Is Represented in Multiple Ways**

  Howard Gardner has posited the idea that human beings possess multiple intelligences, or ways of perceiving, storing, structuring and transforming information and knowledge.24 Gardner

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PART 2     THE PURPOSE IS LEARNING

has suggested that there are at least seven ways in which people use their intelligences to interact with the environment: linguistic (through words and metaphors), logical mathematical (through logical relations and numerical symbols of such); kinesthetic (through their senses); spatial (through locational representations, size and shape); interpersonal (through interaction with others); visual (through images, pictures and graphics); and intrapersonal (through reflection and contemplation). In other words, as people approach the world, they do so through the use of multiple ways of knowing.

Each person, in this regard, tends to emphasize a particular configuration of intelligences in their knowledge construction processes. But all people, potentially, have all intelligences available to them. The point of this research for case based learning is that case based learning needs to recognize that people approach the material and learning experiences of a case in multiple ways. The knowledge creating and learning processes of cases must, as much as possible, allow for multiple representations. In this regard, cases, which are solely print based, for example, and which require only logical analysis, may not match the intelligence of someone who stresses visual and spatial intelligence. Multiple representations of case based knowledge, multiple modes of engagement with both the knowledge and the learning processes and multiple ways of demonstrating and sharing knowledge in the process are the goals for which case based learning must strive.

Learning Styles of People Vary

Within each form of intelligence, people also exhibit different preferred styles of learning. There are a number of learning styles, which have been identified and can serve as a basis for the design of cases. Some people, for example, are sequential in their approach to learning; they prefer content and learning experiences to be ordered in a tightly logical sequence. Others, are more random in their exploration and prefer to search for information and only later impose structure. Some people are abstractly inclined, that is, they prefer to learn through conceptually based knowledge and only later applying that knowledge to real life. Still others, do the opposite and prefer practical real life and hands on experiences, prior to conceptualization. Learning styles research suggest that, where possible, there be created several learning style pathways through a given case and case based learning process.

Performance Is the Test of Learning

Performance is the act of demonstrating knowledge and is a central element in frameworks for enhancing learning effectiveness. Performance is a crucial test of learning transfer: the capacity to apply new knowledge and skill in contexts, and in relation to tasks, other than those used in initial acquisition. In capacity building, it is not merely knowledge about something, that is pursued, but
the capacity to apply new knowledge to tasks and challenges in work and other settings, thereby improving personal and organisational performance. Case based learning, therefore, should provide multiple opportunities and contexts in which to perform and demonstrate learning. Far too often, “good talking” suffices in case based learning, as a basis for assessing learning performance and true acquisition of knowledge. This Handbook stresses the need to broaden the range of performances, which are encouraged and required in case based learning and the design of cases.

Designing Case Based Learning

Capacity building links knowledge and skills to action by building capabilities (knowing that and knowing how) and capacities (praxis). Capacity building is not an isolated learning event, such as a course of study, since it is deeply entwined in the creation of new patterns of behavior in real life settings. So too, case based learning, when viewed within the context of capacity building, must be seen as a process that bridges knowledge, skills and action; builds new capabilities and enlarges the opportunity for a new praxis. Case based learning, therefore, should not be treated as an event or teaching technique, but as a context out of which new praxis, or ways of seeing and doing, is born. Planning for case based learning, within an actionable learning model, is undertaken from this broader perspective.

Jane Vella has suggested a framework for the planning of learning tasks that is congruent with the approach to case based learning and capacity building developed in this Handbook. Vella who calls her framework the seven steps of planning, suggests that, prior to engaging in a learning task, such as case based learning, the designer should pose seven questions. In this Handbook, an additional final step has been added to create an eight step planning process. The steps are as follows:

❖ **Who?**

Asking this question invites a profile of the participants and the number expected. A profile implies that the educator, or facilitator, needs to find out as much as possible about the participants, prior to the learning task, including the type and level of prior knowledge they may bring to the task.

❖ **Why?**

Answering this question will tell one about the situation that calls for or has produced the need for the learning task. A good way to respond to this question is to respond to the question, “the participant’s need is...”

---

❖ **What?**

The answer to this question determines the content of the learning task: the knowledge, skills and attitudes to be developed or facilitated.

❖ **How?**

Answering the question how will produce the structure for the learning task or program and the materials to be used.

❖ **When?**

Answering this question establishes the time frame for the task.

❖ **Where?**

This answer determines the site for the learning task and the opportunities it affords for various types of learning.

❖ **What For?**

Answering this question determines what will be the achievement-oriented objectives for the learning task. Achievement oriented objectives are stated in the form: “By the end of the learning task learners will have to ....” In writing learning objectives, verbs are used that can be quantified, verified and completed. Achievement based objectives are process objectives and describe what the learners will do with the content in order to learn it.

❖ **What Effects?**

Answering this question determines what effects you expect the learning task to generate. In this regard, there are at least four effects which are possible in case based learning: learning, transfer, impact and transformation. Learning describes what knowledge and skills were directly acquired while engaging in the learning task. Transfer entails the capacity to use this learning in new settings beyond the actual learning task. Impact involves measurable changes that occur in an organisation as a result of the injection of the new learning and transfer of knowledge and skills. Transformation involves the degree to which the new learning generated a challenge to existing assumptions, worldviews and ways of knowing such that a new conceptual framework and orientation to the world is born. The design of learning tasks in case based learning, particularly in the context of capacity building, addresses and provides for the assessment of all four dimensions of effect.
The Four Phase Learning Cycle

Once the general design of the case based learning process is articulated through the eight-step process, it is important, next, to fully elaborate the developmental processes, which will underpin specific learning activities. Case based learning is first and foremost a learning experience, the case providing the vehicle. As such, case based learning is enhanced to the degree to which it is nestled within a learning design framework that guides the linkage between the processes and substance of the learning experience. Described briefly below is a four-phase framework for learning design that can be used to guide the case based learning process in capacity building programs.

The Preparation Phase

*Think Before You Act* are the watchwords of the preparation phase. Its goals are to:

- Arouse learner’s interest
- Give learner’s positive feelings about forthcoming learning experience
- Put them in an optimal state for learning
- Create a positive challenge

In this regard, the preparation phase is also dedicated to developing strategies for the lessening of several potential types of blocks that inhibit learning:

- No sense of personal benefit
- Fear of failure or personal embarrassment

The Four-Phase Learning Cycle
Fear of change or personal growth
Indifference to subject matter
Personal problems/distractions
A sense of “I already know this stuff”
Feeling of impending boredom

A number of techniques can be deployed to unblock the learning potential of participants in case based learning:

The Power of Positive Suggestion

Sometimes facilitators reinforce negative feeling about learning through such talk as:
- “We have a ton of material to cover”
- “This is very complex and difficult”
- “I know this is boring but stay with it”
- “This may not make sense to you but try to learn it”
- “Your job depends on learning this”

Rather than
- “After you master the materials you will be able to”
- “You will find this fun and interesting”
- “This is going to be extremely valuable to you”
- “This is going to help you so much you will be astonished”
- “I know you will be successful in learning this because many others just like you already have”

Set Clear and Meaningful Goals and Benefits

- Goals describe the “what” in learning – Exactly what are people going to learn
- Benefits describe the “why” in learning – Specify the benefits of learning prior to the onset of the process

Strive For Total Learner Involvement

- Learning is not a spectator sport – get them involved immediately and at the outset
- Your job is to get the learners involved in what they say and do, not in what you say and do
- Start with a collaborative activity to break down isolation
The Processing Phase

The processing phase of the learning cycle is aimed at developing conditions for an effective encounter between learners and the knowledge and skills to be acquired and created. Its goals are:

- Facilitating the encounter of the learner with knowledge
- Engaging learning through multiple modes
- Using variety to appeal to all learning styles
- Encouraging collaborative learning and knowledge sharing
- Allowing for knowledge creation by learners

A number of techniques can be used to accelerate the learning in the processing phase:

- Represent your ideas in multiple ways
- Use mnemonic devices—memory joggers
- Take notes for someone else in the group
- Have teams develop quizzes about the material for other teams
- Use concept maps
- Have teams build models of the material
- Use role playing

One of the key dimensions of the processing phase in the learning cycle is the encounter, by the learner, with the case content. In this regard, and in the context of the fact that learners exhibit different learning style and strategies, it is important not to be lulled into a feeling that content can be structured in only one or two ways. Case content and cases, in fact can be structured and content sequenced in a number of different ways. Consider, for example, the following types of content sequencing in case design and learning:

- **Chronological**: Arranging case content in a time sequence. Typical examples of this format are cases, which emerge as narratives or stories with actors and events emerging over time.

- **Topical**: Arranging content by issues of topical significance. Cases, which use this framework, are structured into topical or thematic parts. Many business cases use this framework when looking, for example, at the functional attributes of organisations such as finance, marketing, production etc.

- **Whole-to-Part**: Start with a whole model of the process, or idea, and then deal with each of the parts. This case content design approach begins with the presentation of a large, or all encompassing concept or idea, and then uses the case to
illustrate its many component parts. The concept of strategy in organisations can be developed in this way, with applications within organisations in terms of its different components or multiple case applications of the larger concept.

❖ **Part-to-Whole**: Starting with each part or step leading to the whole. Part to whole sequencing of case content leads to an inductive form of reasoning. Cases are designed in a way in which key components of a larger idea or process are gradually introduced with the synthesis challenge being left to the learner.

❖ **Known-to-Unknown**: Start with what learners already know and build from there. These types of cases, often called live cases, use the learner’s personal experience with an issue, as the starting point of the case, and then provides a set of new experiences in which they are required to test, extend or revise their knowledge, in light of the new situation and context. Leadership development provides an excellent venue for the use of such a case sequencing technique.

❖ **Unknown-to-Known**: This form starts with a dissonant experience challenging what learners think they know and then moves to what they know. The use of dilemmas in cases is an excellent example of this technique.

❖ **Step-by-Step**: In this technique content is sequenced on the basis of steps in a process or procedure. Cases highlighting decision making processes often use such a mode of sequencing content.

❖ **Concentric Circling**: In this technique content is organized so that it repeatedly returns to the same idea or issue with increasing sophistication. The use of one organizing concept with multiple case examples of application with increasing complexity illustrates this approach.

❖ **Spiralling**: Start with a concrete example or case and move to higher levels of abstraction.

**The Practice Phase**

The practice phase in the learning cycle involves extending, deepening and integrating skills. The goals of this phase are as follows:

- Help learners incorporate and integrate new knowledge or skill in a variety of ways
Apply problem solving, decision making and other processes to material
• Skill building practice sessions
• Allow for reflection and metacognitive processes

These goals are worked toward by employing various process frameworks through which to enhance such capabilities as decision-making and creative problem solving. These frameworks are elaborated in later sections of the Handbook. In this regard, the purpose is to teach learners the framework itself and provide multiple avenues for their application.

The Performance Phase

In the fourth phase the center of attention shifts toward applying and demonstrating learning. The goals are as follows:
• Help learners apply their new knowledge
• Help learners extend their new knowledge
• Provide performance evaluation and feedback
• Provide ongoing coaching

The case discussion process is the vehicle through which the performance phase unfolds in case based learning.

Learning Tasks In Case Based Learning

Many of the facilitation strategies, discussed, thus far, focus mainly on the facilitator, or instructor, and his/her role in developing a context that is conducive to learning for learners. To a degree, these are instructor-led processes. Parallel to the use of these techniques, it is also important to consider what can be called learner led processes. In this regard, Jane Vella has introduced the idea of learning tasks as an organizing principle for adult learning.

A learning task is a way to structure dialogue. As described by Vella, a learning task is an open question put to members of a small group who have been given all of the resources needed to respond. Learning tasks attempt to ensure learner engagement with new content. Far too often teaching tasks provide a structure for monologue, rather than a stimulus for dialogue and mutual learning. The centerpiece of dialogic teaching rests on the role of the teacher as mediator, who listens to the responses and observes the interactions of learners as they confront new
knowledge and then guides them in a process of co-inquiry toward reflective understanding. Learning tasks can be set to energize the mind, the emotions or the psychomotor dimensions of human functioning.

There are at least four types of learning tasks, which can be designed in case based learning: inductive, input, implementation and integration.

❖ **Inductive Tasks**

Some learning tasks do not introduce new insights or dramatically new knowledge. Rather, they invite learners to clarify where they are, in terms of new content and what their present conception of the new content might be. In other words, some learning tasks are set to probe learners’ pre-existing knowledge and the conceptual structures, which they bring to the learning context. Inductive tasks, when framed as questions, use verbs such as describe, tell a story, define, sketch, name, etc. Inductive tasks begin with the lives and experiences of learners. In case based learning one might ask: “How does your experience in work conform to that of actor A in the case?” or, “Have you ever been in a situation similar to that described in this case?” In most inductive tasks it is the content of the learner’s perceptions and prior knowledge that actually forms the basis of the task.

❖ **Input Tasks**

Input tasks invite the learner to grapple directly with new knowledge, skills or attitudes. Input tasks involve systematically presenting new content for comparison and reflection. In input
tasks, the new material is confronted directly. When presented as an input task, though, new content is challenged and critiqued by the learner, not just received as accepted wisdom. It is, in all senses of the word, critical inquiry. As an example, in case based learning, consider the following questions: “Having read the case, describe briefly the processes used by organisation X to set its strategic direction?” “Are there other processes which could have been used to produce the same or different results?” In setting input learning tasks, facilitators and designers of case based learning can be guided by the use of verbs in their specification of objectives and in the dialogue which ensues with learners.

Benjamin Bloom and his colleagues, in this regard, provided a set of verbs, which reflect learning in different domains. Skillful use of these verbs in questioning and assessment can greatly facilitate the learning, which occurs through input tasks in case based learning.

Recently, based on the work in multiple intelligences theory, a different set of categories for input tasks has been developed. These verbs when used in the process of dialogue and assessment in case based learning stimulate different intelligences, which people possess.

**Bloom’s Taxonomy: Performance Verbs**

<table>
<thead>
<tr>
<th>Knowledge Analysis</th>
<th>Comprehension Synthesis</th>
<th>Application Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Count</strong></td>
<td>Associate</td>
<td>Select</td>
</tr>
<tr>
<td><strong>Define</strong></td>
<td>Arrange</td>
<td>Interpret</td>
</tr>
<tr>
<td><strong>Draw</strong></td>
<td>Compare Combine</td>
<td>Appraise</td>
</tr>
<tr>
<td><strong>Identify</strong></td>
<td>Compute</td>
<td>Interpolate</td>
</tr>
<tr>
<td><strong>Indicate</strong></td>
<td>Construct</td>
<td>Assess</td>
</tr>
<tr>
<td><strong>List</strong></td>
<td>Contrast</td>
<td>Predict</td>
</tr>
<tr>
<td><strong>Name</strong></td>
<td>Create</td>
<td>Critique</td>
</tr>
<tr>
<td><strong>Point</strong></td>
<td>Describe Design</td>
<td>Translate</td>
</tr>
<tr>
<td><strong>Quote</strong></td>
<td>Differentiate</td>
<td>Determine</td>
</tr>
<tr>
<td><strong>Recognize</strong></td>
<td>Develop</td>
<td>Evaluate</td>
</tr>
<tr>
<td><strong>Construct</strong></td>
<td>Discuss</td>
<td>Grade</td>
</tr>
<tr>
<td><strong>Recall</strong></td>
<td>Formulate</td>
<td>Judge</td>
</tr>
<tr>
<td><strong>Order</strong></td>
<td>Distinguish</td>
<td>Measure</td>
</tr>
<tr>
<td><strong>Recite</strong></td>
<td>Generalize</td>
<td>Rank</td>
</tr>
<tr>
<td><strong>Group</strong></td>
<td>Estimate Integrate</td>
<td>Rate</td>
</tr>
<tr>
<td></td>
<td>Extrapolate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Organize</td>
<td></td>
</tr>
</tbody>
</table>
Multiple Intelligences Theory: Verb Categories

<table>
<thead>
<tr>
<th>Verbal</th>
<th>Visual</th>
<th>Logical</th>
<th>Musical</th>
<th>Interpersonal</th>
<th>Intrapersonal</th>
<th>Bodily</th>
<th>Naturalist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report</td>
<td>Design a story</td>
<td>Reason</td>
<td>Sing</td>
<td>Discuss</td>
<td>Journal</td>
<td>Dance</td>
<td>Relate</td>
</tr>
<tr>
<td>Paraphrase</td>
<td>Paint</td>
<td>Collect</td>
<td>Listen</td>
<td>Respond</td>
<td>Intuit</td>
<td>Sculpt</td>
<td>Discover</td>
</tr>
<tr>
<td>Write</td>
<td>Draw</td>
<td>Record</td>
<td>Compose</td>
<td>Dialogue</td>
<td>Reflect</td>
<td>Perform</td>
<td>Uncover</td>
</tr>
<tr>
<td>Joke</td>
<td>Observe</td>
<td>Analyze</td>
<td>Audiotape</td>
<td>Report</td>
<td>Log</td>
<td>Prepare</td>
<td>Observe</td>
</tr>
<tr>
<td>Create</td>
<td>Illustrate</td>
<td>Graph</td>
<td>Improvise</td>
<td>Survey</td>
<td>Mediate</td>
<td>Construct</td>
<td>Dig</td>
</tr>
<tr>
<td>Label</td>
<td>Diagram</td>
<td>Compare</td>
<td>Select music</td>
<td>Question</td>
<td>Study</td>
<td>Act</td>
<td>Plant</td>
</tr>
<tr>
<td>Recite</td>
<td>Depict</td>
<td>Contrast</td>
<td>Critique music</td>
<td>Paraphrase</td>
<td>Rehearse</td>
<td>Role-play</td>
<td>Design</td>
</tr>
<tr>
<td>Listen</td>
<td>Show</td>
<td>Rank</td>
<td>Evaluate</td>
<td>Affirm</td>
<td>Express</td>
<td>Pantomime</td>
<td>Display</td>
</tr>
<tr>
<td>List</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retell</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Sort</td>
</tr>
</tbody>
</table>

❖ Implementation Tasks

An implementation task invites learners to use new knowledge, skills and attitudes in the learning environment immediately. They implement these skills and understandings in the workshop or class setting. An implementation task invites learners to review content and practice new skills. Consider the following example in case based learning: “Now that we have seen how organisation X uses accrual accounting, develop a framework which can be applied to organisation Y”. Or, “Provide a briefing sheet for the Minister of Health on the question of policies for AIDS prevention which incorporates the knowledge about the disease which you have gained in the case”.

❖ Integration Tasks

In an integration task, learners are invited to apply what they have learned to a setting other than the learning task itself—to their life contexts. This can be done through imagining the implications for that setting, by remembering a similar experience, or by designing a real project to be undertaken. Implementation tasks examine the capacity to transfer new knowledge and to generalize from that experience. Implementation tasks provide opportunities for ongoing assessment without it being a testing task. The integration task is a learning task first and foremost.

Designing and facilitating learning tasks, as a core component in case based learning, demands skillful facilitation and planning. Tasks do not just emerge full blown as learning contexts simply because they have been set or written down. In this regard, Vella suggests the following guidelines for the art of leading learning tasks:
- **Prepare Each Learning Task**
  It is important to prepare each learning task in advance and the sequence of such tasks in the course of case based learning.

- **Walk Through the Task**
  After the task is prepared it is advisable and helpful to test it out on a partner in order to grasp whether there are unintended nuances or misinterpretations.

- **Set the Learning Task Clearly**
  Be sure to clearly set the learning task for the group. In fact, beginning with the phrase “The next learning task is often a useful entrée to it.

- **Set the End Time**
  Every learning task has a time frame. Be specific as to how much time will be available to engage the learning tasks. This provides focus and order to the learning process.

- **Ask the Learners: “Is the task clear?”**
  This is an important device to insure that all learners clearly understand the task and allows you to make alterations if confusion reigns.

- **Sit Still and Pay Attention**
  This is often a difficult challenge for most instructors and one, which goes to the heart of the approach to learning through learning tasks.

- **Welcome Responses and Sharing**
  Your job is to welcome responses and affirm the efforts involved in generating them.

- **Summarize the Task**
  At some point it becomes important to summarize the patterns and responses generated in the learning task. For example: “What we have just learned....”

- **Make a Smooth Transition to the Next Task**
  Having completed a task take a short break and then introduce the next learning task showing how it connects to the one just completed.
Designing and leading case based learning through learning tasks is challenging and demanding work. But the benefits are equally challenging and powerful:

- **Immediate learning**
  If you employ learning tasks in case based learning, then learning occurs immediately. A learning task implements an achievement based learning objective which in turn describes what learners do with the content they confront. Learning tasks, as a result, are one way in which to operationalize the entire notion of learner centered education and training.

- **Telling Is Not Teaching**
  Learning tasks prevent us from merely telling; a habit, which unfortunately pervades much instruction in capacity building programs. In telling, the content is merely heard. In learning tasks, the content is constructed, analyzed, compared and synthesized by the learner and with the support of the instructor.

- **Engagement**
  Learning tasks demand engagement and are designed for just this purpose. And engagement stimulates the active construction of knowledge and meaning. Engagement generates lasting learning.

- **Inviting Critical Thinking**
  Learning tasks invite critical thinking and reflection. One reason is that learning is a function of the degree to which we contest the content.

- **Critical Feeling**
  Learning tasks invite both the learner and instructor to explore feelings in a critical and supportive manner.

- **Comprehensiveness**
  A learning task invites the learner to deal with the content as a whole rather than in a fragmented and linear fashion. Content, objectives and tasks are clearly linked and mutually reinforcing.

- **Completion**
  Learning tasks since they stand as a whole insure completion or full mastery in the overall learning process.
- **Assessment**
  Given the wholeness and completeness of a learning task the opportunity for assessment of progress in learning is facilitated and ongoing.

- **Dialogue**
  The structure of learning tasks invites and calls for dialogue among learners and between learners and the instructor. In this process, the learner is a subject not an object of the process.

- **Diversity**
  Learning tasks can vary greatly and allow for a diversity of learning styles to be energized and employed.

- **Multiplicity**
  Learning tasks call for cognitive, affective and psychomotor aspects of human functioning and information search.

- **Instructor Learning**
  Learning tasks, since they place the role of the instructor in that of an observer and mediator of learning experiences, even teach teachers!
Part 3
Unpacking the Case

What exactly is a case? Is it a single recognizable entity? Does interaction with cases afford learning opportunities not found in conventional teaching? These, and other, related questions are explored in this section.

The word “case” comes from the Latin *casus*, meaning “occurrence”; or something, which happens. In its educational use, *case* refers to a description of something, which has occurred. The word case is also used, in educational contexts, in two different ways: case study and case history. A case study is different from a case history. A case history is a description, or record, of what happened to someone or an event, which occurred in some situation, with no particular guiding purpose in mind. A case study, in contrast, is designed as a learning vehicle with specific educational objectives in mind.

The typical case, when used as a learning vehicle, consists of written and graphic material, often several pages in length, of an actual situation facing an organisation or decision-maker. It will describe how the current situation developed and what problems or opportunities key actors, in the situation, are facing. Tables of financial and other information, as well as diagrams, often form part of the illustrative material in the case. Increasingly, cases are being developed using interactive multi-media technology, in which live decision-making and discussion are portrayed.

Cases vary in a number of ways. They may encompass a few sentences, or be hundreds of pages long. Many people wrongly associate the length of a case with its level of difficulty.
Often the most difficult cases are presented in about one page, or even one paragraph, in length. Although cases normally involve organisations, this is not necessarily required. Cases have been developed which describe the problems of individuals, groups, nations and social institutions. Moreover, cases are not confined, in their use, to programs in business or management, but are also increasingly employed in training programs in the helping professions, such as medicine.

Cases may be designed to provide accurate descriptions of real situations, or they may be works of fiction and imagination. Most cases combine both elements in their design and narrative. Indeed, some case writers actually “rewrite history” to suit their educational objectives.

In many peoples’ minds, the case method is associated with the style developed for teaching MBA students at the Harvard University Business School. At Harvard, students are given a case study to examine and they proceed to discuss their analyses in large open classes, with an instructor leading the case by asking questions of individuals, promoting class discussions, summarizing, prompting, generalizing and guiding the learning process. While the Harvard model may be very well known, it represents only one way in which case methods are and can be used in the learning process. In this Handbook, there is a diversity of case study approaches described as exemplars of case based learning.

**Cases and Exercises**

It is perhaps useful, at the outset, to make a distinction between the case based method and an exercise. On the surface, an exercise may seem similar to a case, in that an exercise often uses a description of an actual, or fictitious situation, as an example. However, the objectives of undertaking an exercise are different from those involved with case based learning.

An exercise typically provides a context in which a person learns to apply a technique, concept or principle. A case is used, on the other hand, to develop a broad range of skills, some of which are directly related to the case and others, which contribute to the development of broader skills and insights in a field of study or practice.

An exercise often has a single solution, or one particular way of handling a situation. In a case, there are often broad ranges of competing and parallel solutions, which are possible and can be explored. Unlike an exercise, the central purpose of a case is to have students confront and explore possible solutions to complex, unstructured problems. Algorithms, and other logical devices, while necessary in case learning, are often incomplete as a basis for approaching the problems presented. The intuitive dimension of thinking is regularly called upon in case examination.
The Use of Cases

Cases can either be “dead” or “alive”. A “dead” case is one in which the student has available all of the data and information, in the context of the case material, to solve the problem. In a live case, further information is injected into the case as time unfolds. Often participants, through their own analyses and other work on the case, produce data, insights and information, which is added to the case itself. In this context, a beginning case can look quite different, during and following the case analysis and discussion process, depending on what different participants do with the case. The same principle applies to different instructors who may add different insights to the same presenting case. Cases, and their “meaning”, are, as a result, always emergent.

Cases can be used as the vehicle for the teaching of an entire course or capacity building program, as in Harvard, or as a key component in the teaching program of a course. When used as a teaching vehicle in a course, there are usually two possible variations. The first is where the participants are given a case prior to the class and then engage in a class discussion of the case and the problems it presents. The teaching styles in this discussion can also vary from non-directed to directed; the difference being the amount of structure, that the instructor imposes, on the flow, focus and outcomes of the discussion.

A second variation, when using a case as a vehicle of instruction, involves the learners, either alone or as part of a group, making a presentation on their analysis of the case in front of the class and the instructor. Often, in case based learning models, learners select, or are assigned to, study groups, composed of other learners. These study groups can be constituted differently to deal with different types of cases or can function on a permanent basis throughout an entire course of study.

Cases are also increasingly being utilized as a basis for the evaluation of learner understanding and performance. Again, there are variations in this practice. One method is to give learners a prepared case, which they examine and in relation to which they prepare a written response. This is called an open book format and learners complete the response in settings other than the classroom.

A second variant on this assessment method is to give the case to the participants, but require that they develop their response in an examination setting. This is called closed book. A third method involves giving a participant a fresh case, which they respond to within pre-established time frames either at home or in class. The method selected depends, of course, upon the objectives of the evaluation.
Cased Based Learning: 
Advantages and Limitations

No teaching method is suitable for all learners, all content and all situations. And all teaching methods have advantages and disadvantages. Before outlining case based learning methods in detail, a review of some of the key advantages and limitations of the approach is appropriate.

Advantages

A number of advantages have been cited as flowing from case based learning method. These are as follows:26

- **It is personal.** It places the burden of thinking and reflection on the learners and arouses their interest and motivation by making them active, rather than passive, participants in the learning process.

- **It is real.** Learners often examine situations and problems that have actually occurred in businesses and organisations.

- **It is specific.** Learners often deal with specific facts, decisions and evidence, rather than vague generalizations. The method brings out the difficulty of applying formulas and generalizations to all situations and types of problem. Situations are seen as examples of general instances, but which require unique approaches.

- **It encourages group learning.** It provides opportunities to work cooperatively, in group and team situations that often characterize working settings in contemporary organisations and businesses.

- **It establishes a strong sense of give and take.** Learners must justify their views and opinions and take into account the views of others.

- **It sensitizes one to differences.** Learners, through discussion of a common case, often come to see that people see the same situation in quite different ways, depending on their way of approaching the case and their predispositions toward the issues.

- *It encourages the search for alternatives.* Cases produce a realization that problems often have multiple solution paths. Many cases are designed to reflect ill-defined and ill-structured situations and learners, in examining these, come to see that there are multiple solution paths to shared problems.

- *It develops judgment and the ability to think independently.*

- *It enriches understanding of human behavior.* It brings about a better understanding of human behavior and the myriad of factors that can, and do, influence people in the making of their decisions and leading organisations.

- *It requires the ability to communicate.* It increases the learner’s skill in communicating ideas and reporting on findings, both of which are essential skills in the modern organisation.

**Limitations**

There are, however, a number of limitations that various people have attributed to the case method. Some of the more significant of these reservations relate to the following: 27

- In the minds of some people, the case based learning method does not actually relate to real experience, but to a simulation of that real experience. In case discussions, learners do not actually have the responsibility that comes with making decisions in real life, nor do they confront the emotional elements that often accompany such decision-making.

- The case based approach, some argue, is incomplete, since learners are not engaged in the process of carrying out decisions over time or seeing how subtle changes in a situation can alter the type of decisions being made.

- The case based approach, in some peoples’ minds, over emphasizes the making of decisions. In real life situations, people often deliberately choose, for strategic reasons, not to make a decision, or to delay decisions, even in the face of strong evidence.

- The case based method takes a very skilled instructor to bring about the learning entailed in the case and many instructors may not have such skills.

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Some suggest that the case based method is slow and that it is more efficient to directly present concepts and theory, rather than have them derived inductively through inquiry and discussion.

The case method, some suggest, presents greater opportunities for learners, with good presentation skills and public personalities, to show their knowledge and skills, while penalizing others who do not have such skills or inclinations.

As was noted above, no teaching or training method is superior to all others and applicable to all goals and instances. In selecting a case based model of learning, either as the sole, or a component part, of a capacity building program, this incompleteness should be borne in mind.

Case Based Learning as Creative Problem Solving

Case based learning is not solely concerned with the transmission of knowledge to learners, but also extends to the enhancement of core competencies in key skill areas and the development of attitudes. These objectives, when combined, can be described as building the capacity for creative problem solving. The sub-elements which contribute to creative problem solving, through case based learning, are as follows:

Knowledge

Acquiring specific knowledge of a field, or a working context, is not the central objective of case methods. Other learning experiences may be more effective in this domain. But knowledge development is often an incidental benefit of case based learning and it is often surprising to learners how much information they actually acquire through a case, which is applicable to other situations. Even more important in case based learning is the opportunity that it affords individual learners, and groups of learners, to create their own knowledge. In addition, learners often develop what are called “cognitive heuristics”, or rules of thumb, for dealing with types of situations they confront through the cases they examine.
Analytical Skills

The case based learning framework and process promotes the development of a number of analytical skills. Case studies are comprised of data and other descriptive information. One of the analytical skills developed in the case based model is information management. Participants learn how to classify, categorize, organize and evaluate information. They learn to recognize when gaps in information exist and how to fill those gaps. They also learn how to define and explore alternative solutions to problems; how to break a problem down into its component and interrelated parts.

Application Skills

The case learning method provides learners with a context in which to apply concepts, techniques and principles to problems of an ill-structured nature. In some cases, they can actually compare how they applied these concepts to the cases with those actually applied by practitioners and experts. Moreover, people also learn what techniques most appropriately “fit” a given problem situation.

Creative Skills

Cases cannot usually be unraveled through logical analysis alone. Creativity and intuitive thinking processes are essential to good case examination by the learner. Creativity is particularly important in generating alternative solutions to problems presented in and through cases. The appendix in this Handbook provides a brief introduction to a number of techniques that can be used to aid and enhance the creative thinking abilities of learners when engaging a case.

Decision Making Skills

Case studies tend to be action-oriented. They usually demand that the learner engage in choices and recommend action. Certain highly sophisticated computer-based cases also provide a dynamic environment in which learners must make decisions and otherwise deal with the results of earlier decisions, which they had taken in a particular case.

Communication Skills

Depending upon how the instructor chooses to run the class, communication skills can be effectively developed, within and through, the case method. In situations in which learners
are required to make formal presentations of their case examination, presentation and argument skills are developed. Moreover, in the free flow of case discussion and debate in class, students are required to engage in active listening and reasoning, within an ongoing dialogue and debate. The capacity to “think on your feet” is something which effective case learning environments promote and develop.

**Social Skills**

Case discussions, to a degree, are social processes. By active engagement in these processes, students hone their skills in listening, empathizing, control, assertion and leadership. These social skills are especially called upon when learners work in study groups composed of people from diverse backgrounds.

**Self-Analysis Skills**

Often disagreements in case discussions center on value differences, rather than disagreements about facts. In this way, cases provide a context for the examination of personal values—not so much from a judgmental point of view as from the perspective of coming to know oneself better.
Part 4

Designing and Writing Cases

There are a wide variety of types and forms of cases. This is, in fact, one of the advantages of case based learning. Crafting cases is an activity that falls somewhere between writing a play for the stage and producing a technical report. Questions related to plot, scene, dialogue intermingle with issues related to facts, data, trends and patterns. Imagination is important in crafting cases, but so too is a grasp of evidence, concepts and theories. Moreover, cases are written, not only to be understood by those who read them, but also as a context, which stimulates the development of an interactive learning process. The section, which follows, introduces the diversity of types of cases and proposes general guidelines for the development of different types of cases.

Guidelines for Writing Role Cases

In general, there are two types of cases, each of which varies in terms of their “story-line” and plot. One such case type involves the depiction of people within their organisation or other context and the interactions that occur between and among them. These cases, which can be termed “role cases”, invite learners to deal with issues and choices in the context of interpersonal relations and statuses within organisations. A framework for the development of such cases is provided below.
1. **Identify a Case Goal**

Identifying a case goal is the foundation for the development of all cases. The case goal provides the learning purpose for, and focus of, the case. The goal guides the developer toward the information, that will be required in the case.

Typical case goals include the following:
- To resolve a problem/event/situation
- To persuade/influence a person or group to act in a certain way
- To establish causative factors for the problem which has been identified
- To gather support/commitment for the resolution of a problem

2. **Establish a Case Objective**

The case objective establishes the “playing field” on which the case will be executed by the participants. The case objective includes the following components:

- Identification of the sector of the firm, organisation or other setting in which the case will occur; for example, marketing, human resources, or information systems. Or, a ministry or program of service.

- Identification of the “cast of characters”, or major roles in the case, by their position and titles. This tells you who will be involved in the case.

- Explanation of why the characters are meeting, conversing or interacting. This speaks to the issue of why the encounter took place.

When all three components are tied together, a case objective is established. For example: A meeting between the CEO of a company and a new director of marketing to discuss a strategy to regain lost market share in relation to a drug product. This, in other words, is the scene for the case.

3. **Collect General Background Information**

The objective in this phase is to collect pertinent information on all of the characters involved in the case. For example:

- Education
- Age
- Time on the job
- Prior work history
- Current duties and responsibilities
- Number of persons supervised
- Person to whom he/she reports
- Job objective
- Next job aspired to
- Personal interests and pressures
- Values and attitudes

Note: Not all factors need to be used but should be developed in a profile prior to any actual case writing.

4. **Depict the Case Study Figures or Characters**

In this step, you add information that will give life to the characters in your case. For example, the following types of information are often useful:

- The job pressures of each person in the case. For example, demands being made upon them for such things as increased productivity, cost reductions, budget reallocations or peer pressures.

- Personal pressures, for example, an ailing spouse, children who are delinquent, financial concerns, marriage breakup or larger conflicts between personal and career goals.

- Historical relationships between the parties involved, whether good, bad or strained in some way. Length of the relationship and any “rumors” about the relationship.

- Hidden agendas in the interaction between the people involved in the case situation. For example, one person always trying to impress the “boss” in order to advance in his/her career.

- Outcomes, or what each person hopes to achieve in the situation.

- Possibilities for cooperation: consider personal motivation, lack of trust between the parties, different leadership or decision-making styles etc.

- Personal values, for example, one person favors being open and truthful and the other keeps things to himself/herself and is always involved in deception.

Note: Again not all of the above factors need to be used but should be developed in the character profiles.
5. Describe the Culture of the Organisation

As an added dose of realism, the prevailing culture of the organisation concerned, and any significant subcultures within it, should be developed in the case.

In writing role cases, the following techniques are helpful for generating and maintaining learner interest:

- Use a “story” format. By presenting your case as a story, you ensure universal appeal. Everybody likes a good story and, since it is a story, no one has an advantage because of prior information or knowledge. Stories tap learners’ experiences.

- Give the characters in your story “fun names”. A little humor usually helps characters come to life. Example: “Penny Wise: Chief Accountant”; “Attila Smith: Overbearing boss” etc.

- Add dialogue to your story. Your case has characters and people do talk. So let them speak in the case. But keep your dialogue authentic, since you do not want students to say, “people do not talk like that”.

- Provide realistic details for authenticity. Use slang, shop expressions and typical facial and body reactions for a sense of realism.

- Write descriptively. This is the greatest challenge in case writing because it forces the writer to suspend any judgment on the case. Descriptive writing also means attending to the senses—taste, touch, smell, sight in describing people’s reactions and feelings.

- Present a logical flow. It is difficult for students to follow a story if the sequence of events or actions is distorted. Draw a map of the event and action sequence before you write.

- Provide both completeness and mystery. Your story must provide enough information, in order that learners can generally understand what the situation is and the events within it. On the other hand, you do not want to build “ready-made solutions” into the case. Finding solutions is the task of the student. Leave a thread or two within the story hanging or a situation and its consequences incomplete.
Guidelines for Writing Conceptual Cases

Unlike role cases, that center on characters in a story, conceptual cases are developed to illustrate, or require the application of, an idea, principle or concept to a situation. The framework for the development of conceptual cases includes the following elements:

1. **Decide on the Principle**
   This is the most critical step. It involves deciding on the core concept(s) to be illustrated in the case. For example, the problems of creating a new delegated system of authority in an organisation whose culture has traditionally been heavily bureaucratic with top-down decision-making.

2. **Establish a Situation**
   This involves the creation of a situation, a combination of events, actions, outcomes and context that will demonstrate, or require the student to infer, the operation of a principle. This requires that the writer think of typical problem types and solutions.

3. **Develop Appropriate Symptoms**
   These may be positive or negative. In this step, the writer is seeking out incidents, or situations, which illustrate the operation of the principle. For example: a strategic plan which consumed substantial time and money to develop, and which has been announced publicly by the CEO of the company, is starting to fail because it did not take into account the development of a superior new product by a competitor.

4. **Develop the Characters, Actions and Decisions**
   Describe who, what, where, when, how and why in terms of the situation. This is the basic narrative of the case.

5. **Write the Case**
   In this section utilize the same techniques discussed in role cases.

6. **Provide Questions or Tasks**
   Provide a key question or questions to be answered by students in the case. Alternatively, ask the students to undertake a key task as part of the case (for example, produce a short briefing paper for the President of the Company on the situation and decision options).
As in any form of effective writing, case writing benefits enormously from the development of a plan of attack, or design, before the actual writing begins.

**Formats for Case Development**

A case can be presented and written using many formats. The selection of a format, of course, is determined by the learning objectives, which guide the case writing and the type of learning process envisaged for students. Below are described several of the more popular and useful formats for case design and presentation.

- **The Classic Harvard Comprehensive Case**

  In a classic case study, such as those employed in the Harvard Business School, students are given a comprehensive case. The case is drawn from a real situation and is thoroughly researched. Data and information is presented in various forms and the situation is presented from a variety of perspectives.

  Because of the comprehensive nature of the case, students must spend considerable time, at least two to three hours and even days, in preparation for the discussion and analysis of the case. The discussion itself is very non-directive, with the instructor’s role being that of a catalyst, “devil’s” advocate, issue-sharpener, referee etc., rather than an expert, lecturer or authority figure.

  The instructor, in the classic case mode, usually starts with the following question: “What seems to be going on here?” The group will usually identify a variety of issues in the discussion. The purpose of the discussion is to identify the “big picture”, or a holistic understanding of the dynamics of the situation. One of the major things learned in such cases is that there is no single or best solution to the case. In some cases, there is literally no solution possible. An example of a classic comprehensive case is included in the appendices.

- **The Short Case**

  The comprehensive case requires substantial time and effort, both in the processes of design and discussion. In industry training, the use of such cases is limited often by the availability of time. Short cases often accomplish similar objectives as comprehensive cases if they are well designed and the discussion is clear and crisp.
The case below is an example of a short case:

INTERNATIONAL MEATS INC.

International Meats Inc. has a job that is marked by extremely high turnover. Employees rarely stay more than three or four months. Some workers leave after only two weeks and the investment by the company in training is lost. Absenteeism and lateness rates are also extremely high. The reason? The duties are repetitive and tedious, dirty, smelly and generally of low status in the community. Typical tasks include readying the garbage for removal, sweeping and mopping floors, scrubbing walls, cleaning washrooms. The volume of work is such that free time ranges from 45 minutes to nearly 2 hours depending on the location of the work and the worker.

Assume that you are the personnel officer of the plant. What might you do to extend, in a significant way, the amount of time that employees stay with the company?

Below are a sample set of possible solutions to the Meat Company case which are drawn from different perspectives:

1. Job Design Types of Approaches

- Mechanize the job to remove, as much as possible, the dirty work and monotony of the job.

- Ensure the presence of high quality materials and equipment to minimize irritations on the job.

- Enrich the job with higher-level duties and responsibilities either on the job or elsewhere. Note: free time is available for this.

- Utilize the “free time” of employees for training for higher-level jobs in the organisation.

- Distribute or rotate tasks so that the same person does not have to do the same monotonous work all of the time.
2. **Recruitment Type Approaches**

- Spend as much time interviewing for this type of job as others, even if they are seen to be low level. If you do this, you will lessen the eventual turnover rate.

- Selectively interview only those who like or tolerate doing this type of work.

- Be candid about the drawbacks of the job and show candidates the work before hiring them.

3. **Motivational Approaches**

- Treat the position as an “entry-level” job and move employees to other positions as soon as possible.

- Add incentives by allowing the person to leave as soon as the job is done and still getting paid for the full day.

- Ask the employee what could be done to lessen the drudgery of the job.

- Give sincere praise for a job well done.

- **The Incident Process**

The incident process, like the short case, represents a reaction to the lengthy comprehensive case. The incident process is used to teach people to collect a range of relevant facts before making a decision.

In this case based learning process, the group receives a short description of an incident, which can be read and understood quickly. The incident usually presents a situation in which the manager concerned (that is the students) must make a decision. However, before the manager decides, it is important that he/she have as full a set of facts and information as possible. How does one get these facts? By asking the instructor.

Group members, in the role of decision maker, must ask the instructor a number of fact-seeking questions such as:

- What is the organisation like? The instructor then distributes a set of organisation charts to everyone.
• What is the company’s financial condition? The instructor then gives the students financial data on the company.
• Are there additional records on the performance of the company?
• The process continues...

If the instructor cannot answer the learner’s question with appropriate information, then he/she responds as follows: “We do not have any information on that point.”

The next step in the incident process is to define the major issues and sub issues which exist in the incident. In the last step, the instructor asks the students to make their decision and give their reasons for it.

The Incident case has a number of advantages:

• The short case gets the group into action very quickly.
• It obviously teaches the manager to respect facts and seek them out in full before making a decision.
• It involves participants to a high degree.
• It sharpens one’s skill in decision-making.
• It simulates the “flow of information and issues.”

The Action Maze

An action maze is a highly structured group activity, that centers on problem solving and decision-making. It is a form of case study, but goes beyond it in its complexity. It works as follows.

The instructor gives the participants a written case. The case, not only states the problem, but also provides options, in terms of potential solutions. The group discusses these options and then agrees to a single solution. They then ask the instructor for another “frame”. The next frame explains the consequences of the decision they selected. The group receives more alternative courses of action with the second frame and the process repeats itself.

To illustrate the action maze techniques consider the following case:
You have a secretary N.G. Sack who has been taking advantage of his position and has been abusing his leave privileges with frequent late arrivals, long lunch periods, and use of sick leave excessively. The problem is complicated by the fact that N.G. has been around in the job for three years, knows the job very well, and is an unusually helpful and fast worker. But you have informally received many complaints from other staff that N.G. seems to be allowed special privileges not given to them and which do not go with his position.

**Your action is?**
Select one of the following alternatives:

➢ C: Counsel N.G. on the abuse of the leave regulations

➢ S: Invite N.G. to your staff meeting where a general discussion will be held on the abuse of leaves. Hopefully he will get the message.

➢ L: Lay it on the line. Tell N.G. in clear and certain terms that enough is enough.

➢ N: Do nothing. The problem will probably sort itself out.

The group selects one option, for example, “N”. They are told what happens as a result of that decision. For example: N.G. does not change as your decision assumed he would. In fact, you see that two months later things have gotten worse. So you must now make one of the following decisions: choose between options S, L and two new alternatives. And the process moves on.

Each decision that the group makes produces particular consequences. If high quality decisions are made, the group receives a set of more desirable choices. Bad choices lead to less desirable options and take one further into a maze.

The Action Maze combines decision making about case options and also forces students to deal with the consequences of their decisions. The maze effect is also a powerful experience, as people begin to see how they can become trapped by their own decisions in situations.
The Mousetrap Technique

The Mousetrap technique is designed to show learners that their thinking about organisational issues and problems may be infected by various forms of faulty reasoning: rationalization, use of double standards, inconsistencies, confusing personal and societal values etc.

The Gambling Case, which follows, is adapted from a case used by the U.S. Naval Department of Civilian Personnel in its leadership-training program. It well illustrates the Mousetrap technique.

The Gambling Case

SITUATION ONE

You are Fred Blair, Chief of Administration, in Big City Hospital. This morning you are faced with a perplexing situation. It seems that last night four hospital attendants were caught playing cards for money. The excuse is that they were playing cards on their dinner period, as they often do. Ordinarily no money is bet. But since last night was payday they decided to bet for real money. They were playing just ten minutes past their dinner period when they were spotted by a patient who promptly reported their gambling to the shift supervisor.

The four men have been with the hospital for periods of time ranging from 5 to 8 years. Three have above average performance records; the fourth has a history of periodic absenteeism and was involved in a gambling incident several years ago and received a reprimand as a first offender. One of the good performers has admitted that he urged the others to gamble for money.

The hospital has a clear-cut procedure for all disciplinary offenses. The section on gambling specifies the following:

1. GAMBLING
   A. FIRST OFFENSE
      Minimum: Written reprimand
      Maximum: Suspension for 10 days
B. SECOND OFFENSE  
   Minimum: Suspension for 10 days  
   Maximum: Discharge

2. PROMOTION OF GAMBLING
   A. FIRST OFFENSE  
   Minimum: Suspension for 10 days  
   Maximum: Discharge

   B. SECOND OFFENSE: Discharge

You are Fred Blair and have to decide:

1. Do you enforce the no gambling rule? 
2. If so do you treat all four men alike?

SITUATION TWO

One week after the problem with the four card-players Fred Blair had a very angry visitor in his office—Vina Dixon, the Chief Dietician of the hospital. The following conversation occurred:

Ms. Dixon: “I’m here to find out who is running my department.”
Fred Blair: “What?”
Ms. Dixon: “I am tired of people coming into my department and hassling my employees to buy raffle tickets”
Fred Blair: “Hassling?”
Ms. Dixon: “Oh sure they say it is voluntary and always for a worthy cause—poor children, handicapped adults, older people”. But that isn’t the point!
Fred Blair: “The point is…….”
Ms. Dixon: “That people are promoting gambling on official time and on Government property too.”
Fred Blair: “Which has been going on since year one.”
Ms. Dixon: “Exactly and I am here to put a stop to it.”
Fred Blair: “How will you do that?”
Ms. Dixon: “By calling a spade a spade rather than a shovel. This is gambling not charitable soliciting and I hereby bring
formal charges of gambling against Supervisory Nurse Betty Burns.”
Fred Dixon: “You mean official charges?”
Ms. Dixon: “Exactly. Here is my letter, which has all of the key points. Now what are you going to do about it?”

You are Fred Blair. What should you do about the charges presented?

SITUATION THREE

A month later Fred Blair has another visitor. It is Tom Edmonds, a Department Head who reports to Blair.

Tom: “You will want to get in on this one.”
Fred: “What one?”
Tom: “You know the World Cup of Soccer is on next week and we have our usual pool on it. Only this time the ante is higher and we have twice as many betters. A big pot is really shaping up.”
Fred: “Uh... I’m not so sure.”
Tom: “Come on, you have always played and have picked more winners than the rest of us. Give us a chance to get some of our money back. How about it?”

You are Fred Blair. How do you respond?

As can be seen in the staging of the three case situations, the Mousetrap Technique deliberately structures situations to test the degree of consistency in a person’s decision making. The issue in each case remains the same: gambling. What the Mousetrap Technique does is to alter the situation in which gambling exists and does so in a way, which asks the learner to apply the same rationale and principle from an earlier case to a later one or explore defensible and equitable distinctions.
The Multiple Case Technique

An interesting variation on the case study is to present for analysis three or four small cases on a given problem area. This allows the students to compare principles across three or four different situations. The appendices contain an example of the multiple case model.

The Live Case

Yet another variation on the traditional case study is the live case. This technique involves bringing into the classroom a top-level personage (company president, senior official etc) who represents a live case problem being studied by students. By “live” is meant a problem being currently worked on in the real world.

The case can be presented live to the group of learners and there can begin an interaction and discussion with the group. The immediacy of the actual case, being dealt with by the invited person, increases learner motivation. In some instances, using modern communications technology, the official can present the case via computer conferencing or video from his office. In some uses of the live case, the invited person actually benefits from the discussion and views of the learners. This provides a testing ground for the development of new ideas.

Participant Cases

Another variation on the traditional case involves using cases created by participants. Participants bring their own cases and lead discussion on the themes in the situation. The instructor, not only offers critical advice on the substance of the case, but also evaluates the degree to which the case design achieved its learning objective. Being able to design a case to highlight a problem is one way to find out the degree to which students actually understand the concepts to be covered. When learners become teachers, as in the participant case situation, they are forced to reflect on their level of knowledge and their capacity to deal with a range of questions, which other participants may pose.

A variant on the participant case is to have learners modify a presented case, in a way, which makes the problem presented more complex, or more easily understood.
The Ranking Approach

A good way to involve and excite learners is to have them rank possible solutions to a case, on an individual basis, and then have them discuss these rankings in a group. Below is a case, which illustrates the use of the ranking approach.

Pat Teal, training director for High Tech Diversified Products Inc. has been on the job for 18 months. The training program, as Pat found it, consisted of employee orientation and an occasional skill course. At the outset Pat Teal identified the need for management training and set about the design and offering of a series of highly successful management training programs. The workshops of 18-20 different managers were held in out-of-city locations, ran for five full days, relied heavily on in-group discussion methods and achieved strong positive evaluations from all participants and managers who sent their staff to the programs.

The President of the company was informed of the success of Pat and now wants to “ride” on her success. He wants Pat to provide the same kind of training to about 150 senior managers who will be attending the Company’s annual meeting in Las Vegas. The President also invited various other people to attend including suppliers, customers, business journalists and trade association officials. Several new products are to be unveiled at the meeting. In other words, the President sees this as a public relations and sales promotion event rather than intensive training as Pat has been providing it. Pat appreciates the support and enthusiasm of the President, but knows that you cannot replicate the impact of the training in this extravaganza like atmosphere.

You are a close colleague of Pat doing similar kind of work for another Company. Pat has contacted you for advice in respect of alternative strategies, which might be considered in coping with the request of the President of the company. These strategies are listed below. Rank them in order in which you would recommend them to Pat (no. 1 is most recommended and no. 10 least recommended).
Alternative Strategies for Pat Teal:

- Why argue with your own success? Just try your best to give the President what he wants.

- A key department head who has an “in” with the President is aware of the problem and sees it the same way that Pat does. This person would probably intercede with the President if asked by Pat. Why not ask him to do just that.

- Confront the President on a one-on-one basis and explain to him why the extravaganza approach will not work.

- Secure advice and assistance from a consultant who specializes in making large group meetings effective and go ahead and do the job.

- Call a special meeting of the Training Advisory Committee and explain the problem and try to get their support for a strong negative recommendation to the President.

- Even though your boss, the VP for Human Resources, specializes in recruitment and compensation, ask him to approach the President on the matter for you.

- Ask a number of the people who have been in the training programs you ran to write letters to the President arguing against the proposal.

- If you disagree on principle then start looking for another job.

- To get off the hook suggest that the training being requested be contracted out to a local university.
Using a Letter

Often cases can be developed around a letter, or other form of communication, received by a company official or staff member of an organisation. Consider the following letter. You are the President of the Company and you receive the following letter. What do you do? If you decide to reply, draft the response.

John Quinn  
President  
United Stores

Dear Mr. Quinn:

My wife and I had the misfortune of shopping in our East Oaks store last Friday night. We were in the camping department and saw two clerks there, but apparently no one could see us. Or at least so it seemed to us after we had waited 20 minutes for some service.

We finally approached one clerk who told us that we would have to see someone else since he was on his dinner break. So we approached another clerk and asked her if she was familiar with the two tents we were interested in. She said she was. We asked her what the difference between the two tents was and she said one cost more than the other did so it was probably the better tent. We were not satisfied with the answer and so we asked the supervisor the same question. He said he owned both tents so they were equally as good.

At last we went across the street to Smith’s Camping Store and received clear answers to our questions and bought a good quality and moderately priced tent.

Mr. Quinn, do you think we should ever return to United Stores again? We have some very big doubts.

Yours sincerely,
A. Customer

Assume you are the President of the Company what action would you take?
Using Dialogue

Another interesting technique for developing cases is to construct a dialogue between people and have students address a number of questions about it. Consider the following example:

Pat Smith, Department Chief, has asked Melissa Blunt to discuss ways of improving the weekly staff meeting that is attended by eight Branch Chiefs. The following dialogue ensues:

Pat: Melissa you have a lot of good ideas about management. What do you think we should do to improve our staff meetings?

Melissa: Hey, wait boss, I am not that much of an expert on that!

Pat: Well we keep having jokes told about how boring our meetings are and some of the chiefs try to find excuses not to come.

Melissa: I suppose there is a problem.

Pat: Sure there is. So let’s be blunt. What would you do if you were in my position?

Melissa: Well... I might turn the problem over to the group. Why not let them......

Pat: Wait a minute here. We don’t want to stir up a lot of feelings over this. Can’t we just make some simple changes to improve things?

Melissa: I suppose that is true. Why not rotate the chairmanship of the meetings among the chiefs?

Pat: Wait a minute on this idea–half of them couldn’t run a meeting properly. That would never work.

Melissa: Yeah, I guess you are right.

Pat: Glad to see that you see it my way. Any other ideas?
Melissa: I said I was not an expert remember, but what if we cut down the reports on what everyone is doing everyday of the week and focus on some key problems?

Pat: Oh we couldn’t do that. People want to know what is going on.

Melissa: But what if people just prepared short written updates on what they are doing, then we could get at solving problems?

Pat: Do you mean to say we are not solving problems now?

Melissa: Oh no... I did not mean to say....

Pat: Well its lunchtime and I have a meeting downtown. Why not jot down some new ideas on this matter and send them to me.

Melissa: Sure thing.....

Questions for Discussion

- What are the real issues here?
- Does Pat really want help on the problem?
- How well did Melissa read Pat’s attitudes about staff meetings?
- If you were Melissa, how would you have responded to Pat’s request?
- If you were Melissa, how would you respond should Pat bring it up again?
- How open is Pat to feedback?
- How would you describe the climate in this department?
- Would Pat and the Department be just as well off if they eliminated staff meetings?
- What can managers do to liven up staff meetings?
- What are the implications of this case for the idea of participative management?

The Decision Analysis Approach

Depending upon your goals, it may be desirable to present participants with a case and several possible solutions to it. The participants then do one of the following things:
• Analyze the pros and cons of each decision, including the possible future consequences of implementing the decision.

• Come up with another decision that would be superior to any of the presented solutions and show why it is superior.

In later sections of this Handbook, several techniques for aiding in decision-making are explained and can be applied to this type of case.

❑ **Risk Analysis Model**

Management decision-making often entails risk; not only financial risks, but also career risks, strategic risks and the risks that flow from making ineffective decisions. Cases can be used to explore this dimension of management decision-making. In this regard, a T Column is a useful technique to be employed in risk assessment. Opposite is a T column, which illustrates the application of this technique.

<table>
<thead>
<tr>
<th>RISKS</th>
<th>OVERCOMING THE RISK</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Decisions made without all of the facts</td>
<td>Provide written background</td>
</tr>
<tr>
<td>• Decisions made that ignore costs</td>
<td>Listen to employee ideas</td>
</tr>
<tr>
<td>• Loss of management authority</td>
<td>Restrict work to facts</td>
</tr>
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❑ **Simulations as Cases**

Games and simulations can be used very productively in case based learning. These forms of learning are known as structured experiences, in which participants learn through the experience of the simulation or game. In this approach, the instructor provides the vehicle for the learning — the exercise. The learning comes about by actually undergoing the experience.
A simulation is any training activity designed to reflect reality. There are four types of simulations used in case based learning:

- **Psychomotor and Perceptual Simulations**
  For example: In a flight simulation, trainee pilots practice visual and motor coordination and task sequences. Cues are taken from the visual and physical simulator.

- **Cognitive-Task Simulations**
  Here the participants learn the concepts and abstractions underlying the rules and principles governing their work environment. For example, a stock market game.

- **Systems Simulations**
  These simulations are designed for tasks, which involve communication and coordination. Several participants can function simultaneously in different roles as parts of a larger system.

- **Virtual Reality Simulations**
  This is an emerging tool. Here the attempt is made to achieve total sensory simulation through the use of special headgear and gloves linked to a computer.

Below is a list of the types of training which have been addressed through the use of simulations:

- Company officials participate in mock disasters or crises to test their systems and reactions.

- Commercial pilots receive regular simulator training and assessment as part of fitness for service evaluations.

- Hotel workers engage in simulations in which many tour groups show up at the front desk simultaneously.

- Auditors are given a full range of financial statements of a fictitious company and are instructed to audit the company.

- Production and distribution processes are simulated as systems and students make alterations in the system, using computers, to increase flow through and decrease cost.

Simulations have many of the advantages of classical case based learning. In addition, simulations allow mistakes to be made in a “risk free” environment. Simulations also allow time
frames to be compressed. For example, problems likely to be encountered over a period of two years can be compressed into a simulation of one half day. This “time compression factor”, however, must be handled with care, since learners can inadvertently acquire a sense of time-lines, which are wholly unrealistic in the real world.

The In-Basket Simulation

One of the best examples of applying the simulation concept to case based learning is the use of the In-Basket simulation. The In-Basket Simulation is a management simulation designed to provide skilled practice in decision making, problem solving and time management. The term “In-Basket” is a metaphor for the flow of information, in various forms, which often come across a manager’s desk and lay in his/her In-Basket awaiting a response or reaction from the manager. For automated offices, one can use the ever-growing number of email messages, which now fill a user’s electronic mail box. Rather than an “In-Basket,” one might refer to this as an “electronic dump.”

Designing an In-Basket

In designing an In-Basket, for use in case based learning, the following guidelines have been found to increase the effectiveness and efficiency of the process:

1. Selection of Subject Matter

In designing an In-Basket training, you have the following options:

- **General Character**: The items in the In-Basket can be general in character; that is, applicable and of interest to all managers regardless of their organisational affiliation or functions. Thus, one could include items in the In-Basket, which broadly relate to finance, human resources, planning etc.

- **Specialized Character**: In-Baskets can also be designed to have the following types of special appeal: To managers of particular types of organisations (e.g. banks, small companies, ministries, etc.); To managers who perform particular job functions (e.g. accountants, HR managers, marketing).

- **In-House Character**: Here the materials are customized to the situations and problems faced by a particular company or may really be sanitized versions of that company’s actual documents.
2. **Selection of Basket Topics**
Specific items for the In-Basket can be selected to reflect particular problems in organisations, at a given point in time, or to reflect new approaches to management.

3. **Guidelines for a Quality In-Basket**
   - **Strive for a Good Mix of Items**
     - Crisis type items (one or two of these) which give the In-Basket a sense of challenge, interest and urgency
     - Other substantive items which reflect detailed knowledge of particular issues facing an organisation
     - Interrelated items which are affected by the times in one and two above
     - Distracters which in themselves are minor and can be handled fairly easily
   
   - **Strive for Realism**
     This should be done, not only with the selection of high interest, and high relevance items, but also in the use of language and style.

   - **Try to Avoid Repetitious Items**
     Too many times of the same type lead to boredom on the part of learners.

   - **Use a Mix of Formats in the Items**
     Use memos, letters, short notes, diagrams, etc.

   - **Make the In-Basket Self-Contained**
     The In-Basket should be designed so that the participants can complete the exercise by using the materials in the In-Basket and do not have to invent information as part of the simulation case.

   - **Items Should be Presented Randomly**
     One of the challenges of the In-Basket simulation is to have participants organize their approach to the In-basket. Do not provide a formal or hidden sequence in the ways that the items are presented.

**A Sample In-Basket Exercise**
Below is a sample In-Basket exercise:
You are one of seven handpicked senior officials who have been invited to a confidential meeting with the newly elected Prime Minister of your country, Matania, a small island state with a multi ethnic population of 4,500,000. Despite showing signs of real economic progress about 15 years ago, your country has stalled in terms of GNP and per capita GNP and, in recent years, verged on the negative in each category. Your public debt in this period has risen rapidly as has your indebtedness to donor agencies. Unemployment is high and rising. The only secure niche for working people appears to be what is called a “nice warm and soft job” in the civil service whose numbers have steadily risen. In this period, there have been innumerable commissions and studies of the problems facing your nation, but each has tended to result in lofty goals and rhetoric with little real signs of progress. A dependency and hopelessness mentality has emerged in recent years. The statistics below tell the story.

In this context, an election has just been held and a new government, albeit a minority one, has emerged. The new government is reformist in bent calling for a new partnership approach to change and development. The people seem ready to give them a chance, but deep skepticism still lingers.

The newly elected Prime Minister entered the cabinet room accompanied by his two senior policy advisers and the newly appointed Minister for Public Sector Renewal. Seated around the table were seven senior officials drawn from the Ministries of Finance, Health, Education, Social Services, Agriculture, Trade, and Justice. With the formalities of introduction completed the Prime Minister opened the meeting:

“Colleagues,” the Prime Minister liked to be known as a man of the people, “You are all aware of the fact that during the election campaign my party, unlike our predecessors, pledged that, if elected, we would renew confidence in the public sector and its management. In fact, we had a theme for this pledge: ‘Partners For Progress’. By this we meant that all segments of our nation must come together in a new partnership for the benefit of the people-the private sector, labor unions, civil society, professionals and of course the public sector. In fact, we see that the public sector can take the lead in forging this new partnership for progress. And by lead, I mean lead by championing change. There is no point in our reaching out to other groups in society if we, in government, continue in our time worn ways of behaving. You know what I mean. Our government bureaucracy suffers from the multiple symptoms of a deep-seated sclerosis.”

Turning to one of his policy advisors, the Prime Minister suggested that he remind people in the room about these sclerotic symptoms. “As the Prime Minister has so clearly put it,” the advisor hummed, “our bureaucracy is sick and some would suggest that it is a terminal condi-
tion. As you in this room well know, and for that matter so do most civil servants who are at least semi-conscious, our public sector apparatus is what I like to call a counter-competitive drag on the nation.” The advisor, who also served as the major speechwriter for the Prime Minister, offered the group a self-confident smirk at what he thought was his apt and interesting choice of words. “As our party task force has detailed in its recent report, the public sector suffers from an interconnected series of pathologies”:

- Patronage in appointments at all levels of the civil service
- A promotion policy based upon seigniority and length of service
- An incapacity, and in cases outright failure, to provide courteous or timely service to citizens
- A budget system and process which generates only increases in expenditures annual with no capacity to reallocate resources
- The complete absence of leadership and innovation often referred to in the service as a “duck and see” mentality
- A preponderance of males at all levels in the senior positions
- A shifting the blame and ducking of responsibility mentality
- A job description system which is so detailed that it works against any form of teamwork
- A culture of inter-departmental competition with literally no incentives for collaboration
- A set of procedures accumulated over time which drowns both civil servant and the public in endless layers of decision making and mounds of paper
- A civil service union which only sees job protection and job growth as its goals
- A financial situation in which over 50% of the GNP of the country is absorbed by the public sector with an annual growth in that share of 5%
- A government debt which is steadily rising driven by annual budgetary deficits and borrowing
- A large state owned enterprise sector which had developed overtime through a set of government bailouts of failing firms and a belief that public investment could drive growth
- And last but not least a rampant moonlighting by civil servants who do other jobs or run other businesses during times when they are supposed to be working

“I could go on but I will not,” concluded the advisor as he turned again to the Prime Minister.

“This situation is going to be changed,” underlined the Prime Minister, his index finger pointed squarely at those assembled, “and it is going to be changed dramatically. I have called you together today since I have been informed that you seven represent a small but growing group within the government service who want to have change and have been prepared to risk to undertake it. I hope for all of our sakes that this is true.”

“The first step in this change process has already been taken by my decision to appoint John Maxwell as Minister in charge of Public Sector Renewal. Mr. Maxwell should be well known
to you. He was fired by the previous government for daring to speak out on the issues that I have raised with you. He has my one hundred percent support and this is indicated by the fact that he will sit as one of four Ministers in my strategic planning committee of cabinet.”

The members of the group have heard rumors to the effect that the Prime Minister was going to alter the structure of decision making at the highest levels of government, but this was the first real indication of what that might mean. “The strategic planning committee has already made one very important decision: we must clean up our own house before we invite others to the party. I have given Minister Maxwell one month to present to me, and to the strategic planning committee, a plan of action for change; one which will work fast and draw support from all of the groups I referenced earlier. I have told Minister Maxwell that I want the public sector to play a leadership role in our larger policy commitment to revitalize the nation.” In the election campaign the Prime Minister had consistently stressed the theme of “transforming for tomorrow.”

“In this regard, I want you to always remember the fact that we have a minority government and do not want to go to the polls again without something to run the election on—a real achievement. Give me a plan, a workable plan, with vision and real change, not a set of lofty rhetorical statements, which lead nowhere. And, in this regard, give me a plan, which will not only modernize our public sector but also contribute directly to a five year 20% overall decrease in expenditures and a 3% growth in employment. But give me a plan which will keep me in office long enough to implement it.” With those words the Prime Minister turned to Maxwell to take over the meeting and wished everyone “good thinking”.

Maxwell, a man of few words, came straight to the point. “Here’s the lay of the land.” The government has decided to create a new department called “Public Sector Renewal” which will be given overall responsibility for the development of policies and strategies for change within the public sector, particularly its management processes and systems. This department will be the lightning rod for change.

Maxwell, an experienced manager, knew that the first thing on everyone’s mind was resources. “The department will be given a staff entitlement of 10 professionals and 7 support staff with the option to second into it on a one-year basis only up to another 10 staff from other departments. The non-staff operating budget will be 500,000 dollars per year for a period not to exceed three years.”

The members of the group, almost in unison, looked at each other in a quandary over the meaning of the last statement. “The new department will also have first call on the installation of new information and communications technology. The department will work closely with a new parliamentary sub committee on public sector renewal, a bipartisan group chaired by the
deputy Prime Minister. Lastly, the new department will have direct input into shaping the budgetary process for the forthcoming three years and will provide independent analysis of that process and its substantive elements directly to cabinet.”

“These are the tools,” noted Maxwell. “Now what does the terrain look like. As the Prime Minister said we are in a minority position in parliament, but we intend to govern as if we had a majority. The civil service union contract comes up for negotiation this year and all items both salary and non-salary are on the table. The IMF will be doing a country review this year as will the ADB. In this regard, there are rumors that the Fund and the Bank are concerned about our macroeconomic fundamentals and the size of the public sector. Various civil society organizations, and single interest groups concerned with everything from the environment to abortion are insisting that, in return for the support they gave our party in the last election, they want in on the discussions and plans for public sector renewal. They all seem to want the government to find what they call a new participatory contract with the people—whatever that means. Business has been clamoring for the government to immediately privatize SOE’s in telecommunications, agriculture, postal services and banking, as well as wanting a corporate tax cut of 25%. Labor unions in general are growing increasingly angry about our unemployment rate, which is hovering at 20% and are insisting that this situation must be turned around. And last but not least some of my cabinet colleagues are eyeing me rather suspiciously as an empire builder.” “Oh yes,” the Minister reminded himself, “we have also had a series of leaks from within the bureaucracy recently, which have been rather embarrassing to the government.”

“Oh yes, one last point. I noticed eyebrows raised when the three-year time frame was noted earlier. I can understand your consternation. Let me clear that matter up quickly. This department will have a lifetime of only three years. Whether it succeed or fails, it will be closed permanently after the three-year period. This is part of walking the talk,” smiled the Minister.

“You people are known for rising to the challenge. I think this challenge will certainly meet that test. Now to the meat of the issue. As the Prime Minister said I have to present a strategic plan within a month, but he forgot to say that I will have one shot at this. I am clearing my calendar of all events and business for the next month, with the exception of a two-week trip I must take to New York. I want you to do the same. As of this moment you are on permanent secondment to this department.”

“I have to give a briefing, a short one, to the cabinet on the new department in two days time. I want to be able to tell them in a few words exactly what we are about. Why will our existence make any difference to anyone? What is our role going to be? I want this punchy and crisp—put in words, or even a picture for that matter, that anyone on the street can understand. Don’t
give me government speak or try to impress me with your rhetoric. But I want it also to the kind of words that draw people to us rather than away from us. I want the words to somehow let people know that we are not just going to ram things through in typical top down fashion, but we are genuinely interested in getting their input and their ideas. But I also don’t want people to think that they can block us with endless discussion and rainbow chasing. I know what you’re thinking: “I want my cake and I want to eat it too.” You’re right, I do, I am a Minister!

With those words, and the tense laugh they elicited, the Minister charged the group with the task of providing him with “the words” in two days time and left them to decide how they would do this and who if anyone would volunteer to chair the group.

There was no question, in your mind, that chairing such a group was a “win big, lose big” situation. Whoever chaired the group and managed to achieve the stated goals would be viewed very positively by the government and equally negatively by the people who might be subjected to layoffs and unemployment. However you had always advocated change and this might just be your chance — a chance of a lifetime. There was no question that you had both support and detractors in potentially assuming the role. Being from a line Ministry you could count on their support. The central agencies people, however, would be suspicious of the entire undertaking and anyone connected with it. The reason for this was simple: the planned reform implied a direct critique of the role of central agencies in the past. If you assumed the role and failed or floundered, these central agency people would make life difficult, if not impossible, for you. But this situation facing the country called for leadership, knowledge and commitment, which, after all you thought, were the ultimate purposes of your chosen vocation in public service.

As you walked into your office, your secretary stood there holding a fax in her hand from John Johnson, your colleague in social services. The fax was simple and yet disturbing:

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Ministry of Social Services
Matania

Pete Peterson
Deputy Minister of Labor

Pete: You had better check out these attachments before deciding to take on the role of chair.

John
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MUSP
Matania Union of Service Professionals

Resolutions of the 25th Annual General Assembly

Be it resolved that:

- Being the congress of professionals in teaching, nursing, medicine, social work, engineering and information science and speaking on their behalf.

- Request that the national government immediately set national standards for the provision of services to people in the areas represented by the membership of MUSP.

- That such services be provided for only by individuals holding professional qualifications as established by MUSP.

- That the national government retain all budgetary authority and constitutional responsibility for the provision of such services.

- That members of MUSP currently employed by municipal governments be immediately transferred to be employees of the national government.

- That MUSP be consulted directly and be given a veto on any devolution of national authority or budgetary responsibility for the provision of services offered by their members.

- That the salaries of MUSP members be reviewed and that the government give a formal commitment to raise these salary levels to the OECD average within a space of three years.
MATANIA CHAMBER OF COMMERCE

Dear Mr. Prime Minister:

The members of the Matania Chamber of Commerce would like to congratulate you and your colleagues on your recent election victory and assumption of government. We recall during your election campaign that you talked of a new “Partnership for Progress” and we certainly think that the time is ripe for such a new beginning. In this regard, we believe that substance can be given to this theme by seriously involving the private sector in not only the deliberations of government but in the provision of public services.

On the former point we welcome your initiatives in inviting stakeholders to express their views regarding priorities for the Nation. On the latter point we have a specific proposal to put before you. The government unquestionably must insure that certain key services are provided to the public. On this there is no difference of view. However, we at the MCC believe that it does not follow that these services must be provided BY government. In fact, we believe the government can better fulfill its mandate to provide services to the public by using the private sector as a vehicle for the delivery of these services. It is well known that the private sector is more efficient in its operations than the public sector.

To this end, we propose that your government immediately give consideration to the following:

- Privatization of the Matania Telecommunications Authority
- Privatization of the Matania Postal Authority
- Privatization of the Matania Ports Authority
- Contracting out to the private sector through a competitive bidding process of the following services: income tax collection, road construction and maintenance, retail liquor, public buildings maintenance, government computer services, public health clinics, school textbook publishing, government printing, tourism promotion, customs and excise.

The MCC believes that it can provide these services, through its member businesses in a timely, efficient, and cost effective manner leading to significant savings of public expenditure. We believe this so strongly that our members are quite prepared to enter into performance contracts for the delivery of such services.

We thank you for taking the time to listen to our ideas a “partners” in a new “progress” for our Nation. We look forward to an early meeting with you to discuss these proposals.

Yours truly

Samuel Angina
President, MCC
VAM is a coalition of civic groups and voluntary associations dedicated to improving the lives of the average citizen in our country. We believe that we need less government and more voluntary spirit as a way of solving our problems and seizing opportunities. Voluntary groups of all kinds, with public funding and a mandate, can do what government on its own cannot do: reduce poverty, develop communities, deliver local services to local people, increase public participation in planning and programs, empower community problem solving, nurture entrepreneurial activity, and build a more democratic society.

We ask that the government recognize its limitations and empower the voluntary sector to serve the needs of people. We ask that 25% of the budget be devoted to funding voluntary organizations to serve the real needs of citizens.

If you agree, please sign this petition and mail directly to the office of the Prime Minister.

Name_________________ endorses VAM and its call for civic renewal, public funding and voluntary action.

At this point your Secretary rushed in saying that your wife was calling you on an urgent basis. You knew what was coming. The conversation was brief and heated. Jean, your wife, made it clear that if the rumors about you undertaking this role were true, then this assignment would mean that you would stay in government service two years after your planned retirement. She reminded you that you had agreed that it was time to devote yourself to the family. Your health would not stand the pressure, which she had confirmed with Dr. Smith your physician. He had said that “you might survive the ordeal but the probabilities were not in your favor”. The conversation concluded with an ultimatum from your wife—take the job and she would initiate steps for a divorce. If you didn’t want a life, she did.

You had heard your wife threaten before but never with such a tone of seriousness. She wouldn’t want to end a 25-year marriage would she?

The light on your computer began to flash signaling that you had incoming email, which had not been opened. The automatic alert system that you installed was to improve your efficiency but lately it seemed that you were becoming a slave to the machine. Having no choice, you
turned on the machine and as usual there were a number of emails for you seven of which were marked urgent, for your eyes-only. One by one you opened the emails:

Pete: When I brought you into government and gave you a job when no one else would, you said that you would never forget and if I ever needed your help I could count on you. I need your help and I am counting on you. The chair’s job is yours if you want it. You have the most support among the group. I cannot tell you what to do, but I can say that I need you.
Maxwell

Mr. Peterson: Our country faces a grave situation. I have just been informed that our foreign reserves are far worse than we had suspected. Unless we take action as I discussed this afternoon we will default on our loans, be unable to pay public salaries and for all intents and purposes be bankrupt as a state. Moreover, our pensions will all be at risk – yours included. For your family, and your country I must insist that you consider the role of chair of the group we have put together.

PM

Confidential
Peterson: Take a role in this process at your peril. We are running a story next week on graft and corruption in the new administration with the so-called reform agenda being at the center. A nice diversionary tactic to turn attention away from wrong doing by politicians and some bureaucrats. If you stay involved, then you will be implicated.
Hancock, Daily Matanian

Pete: I have been canvassing opinion and those listed below who represent the majority of the committee are fully behind you as chair. In fact if you do not take it, then they will resign.

John Pitch
Mary Ellwood
Igor Nvan
Bill Greenwood
Mary Marquart
John Johnson

Yours, Ed
Son: I have been hearing some disturbing things from the fellows at the labor hall. They say you are going to take some kind of role in laying off workers in government. Pete, these are our friends; they have families to take care of. You know what it is like. Remember when I got laid off and how scared we all were. It was after that that I became active in the union and as you remember I served as President for over ten years. My life was the union, and because of the union you received the loan to go to college. You cannot turn your back on these working people. You were not raised this way. I hope I am wrong about this rumor.
Dad

My Dear Mr. Peterson

The situation of the new government is precarious to say the least. We in opposition are already making plans for the next election which we strongly feel will be ours particularly after the so-called public sector reform program is launched. We are encouraging all people of common sense to distance themselves from this effort as a patriotic gesture and we will not forget the patriots when we reassemble office.

Yours truly, Justine Delay
Leader of the Opposition

Mr. Peterson: RE. Your request for a loan to prevent default on your mortgage payment. The Matania National Bank has in place a special program to assist public servants in special loan requests of this nature. We will be able to respond positively to your request with a written authorization from the Office of the Prime Minister that indicates that you will be in employ of the Government for a period of three years. This is the only program of assistance that we can offer you and I do hope it proves to be satisfactory to you and prevents us as well from undertaking a bankruptcy proceeding.

Yours truly
Edwin Jones
Manager NBM
Mr. Peterson:
The Prime Minister has asked that I pass on to you the confidential results of the Public Expenditure and Economic Review recently concluded by our Department. As you can see the fiscal and economic situation facing Matania is far worse than the public had been led to believe by the previous government. For five years I had attempted in vain to convince the Government to act. You can understand, in this context, why I am fully supportive of the initiative being proposed by the Prime Minister. I am with him one hundred percent. In this time of need in our country, the Prime Minister will require all the support he can muster. In this regard, I personally believe that you are the right person to chair the group and I promise you my full support.

Our nation needs you.

John Smalley
Deputy Minister of Finance
Government of Matinee
See: Attachment A
One of the advantages of the new world of email is that you can receive information very quickly. One of the disadvantages, you say to yourself, is that such rapid response narrows the time frame for decision and reaction. The wheels of government are now spinning quite fast with the new electronic oil. While you were instructed to keep the earlier meeting confidential this issue is of such importance that you feel you need some rapid response advice from three of your most trusted advisers. You turn to the keyboard and draft a quick email:

To: John Pinkus, Head, Policy and Strategy
    Nancy Birdsell, Director Human Resources
    Bill James, Senior Advisor

Colleagues: This message is absolutely confidential. You have probably already heard the rumors about a major reform initiative by the Prime Minister as reported in the Daily Matanian. Everything reported is true. I am now being asked by a number of people to take the Chair of the Committee. I need you quick advice on what you think I should do. Bullet point only and not long-winded. I am attaching a set of emails I have received and a for your eyes-only copy of Matania At A Glance. Make this a priority. I cannot meet with you—not enough time. Just email me.

Pete

Within minutes the email flasher signaled incoming mail.

Pete:
Take the job. If you do not, someone like Masters will, and that will be a disaster. You know what he thinks of you and it is not complimentary. Beyond that take it because the issues are serious for the country, as the report shows. We have always stood for planning and strategic thinking. Now is our chance to show people what it means and how to do it. I am with you completely. I will understand if your answer is no, but I would find it hard to believe.

JP
Pete: You have the knowledge and you have the skills. The job was made for you. My only question is do you have the nerve? This will be stressful beyond belief. Regardless of those who say they support you make no mistake about it: you will be out on the limb on your own. But if you pull it off, I can see Head of the Privy Council as your new job title. By the way, what does your wife think of all this?

Nancy

Pete: What can I say. The HR consequences are enormous. Morale is already bad and will only get worse. And you will be blamed whether you deserve it or not. I think the PM and the rest of them are looking for a scapegoat and you are it. Stay away from this—it smells fishy. Let them do their own dirty work. What would your dad think? In all honesty if you take the job, I will not in all good conscience be able to remain in government service.

BJ

Once again the Secretary interrupted with the news that the planned meeting for tomorrow of the committee had been moved up to this evening at 6:00 pm. That left exactly one hour before the meeting would begin. No time to make phone calls or to draft any sensible response to the emails and fax. Not even much time to think. But just enough time to decide.

You are Pete Peterson. What decision would you make and what would be your rationale for the decision.
Group Analysis of an In-Basket

After the In-Basket exercise has been completed by individuals, the group can analyze the results. Typically, In-Basket results are shared with a group, or groups exchange their results. Teams can rate and give comments on others’ In-Basket results. The scales below are examples of In-Basket rating forms that can be used.

In-Basket Rating Schedule

As a team, you are to review each completed in-basket action. You are to agree on points to be assigned to each action using the scale below.

5 points: The action taken is logical/rational/reasonable in all significant respects. It may not be the action you would take, but it is an appropriate solution.

4 points: The action is quite effective and workable. While it may not be the perfect solution it has a high probability of success.

3 points: The action taken is acceptable but may have some problems connected with it.

2 points: The action taken is very marginal or questionable. The odds against its success are high.

1 points: This appears to be an inappropriate response. The proposed action has little chance of success.

Star Quality Cases

Laurence Lynn has described the characteristics of what he calls “star quality” cases; cases that exemplify the highest standards of problem based learning and challenging content.28

From a learning process perspective, Lynn cites the following star quality attributes:

➢ How much talking did the instructor do versus how much talking did the participants do?

➢ How many participants were voluntarily active in the discussion?

28 Laurence Lynne, Teaching and Learning with Cases (NY: Chatham House, 1999)
➢ How many questions did the instructor ask? How many follow up or challenging questions were asked?

➢ How energetic was the instructor? How far did the instructor “travel” around the classroom?

➢ What was the level of “energy” in the discussion?

➢ How many high points were there? That is, moments when everyone was engaged interested and focused on an issue?

➢ How many times did participants laugh?

➢ Did the discussion make sense? Was it coherent?

➢ Did the discussion conclude on an upbeat?

Lynn also proposes a checklist for star quality cases that can serve as a benchmark against which to assess the quality and richness of a case:

✓ Is a decision-maker who must act, choose, or make decisions clearly identified?
✓ What is the actor’s job/role/position?
✓ Why must the actor take action?
✓ What kind of action must be taken?
✓ When is the action necessary?
✓ What is the urgency of the action?
✓ Is the time-frame or chronology of the case clear?
✓ Can a timeline or sequence of events be constructed from the facts of the case?
✓ Is it important to know where events occurred?
✓ Are places and events clearly identified?
✓ Where is the actor when the action is required?
✓ Can the key problems, issues or difficulties that the decision-maker must or should confront be identified?
✓ How much intellectual effort or deciphering is needed to identify the problems and issues?
✓ Is the level of intellectual effort within the capacity of the participants?
Can information available to or needed by the decision-maker be identified in the case?

Is the relevance of the information obvious or are analysis and judgement needed?

Is there extraneous information and what purpose does it serve in the case?

Is the case organized into a logical and understandable sequence and outline?

Are transitions in the case clear?

Is the case interesting and challenging?

Does the case draw upon the experience of the participants?

Will the case readers be able to see themselves in the position of the decision-makers and other roles in the case?

Are participants likely to have different perceptions of and approaches to the decision in the case?

Can a relevant range of alternative courses of action be clearly identified in the case?

As this section of the Handbook has hopefully illustrated there is no such thing as “a case”. Cases come in a variety of forms and employ a variety of designs. This variation, moreover, stimulates widely different learning processes and outcomes. Matching the type of case to the goals of learning is of equal importance as the design of the case itself.
Part 5

Discovery Teaching Strategies in Case Based Learning

Well-designed and motivating cases are essential to effective case based learning. So too, are skills related to effective problem solving and decision-making. But there is a third, and irreplaceable ingredient, for a complete case based learning experience: discovery teaching.\(^{29}\) As the words imply, discovery teaching is a process by which the instructor creates an inquiry-based learning context, or environment, in which learners, through active engagement with the content, the instructor and other students, “discover” the meaning, power and application of ideas.

Discovery teaching differs from content-based instruction in a number of important ways:

- **Objectives**
  The dominant objective in content-based teaching is to accomplish “coverage”; to get a lot of content across by following a detailed lecture or presentation plan. In the discovery approach, the objective is to change the learner’s behavior or upgrade his/her performance by improving thinking, problem solving, creative and analytic skills and competencies.

❑ **Instructor Role**
The role of the instructor in the content model of instruction is to disseminate content or information. In the discovery model, the role of the instructor is to be an “arranger of experiences”, a facilitator, a catalyst and a moderator.

❑ **Teaching Style**
The teaching styles in the two approaches are dramatically different. The didactic style is based on direct, uninterrupted transmission of content to the learners. In the discovery style, the emphasis is on Socratic interchange and group learning processes.

❑ **Questioning**
The questioning style is also different in the two approaches. In the didactic style of instruction questions, when they are posed, are often the “checking form” of questions deployed to verify whether learners understood the content of the lecture. In the discovery approach, questions provide the engine of the learning process eliciting ideas and concepts from learners. In the discovery model, a range of different types of questions are deployed for a range of learning purposes.

❑ **Learner Role**
The role of the learner in the lecture mode is passive, absorbing and digesting information. In the discovery classroom, the role of the learner is active and involves the process of constructing and giving meaning to the ideas and information in the case and the ensuing discussion.

❑ **Feedback from the Learner**
Here again there are significant differences between the two approaches. In the lecture mode, feedback from the learner is used primarily to assess understanding and retention. In the discovery approach, feedback from the learner is used in the process of group construction of knowledge and to examine the capacity to apply knowledge to case situations.

❑ **Philosophy**
In the content model of the lecture, the philosophy is that the participant does not know, the instructor does know and the lecture is the vehicle for systematically bridging this gap. In the discovery model, the view is that the student already carries relevant content knowledge in his/her head in an inert form and it is the role of the case discussion to make that knowledge live by having the participant “learn by doing”.

The Importance of Questioning

Central to discovery teaching in case based learning, as noted above, is the process of questioning which can be initiated by both the student and the instructor. Under the guidance of the instructor, cases are interrogated, collaboratively analyzed, mutually extended and otherwise examined in depth and breadth. A key instructional skill, in this context, is the art of questioning.

In case based learning, as in other learning situations, there are effective and ineffective types of questions. Good questions, in case based learning, tend to share the following characteristics:

- **Brevity**
  Long, wordy, and windy questions tend to overload learner’s “intake valves”. They often create confusion. Keep your questions lean and short.

- **Clarity**
  Each question should focus, or zero in, on one point only. Overly complex and multifaceted questions, while they may provide a way for the instructor to display his “brilliance”, will often produce intimidation and frustration and forgetfulness of each part, not thoughtfulness.

- **Pertinence**
  The question should be targeted to the theme or issue in the case, which is being discussed. In this regard, there is no substitute for pre-preparation by the instructor.

- **Challenge**
  Good questions are those that provoke thought and encourage evaluation, analysis, synthesis and creativity. Questions which merely exercise a learner’s “memory bank” should be used sparingly.

In regard to questions that “challenge”, there are six types which have been shown to be particularly powerful in case based learning:

- **Convergent**
  These questions challenge the learner to bring together facts or concepts to form other facts or theories. For example: “Based on the behavior illustrated in the case, what principles of work motivation can you develop?”
- **Divergent**
These types of question evoke interpretation, explanation and translation. For example: “How would you explain the reluctance of the firm to abandon yesterday’s star products in the face of a decline in market sales?”

- **Application**
These types of question press the learner to apply what has been learned in one case, or a part of a case, to other cases or the real world.
For example: “To what extent do you think that the strategy behind the success of Software Co. could be applied to revive Hardware Computers?”

- **Evaluative**
These types of questions require that the learner enter into the process of making judgments about the facts presented in the case and the actions of actors in various situations. For example: “How would you characterize the deputy minister as a team leader? As a coach? As a motivator?”

- **Perceptual**
These types of question ask the learner to place himself in the role of one of the people in the case situation and examine the world from that perspective. For example: “Place yourself in the role of Susan Smith, who for years has been passed by for promotion, how do you think she sees the promotion of her best friend Sally to the post of Director? What feelings do you think she has about it?”

- **Lateral**
These types of question ask the learner to look at the case situation in new and novel ways as a means of spurring their creative processes. For example: “Let’s say that the strategy of the CEO was to deliberately have no formal strategy at all to deal with the crisis facing his company. In what ways might this actually help to solve the problem of the company?”

In using discovery teaching, within a case based learning process, the instructor approaches the case discussion with an inquiring mind, that is open to new insights and concepts that often flow from the discussion itself. It is important to remember that, in case based learning, there are no absolute solutions to problems, that are presented. For this reason, one can say that case based learning develops the on-going knowledge and skills of the instructor, as much as it does those of the learner.

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Mutual learning, through the mutual engagement of minds and experiences, is at the heart of the teaching process in case based learning. And these processes are generated through the combined impact of:

Motivating Cases
+ Problem Solving Skills
+ Discovery Teaching

EQUALS
MUTUAL LEARNING

Active Listening

While using effective questioning strategies to engage learners is central in case based learning, so too is providing a context in which learners are attentive to the discussion that ensues in case exploration. Listening, in other words, is equal in importance to talking in case based learning, both for the instructor and the learner. Many communication problems emerge in case based learning settings, because listening skills are ignored, forgotten or assumed to be in operation.

People often confuse hearing with listening. Hearing is picking up sound vibrations, while listening is making sense out of what we hear. Listening requires paying attention, interpreting and remembering incoming information.

Another myth, that surrounds the notion of listening, is that effective listening is a passive activity. Effective listening, however, is an active process. It requires that a person empathize with the speaker, in order that he/she can understand the communication from the point of view of the speaker. Active listening is hard work and entails skills, that can be learned through practice. Central to discussions of cases, then, is the capacity to listen to the viewpoints being expressed by others. This applies both to the instructor facilitating case based learning as to the learners who engage in the process.

Research has shown that there are four basic ingredients to active listening: intensity, empathy, acceptance and a willingness to take responsibility for completeness.31 In active listening,

one concentrates intensely on what the speaker is saying and tunes out the distractions, and other noise, that diverts this attention. Intensity involves summarizing and integrating what is being said in the context of what preceded it. Empathy requires that a person be able to put himself/herself in the shoes of another person, in order to understand what the speaker wants to communicate, rather than what you want to hear or understand.

Empathy, or role-taking, requires knowledge of the speaker and flexibility on the part of the listener. It also requires the capacity to suspend judgment, that is to demonstrate acceptance, and the tendency to rush toward interpretation. The final component of active listening involves taking responsibility to ensure that what was said by the speaker was heard, as the speaker intended, and to probe until that match is achieved. The process of verification entails asking questions to the speaker to insure that there is a correspondence between what is intended and what is received in a message.

Active listening in case based learning can best be facilitated by the instructor demonstrating the skill in the context of the learning process and coaching the learners in active listening through the case discussions. In this regard, there are a number of techniques which can be used to create a climate within which active listening flowers:

❑ Be Motivated
   In order to hear what the other person is saying you first must make the effort. Active listening is hard work and requires a commitment to sustain it.

❑ Make Eye Contact
   People often judge whether you are listening to them by looking at your eyes. One way to generate a feeling that you are actively listening to someone is to make eye contact with him or her.

❑ Empathy
   Do not project your own needs and intentions into the mind of the speaker. Ask yourself who is this speaker and where is he coming from. What are his attitudes, feelings, expectations and intentions?

❑ Take In the Whole Picture
   People are not just cognitive in their orientations. They have feeling and values, which influence what they say and more importantly how they say it. Be attentive to the emotional tone and non-verbal cues, which are exhibited by a speaker while speaking.
Paraphrase
Paraphrasing involves restating what the speaker has said in your own words and then checking to see whether the speaker agrees that you have caught the meaning of what was communicated. Effective ways of paraphrasing include using words such as: Do you mean that... What I hear you saying is.....

Integrate What Is Being Said
Use your spare time while listening to build a mental model of what the total viewpoint of the speaker is as it is evolving. Put the pieces together, rather than thinking of ways to tear them apart.

Avoid Bias and Distortion
The purpose of active listening is to understand what the speaker is attempting to communicate to you. All people will use words or phrases in their discourse, which may be “red flags” to another person. Active listening requires that these words be temporarily placed in the background and not be used as code words to unfairly interpret, categorize or dismiss what the speaker is attempting to say.

Edward Hall, the noted anthropologist, has categorized cultures into two general types: high context and low context. By this distinction, Hall highlights the degree to which meaning, in a given culture, is explicit and codified, or implicit and shared informally among people. Western societies, Hall suggests, are low context, with the bulk of meaning codified in laws and formal rules mediated by open public discussion and debate. Eastern cultures, in his view, may be high context, in which meaning is often tacit, shared informally among people and with a restricted role for public debate and discussion. Whether this dichotomy is true is not the point of introducing it here.

Rather, the point is to look at questioning and listening from the perspective of a high-low context distinction. Questioning can be seen as an activity characteristic of a low context outlook. Listening, on the other hand, can be seen as a model trait of those who prefer high context. In this Handbook, energizing both processes is seen as central to discovery teaching. In doing so, it is, therefore, important to bear in mind that one or other activity, questioning or listening, may better “fit” a particular cultural or personal orientation. Indeed, adopting a questioning or listening stance may actually involve the learning of a new cultural practice and should be seen as such. It also provides a unique opportunity for the development, depending of course on how it is done, of intercultural and interpersonal understanding, sensitivity and awareness.

32 E. Hall, Beyond Culture (NY: Anchor, 1980)
Groups are often utilized in case based learning as the key context for learning and personal development. Cases are provided to groups and it is the group that engages in analysis and discussion of the case. Even when individuals undertake the case analysis, the discussion of the findings and perspectives often occur in group settings. Understanding group dynamics, and the collaborative processes of decision making and learning in groups, is an essential capability for both learners and instructors in case based learning programs.

Groups provide a key context for experiential learning processes in case based learning. Experiential learning begins with the formulation of an action theory by an individual, which specifies what actions are needed to achieve desired consequences. We all carry in our heads action theories: assumptions about what types of actions will produce desired results or help achieve our goals. As we then take action based upon our action theories, we revise the theory in the light of the results that emerge in a given situation.

This cycle is then repeated with ever-continuous revision of our action theories. In this process, we use the resources of various groups, to which we belong, to hone and reformulate our action theory of what works. In case based learning, we use the resources of the case learning group as such a resource and, in the process, develop both our own competencies and the

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competencies of the group as a whole. Experiential learning, then, entails generating an action theory from your own experiences and then continually refining it to improve your effectiveness. Case based group learning processes, as a result, provide a training ground for the development of individual and group effectiveness.

The chart below illustrates this process of experiential learning through groups:

**Group Based Experiential Learning Cycle**

1. **Take Action on the Basis of One’s Current Action Theory**
2. **Implement Revised Action Theory by Taking Modified Action**
3. **Assess Consequences and Obtain Feedback**
4. **Reflect on How Effective Actions Were and Reformulate/Revise the Action Theory**

By structuring case based learning in group settings, as a vehicle to engage a person and group in formulating and testing their theories of action, a bridge can be built between knowledge, skills and actual behavioral change. The latter, of course, is one of the ultimate challenges in all forms of learning: how to effect, not only what a person knows and can do, but also what a person actually does in given situations. Forging links among knowing, skilling and doing is not automatic and requires a commitment, in the design of case based learning, to the following principles and precepts:

- **Holistic Impact**

Effective experiential learning can affect a learner’s cognitive structures, attitudes, values, perceptions and action patterns. To learn to be an effective decision-maker, for example, a learner must develop a new knowledge base and a number of skills:

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1. A concept of what decision making is (knowledge)
2. An action theory concerning what decision-making behaviors will lead to effective decision making either by the person or the group
3. Positive attitudes toward the new decision making procedures
4. Perceptions that the new decision making procedures are situationally appropriate
5. The behavioral skills needed to perform the new decision making actions.

In case based learning, it is important to design learning situations, which bring into play all of these dimensions of human functioning and performance.

- **Personal Knowledge**

People tend to believe more in knowledge they have discovered themselves than in knowledge presented to them by others. A case, as discussed earlier in this Handbook, provides an excellent context out of which to develop new personal and group knowledge.

- **Beyond Information**

It takes more than information to change action theories, attitudes and behavioral patterns. Failure to understand this principle, explains why mere information presented in a case does not lead to any new ways of seeing, let alone acting in the world. Real change in action theories requires new experience, which is of course the context in which the theories are born in the first place. Working with people in groups around issues presented in a case provides just such new experience.

- **Beyond First-Hand Experience**

It also takes more than first hand experience to generate valid knowledge let alone new behavioral patterns. Critical in this regard is the capacity to reflect on experience and examine in different lights. For this reason, case based learning cannot be merely a context for the sharing of existing knowledge and experience. The case itself must be designed to inject new information and new concepts into the learning process.

- **New Mental Structures**

Behavioral changes will be temporary unless the action theories and attitudes underlying them are changed. In case based learning one of the challenges is to place people in situations in which their assumptions about the world are challenged.

We spend a good deal of our time in groups, whether the family, the work group, the community or entertainment and play groups. Part of our personal effectiveness, in both our personal
and work lives, rests upon our capacity to function within, and relate to, groups for various purposes. The fact that our societies are composed, in part, of groups explains why, case based learning often unfolds in group settings. Another reason why groups are used in case based learning, however, flows from the proposition that groups possess capabilities that individuals do not have, particularly in decision making:

- In groups there exists the potential for process gain – the interaction among group members results in ideas, strategies and insights that no one member had previously thought of.

- In groups incorrect solutions are more likely to be recognized and remedied.

- In groups, there tends to be a more accurate memory of facts and events than is possible for an individual.

- In some groups a cooperative ethos exists which leads to the provision of help and assistance to all members.

- Finally, some suggest that the security of a group may increase the potential for decision making which is less risk averse.

For each of these presumed advantages, of course, people have suggested that the opposite holds true. The ultimate arbiter, in this case, is you the reader.

One problem, which can potentially emerge in group decision making, however, has been called “groupthink” which involves a collective striving for unanimity that overrides group members’ motivation to realistically explore alternatives.\(^{35}\) Groupthink leads to concurrence-seeking: the inhibition of discussion in order to avoid disagreement or arguments. Groupthink can trap members in shared illusions and rationalizations and an undue focus on the following types of dynamics:

- **Self-censorship:** Each member minimizes any doubts about the apparent group consensus.

- **Illusion of Unanimity:** Each member assumes that everyone (except himself or herself) is in agreement leading to a situation of pluralistic ignorance about the position of the group.

All of the above potential mechanisms for groupthink can emerge in case based learning processes and, for that reason, it is very important, at the outset, to develop the capacities of the groups involved in the learning process. Due attention to the grounds for the use of groups in case based learning is an absolute necessity.

Despite the potential traps of group decision making, it remains our best hope for solving real problems. The reason is that real problems involve real people and often are nested in their patterns of social interaction. Wisdom can flow from the integration of divergent points of view, but for that to occur these viewpoints must have a context in which they can be expressed. This entails an attitude of inviting differences, rather than fearing them, and struggling to understand others, rather than labeling and categorizing how they differ from us. For these results to occur, there must be a basic commitment to participatory values: full participation, inclusive solutions, mutual respect and shared inquiry.

As the chart below illustrates, participatory and conventional approaches to group decision making generate widely divergent patterns of behavior and norms.

David and Frank Johnson suggest, based upon an extensive review of the research literature, that there are five major characteristics of effective group decision making.  

- The resources of the group members are fully utilized
- Time is well used
- The decision is correct or of high quality
- The decision is implemented by all of the required group members
- The problem solving ability of the group has been enhanced or at least not diminished

**Differences in Group Norms**

<table>
<thead>
<tr>
<th>Participatory Groups</th>
<th>Conventional Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everyone participates – not just vocal few</td>
<td>The fastest thinkers and most articulate get most air or talking time</td>
</tr>
<tr>
<td>Opposing viewpoints allowed to co-exist</td>
<td>People interrupt each other on a regular basis</td>
</tr>
<tr>
<td>People draw each other out with supportive questions</td>
<td>Differences of opinion are treated as conflicts which must be stifled or solved</td>
</tr>
<tr>
<td>Each member listens actively to others</td>
<td>Unless the speaker captivates their attention, people space out, doodle or check the clock</td>
</tr>
<tr>
<td>People listen to others’ ideas because they know their ideas will be heard</td>
<td>People have difficulty listening to other peoples’ ideas because they are busy rehearsing what they are going to say</td>
</tr>
<tr>
<td>Each member speaks up on controversial issues and people know where everyone stands</td>
<td>Some members remain quiet on controversial issues. No one really knows where everyone stands</td>
</tr>
<tr>
<td>Members can accurately represent others’ views even though they do not agree with them</td>
<td>People rarely give accurate representation of views they disagree with</td>
</tr>
<tr>
<td>People refrain from talking behind others’ backs</td>
<td>Because there is no norm of being direct in the meeting, people resort to after the meeting discussion</td>
</tr>
<tr>
<td>A problem is not considered solved until everyone understands the reasoning</td>
<td>A problem is considered solved as soon as the fastest thinkers have reached an answer</td>
</tr>
<tr>
<td>When people make an agreement it is not assumed there is exact interpretation</td>
<td>When people make an agreement it is assumed they are thinking exactly the same way</td>
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</tbody>
</table>

All groups do not offer, by definition, effective contexts for decision making and mutual support. Some groups, in fact, can be quite dysfunctional in these terms. As the next chart illustrates, there are major differences in the characteristics of effective and ineffective groups.

In this regard, Johnson and Johnson suggest the following guidelines for the creation of effective groups which are quite applicable to using groups in case based learning:

➢ The first guideline is to establish clear, operational and relevant group goals that create positive interdependence and evoke a high level of commitment from every member.
Groups exist for a reason and that reason must be made clear if one is using groups in case based learning. You must be able to answer the question: why are we doing this in groups and not as individuals? If one of the goals in using groups in case based learning is to develop collaborative problem solving and learning, then this goal should be clearly spelled out and the design of the group learning process should reflect this fact. In terms of the purpose of a group task, so too, the objective of the group process should be made clear as well as any constraints.

➢ The second guideline, once goals are clear, is to insure that group members must communicate with themselves, in order to coordinate their efforts. Facilitators of group learning need to pay attention to the emergence of barriers to the two-way flow of interaction in groups. In this regard, a stress should be placed on the need for active listening as well as talking and making points.

➢ The third guideline is to ensure that leadership and participation are distributed among all group members. The norm in case based learning, which use groups, is that all mem-

### Group Effectiveness

<table>
<thead>
<tr>
<th>Effective groups</th>
<th>Ineffective groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals are clarified and modified so that there is the best possible match between individual and group goals and they are structured cooperatively so all members are committed to achieving them.</td>
<td>Members accept imposed goals which are competitively structured so that each member attempts to achieve their personal goals first</td>
</tr>
<tr>
<td>Communication is two-way and open with the possibility to express feelings as well as ideas</td>
<td>Communication is one-way; only ideas are expressed and feelings are ignored</td>
</tr>
<tr>
<td>Participation and leadership are distributed among all members</td>
<td>Leadership is delegated and based upon authority; participation is unequal with high powered members dominating</td>
</tr>
<tr>
<td>Ability and information determine influence and power</td>
<td>Position determines power and power flows from an authority and status system</td>
</tr>
<tr>
<td>Decision making processes are matched with the situation</td>
<td>Decisions are always made at the highest levels of authority</td>
</tr>
<tr>
<td>Structured and creative approaches to controversy are pursued with exploration of reasoning of all the group members</td>
<td>Disagreement among members is suppressed and avoided with quick compromises dominating</td>
</tr>
<tr>
<td>Conflicts of interest are negotiated through integrative negotiation and agreement is a mediated process</td>
<td>Conflicts are resolved on a win-lose basis</td>
</tr>
<tr>
<td>Interpersonal and intergroup skills are stressed through high levels of inclusion and support</td>
<td>The functions of group members is to contribute to harmony and individuality is suppressed</td>
</tr>
</tbody>
</table>
bers are to exert leadership. This helps to ensure that the entire resources of the group are utilized. Rotating reporting and chairing roles is one technique that can be used to accomplish this goal in group learning. Another technique is to have each individual write his/her points on post-its noted prior to the onset of discussion, and have these placed on a flip chart and then check, prior to closure, to ensure that the points were discussed or otherwise dealt with.

➢ The fourth guiding principle is to match, in a flexible fashion, decision-making procedures to the issue at hand and the situation that surrounds it. There are numerous ways in which groups can come to a decision from voting, to consensus and expert led decisions. Various methods should be applied in case based learning and some of these, as will be discussed, require separate, direct training.

➢ The fifth guideline is to encourage the group to utilize a number of tools and frameworks for decision making and creative problem solving. Introducing these tools, throughout a case based learning program, opens the group to the exploration of alternatives and often prevents premature dominance of particular individuals. The appendix contains a number of useful techniques, which can assist in this process.

➢ The sixth guideline is always to allow enough time, when using group based learning, for the results of the deliberations of all groups to be presented and discussed. Nothing will dampen motivation for group based learning more quickly than not having the opportunity to present the views of the group. This leads to cynicism, not only with the substance of the issue, but also with the very process of group engagement and learning.

➢ The seventh guideline is a simple one, but one which is often overlooked. Make clear, at the front end of the process, the format to be used in reporting the results of group discussion. If graphics can be used, then illustrate this prior to the onset of work. If the presentation is to be in point form, and within a time-frame, make this absolutely clear.

➢ The final guideline is that, if the development of group problem solving and decision-making skills is to be one of the results of group work, then do not leave this matter to chance. Give these skills a focus equal to the content itself. And if outcomes require the acquisition of new skills, then ensure that the skills are developed and their absorption monitored.
Cooperative and Team Learning

Using groups, in case based learning, provides a vehicle through which to tap into the resources of others, by energizing a process of cooperative learning. To understand the process of cooperative learning, it is helpful to place it within the framework of social interdependence. Social interdependence exists when each individual’s outcomes are affected by the actions of others. Positive interdependence exists when individuals work together to achieve mutual goals. Negative interdependence exists when individuals work against each other to achieve a goal that only a few will or can attain. Social independence results from a situation in which the outcomes of each person is unaffected by the actions of others.

Cooperation involves working together to accomplish shared goals. Within cooperative situations, individuals seek outcomes that are beneficial to themselves and beneficial to other group members. Cooperative learning, in an instructional sense, is the use of small groups in a way that people work together to maximize their own and each others’ learning. It can be contrasted to competitive learning, where people work against each other to achieve an individual goal.

One of the objectives of case based learning is to strengthen the capacity for cooperative learning. In this regard, cooperative case based learning can prove to be a powerful tool in the development and strengthening of teamwork and team training. Not all small groups are teams. A team is a set of interpersonal interactions structured to achieve goals. In some groups, for example working groups in organisations, interdependence is low and accountability focuses upon individual members, not the group as a whole. The product of a working group is the sum of all of the work produced by individual members. Members do not take responsibility for results, other than their own. Moreover, members do not engage in tasks that require combined work. A team, on the other hand, is more than just the sum of its parts. A team’s performance includes teamwork products that require the joint efforts of two or more members, as well as individual work products. The focus is also on team rather than individual accountability. Team members hold themselves, and others, accountable for the joint products of effort.

Katzenbach and Smith, based upon extensive research into the use of teams in organisations, suggest that there are three types of teams: teams that recommend things, teams that make or do things, and teams that run things. This categorization is a useful device for designing case based learning processes in which one of the goals is to help build team skills.

Cases can be constructed in which learners are placed into problem-solving teams with the mandate to analyze and suggest resolutions to problems. Other cases can be developed, calling

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for participants to function in the capacity of teams, that have responsibility to produce an output. Cases can be constructed in which participants are placed in a hypothetical executive team, that runs an organisation and is required to make strategic and other decisions. Cases can be developed in which participants examining the same case are placed into different types of teams and provide their inputs from that perspective. Finally, case based learning programs can be structured as a series of case analyses in which, not only the output of the team is monitored and discussed, but also the quality of the team performance is assessed. In these, and other ways, case based learning can serve as a context for team building.

In using case based learning, as a process for building teamwork and cooperative learning, it is often desirable to develop these skills in a structured and systematic fashion. A case can be used as the focal point for such process training. The framework below, adapted from Johnson and Johnson, illustrates this approach.

1. Form teams based upon the guidelines discussed in earlier sections. For each team select two people who will function as process observers. The function of process observers is to record the moves and progress of the team as they engage in the exercise. Appendix Two provides some guidelines and techniques for process observation.

2. In this exercise there are 11 separate steps and all teams must go through all of the steps.

3. Review the case and identify the key problem, which it presents. Describe the problem as you now see it.

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Any problem can be rephrased so that it describes three things: (i) the situation as it is now (ii) the situation as you would like it to be and (iii) the gap between the current and ideal situation. Restate your problem in these terms.

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
4. Most problems can also be understood in terms of the forces that push toward and against change. These are called helping and restraining forces respectively. Now in terms of the problem you have found and stated, identify the key helping and restraining forces. Helping forces move the problem toward the ideal by overcoming the gap and restraining forces do the opposite by widening the gap between the current and ideal situation.

<table>
<thead>
<tr>
<th>Helping</th>
<th>Restraining</th>
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</table>

5. For each restraining force, list actions, which you think, can be taken to reduce its force on the problem. Brainstorm these actions and do not worry about their feasibility or workability at this stage.

<table>
<thead>
<tr>
<th>Restraining Forces</th>
<th>Action to Reduce</th>
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</table>
6. Now for each helping force describe actions that can increase their strength. Use the same procedure as for restraining forces.

<table>
<thead>
<tr>
<th>Helping Forces</th>
<th>Action</th>
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<tbody>
<tr>
<td>A ________________________________________________________________</td>
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<td>B ________________________________________________________________</td>
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<td>G ________________________________________________________________</td>
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<td>H ________________________________________________________________</td>
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</tbody>
</table>

7. Review the various action steps and underline those which seem feasible.

8. Now list the resources you have available or require to implement the action steps you have prioritized.

9. Now integrate all of the action steps into a comprehensive action plan which addresses who, what, where, when, how and how much (cost).

10. Finally list indicators by which you will be able to know whether the action step has achieved its goal in terms of the problem.

**Facilitation Skills For Collaborative Case Based Learning**

There are two dimensions in any case based learning context: content and process. The content dimension centers on the subjects under discussion, the tasks to be undertaken, the nature of decisions required and the specific learning goals. The process dimension encompasses the methods and procedures being used to undertake the content tasks, the nature of relationships established among learners, the rules and norms of the group and the group dynamics. Facilitation is the art of managing process dimensions in case based learning. Moreover, it is a way of providing leadership without taking the reins in one’s own hands. A facilitator’s role is to help others assume responsibility and take the lead. Put in other words, a facilitator develops the processes, that produce content outcomes.
Facilitation is a form of process leadership and is a highly valuable skill for instructors in case based learning.

In undertaking such a process leadership role, a facilitator performs a number of tasks:

- Helping the group define its overall goal and specific objectives
- Helping members assess their needs and creating contexts and processes so that they can meet them
- Providing processes so that learners can use their time efficiently and effectively in making high quality decisions
- Guiding group discussion in order to keep it on track
- Making accurate notes that reflect the ideas of members
- Helping the group understand its own processes in order to improve upon them
- Making sure that assumptions are surfaced and tested
- Supporting learners in assessing and developing their task and process skills
- Using consensus and other forms of decision resolution
- Supporting learners in managing their own interpersonal dynamics
- Providing feedback to learners in order that they can continue to develop their insights and skills
- Managing conflict in a collaborative mode
- Helping the group and individuals communicate effectively
- Helping the group access outside resources critical to the case
- Fostering leadership in others by sharing responsibility
- Empowering others as facilitators

Effective group facilitation, in case based learning, can be significantly enhanced through the use of a number of tools and techniques:

- **Stay Neutral on Content**
  The role of an instructor in the facilitation mode is to focus on the process of learning and interaction and not to pre-empt that process with strict content interpretations. This is, perhaps, one of the most difficult challenges faced in case based learning since it dramatically alters the traditional teacher directed classroom.

- **Listen Actively**
  The benefits and techniques of active listening have been described previously.

- **Paraphrase to Clarify**
  This has also been discussed previously.
❑ **Visualize Ideas**  
This involves converting ideas generated by the group into graphic and other visual forms in order that they are more accessible and understandable to all group members.

❑ **Play Ping-Pong**  
This involves a process of continually redirecting ideas and questions, which flow from the group back to it.

❑ **Synthesize**  
This entails a process of inviting others to build upon the ideas of the group as they emerge creating a whole concept over time which is greater than the sum of its parts.

❑ **Mirroring**  
This involves periodically holding up a mirror to the group telling them how they look to an outsider.

❑ **Periodic Summarizing**  
This involves summarizing the consensus and issues facing a group periodically as a progress check or barrier focus.

❑ **Drawing People Out**  
Drawing people out is a way of supporting learners in taking the next step in clarifying and refining their ideas. For example: after a person makes a comment one can paraphrase and pose a question. “So it sounds like you are saying X”. “Can you give me an example of X?”

❑ **Gathering Ideas**  
Effective gathering of ideas requires a precise description of the task. “For the next ten minutes, please evaluate this proposal by calling out the pros and cons of the idea.”

❑ **Stacking**  
Stacking is a procedure for helping people take turns when several people want to speak at once. It involves a four-step procedure: 1. First ask for a show of hands for all who want to speak 2. Then create a speaking order by assigning a number to each person with a hand raised 3. Call people in their turn 4. After the last person has spoken check to see if all who wanted to speak have had the opportunity to speak.

❑ **Tracking**  
This process entails keeping track of the various lines of thought that are going on simultaneously in a group. It involves a three-step procedure: 1. First the facilitator
indicates that he is going to step back from the conversation and summarise it 2. Next summarise and name the various conversations that are in play (e.g. sounds like we have three conversations here: one is about roles, one about structure and one about change) 3. Use the question “Am I getting it right?” to determine whether the three types of conversation are indeed occurring in the group.

- **Balancing**
  The direction of a discussion can often be set by the first three people who speak, or be dominated by a highly articulate set of individuals. Balancing is used to round out the discussion by posing the following types of questions: “Okay now we know where three people stand on the issue, does anyone else have a different position? Are there other ways of looking at this? What do others think? We have heard from X and Y, is a third view possible?”

- **Spotting Common Ground**
  This is a technique to use when group members seem to be polarised. It entails a four-step process: 1. First indicate that you are going to summarise the group’s similarities and differences on an issue 2. Summarise the similarities and differences 3. Note the areas of common ground 4. Check for accuracy.

- **Multi-Tasking**
  When the key components of an issue or problem are identified, break the group into task groups to delve further into each element and then have them report back to the group.

- **Creative Reframing**
  Reframing invites learners to break out of normal categories of analysis and reexamine their beliefs and assumptions. This entails making a mental shift and viewing a problem, issue or theme from a different angle and then looking again at how one perceived the issue prior to reframing. A simple reframing technique is to list on a flip chart the traits of the presenting problem: how the problem is currently being defined and then opposite a description of how the attribute could be thought of in a different way entirely. Typically reframing a problem involves altering the assumptions, which are underpinning the current probe definition, changing the causal forces in operation and removing a constraint.

Facilitation, in case based learning, is a subtle and demanding process requiring the use of a number of skills and an awareness of the nuances of discussion and group functioning. Moreover, it occurs in the context of a group process, that unfolds in different phases, each of which presents different focal issues and challenges. Sam Kaner and his colleagues have captured this unfolding process in the diagram following, which serves as a visual guide to facilitators.
in case based learning.\textsuperscript{38} As the diagram illustrates, facilitators of group learning confront a dynamic evolution of learning processes and stages in group settings.

The early rounds of a case discussion typically cover safe and familiar territory. People often take positions that reflect conventional wisdom and established ways of seeing the world and doing things. When, and if, these approaches do not seem to fit the problem or resolve it, people tend to diverge in their thinking and explore, in sometimes random ways, a host of different options and ways of seeing the world. In this stage, often, people will express frustration at not getting to the point or being off track. The struggle to try to integrate diverse perspectives finds learners in the “groan zone”: a metaphor for mixed feelings of anxiety, restlessness, tedium, ambiguity etc. People often “groan” individually and collectively. The groan zone, on the other hand, is the context in which dissonance generates learning. That is, if the facilitator is patient and applies process techniques to aid in resolution. Of course, one can become stuck in the groan zone and be permanently stymied or blocked. The way out of the groan zone is through convergent thinking processes guided by the facilitator. Facilitation, it should be clear, involves the acute capacity to sense where a group is and the tools which may assist it in getting to where it wants to be.

Another way to envision the process of case based learning, from the perspective of facilitation, is through what Bruce Klatt has called the natural learning cycle.\textsuperscript{39} Natural learning, in Klatt’s view, is a process of learning by doing. It involves reflecting on what you have done and its consequences, assessing how this fits with what you already know and how this knowledge might be relevant to future decisions and actions. In natural learning, facilitators assist participants to create and discover their own options and insights by providing for a context of exploration, experimentation and discovery.


According to this model, learning progresses through a cycle: when we act we generate consequences that provide us with feedback. Through this process we learn about our actions. What we learn may alter our thinking and the nature and bases of our actions in future. This cycle has been termed by others as action learning. In the action learning cycle experience is transformed into new knowledge, which forms the basis of new action. The natural learning cycle applies to both individual and group learning. The diagram below illustrates the cycle.

**Focus**
Learning starts with speculation, dissonance or wonderment, that leads to our attention being focused upon the need to learn. At this point in time, we are “learning ready”. In others words, we have a need to, and want to learn. Learning readiness is a powerful notion and presents a challenge to case based learning. Designing cases, that assume people are learning-ready, is dangerous. Generating learning readiness, the need and desire to learn, must be integral to the case design. In this regard, an effective case should generate dissonance, wonderment or speculation on the part of the learner. To do this, case designers must know their learners, not just their content, and they must understand the process of learning, not just the results of that process. Much of this Handbook is devoted to techniques, which will assist case designers in that process. If learners are not focused, and ready to apply their learning processes, then much of what follows will not be case based learning but case based recitation.
Search
With a clear focus in mind and readiness to learn, the next phase of the natural learning cycle entails the collection and organisation of data and useful information. This is done through asking questions, researching and observing, making mental notes of what is interesting and relevant to the focus of your learning.

Integrate
At this point individuals and groups are armed with focus, motivation and information. The next phase involves organizing your findings into categories that are relevant and meaningful. The focus in this phase is synthesis and putting things together in patterns. It is also in this phase that what you are learning is linked to what knowledge you already possess with an ongoing process of revision.

Generalize
At this stage, a person, or group, has integrated past experience and acquired new learning, with the result that they possess a new level of knowledge. At this point, though, the new level of knowledge applies only to the context in which it was acquired. The next step, in the natural learning cycle, involves generalizing and testing that new knowledge in new situations, or applying it to new problems and tasks. This, of course, is the heart of case based learning, and yet, many cases end at this very point in the case. In the design of cases, then, problems, or real life learning tasks, that bring to bear the conceptual knowledge acquired in the case should be included. As will be explained later in this Handbook, the World Wide Web offers a rich resource and context for generalizing and testing new learning and knowledge.

Act
At this point in the natural learning cycle a person enters the stream of action in daily and working life. The opportunities for continuous learning present themselves. By acting on new knowledge and interpreting experience in the light of this knowledge, the person reenters the natural learning cycle.

Learning Styles and Groups
One of the purposes of case based learning is to provide a context in which people can challenge their assumptions about the world, see things afresh or, as is popularly referred to, “thinking outside the box”. In this quest, the resources of the group can be utilized. One resource, within most groups, that often goes unrecognized, is the fact that, within a group,
there will co-exist among members a variety of learning and thinking styles. Essentially, a
learning style is the preferences each individual has for how they learn, what they perceive as
important in learning and how they display the results of their learning.

There are many approaches to and models of learning styles, which flow from research and
clinical practice. To illustrate the value of using learning style difference, for “out of the box
thinking”, the diagram above provides a schematic of learning styles based upon the experi-
ential learning model of David Kolb.

The accommodator approaches learning on the basis of feeling and doing. Accommodators
prefer hands on work, carrying out plans, experimenting, new experiences, trusting their in-
tuitive instinct versus using logic.

The diverger style is based upon feeling and watching. Diversers are good at seeing many points
of view. Other strengths are gathering information and identifying differences and problems.
The assimilator style is based upon thinking and watching. They prefer conciseness, ideas versus people, and logical versus practical tasks.

The converger style is based upon thinking and doing. Convergers prefer practical uses for ideas, finding solutions, and technical versus interpersonal tasks.

In the context of the natural learning cycle, there is a point at which each of the skills and orientations of a given learning style are of more central importance than others. In the design of case based learning programs, it is imperative not to skew the design toward a model, or dominant learning style. In fact, cases, and the group processes associated with them, should be designed to call upon each learning style. The reason for this is that each style, by virtue of its particular orientation toward learning, will illuminate a different dimension of the problem or issue. Learning styles, when they become rigid, tend to mask problems and overly focus solutions. Part of case based learning entails having people “think out of the box”, and for this to occur, they must also be placed in situations in which they “learn out of the box”.

This process of “learning out of the box has been described as exemplifying the difference between what Schon and Arygris call single and double loop learning.40

40 C. Arygris and D. Schon, Organisational Learning (NY: Addison-Wesley, 1995)
Both single and double loop learning start with step one: set goals. Following this, single loop learning assumes the established purpose and goals are correct and cycle within steps 2, 3, and 4 in order to achieve these goals. Efficiency becomes the major concern.

Double loop learning does not assume that the established goals cannot be changed. It cycles back to step 1 and reassesses these goals in the light of feedback. Based upon revised goals, new action plans are made and different actions are taken. Effectiveness becomes the major concern. The distinction between single and double loop learning can also be described in the following manner. Single loop learning is learning to adapt to change without changing one’s basic mode of learning. Double-loop learning is learning to deal with change by changing one’s mode of learning. In the former instance, one’s learning mode becomes more differentiated. In the latter case, the basic system of learning is changed. The key difference is between change within and change of the system.

Single loop learning is necessary in real life since there is little benefit in exercising constant energy on routine and predictable problems. Double loop learning is necessary, though, when we face complex, ambiguous or highly uncertain situations, tasks or problems.

Cases, and case based learning processes, need to be designed in order to energize and require that both single and double loop learning be in play. Cases can be approached using both a single and double loop process with the results compared. Or different groups can be tasked with approaching the case from a single or double loop perspective. But again it is important to remember that the world needs both “single loopers” and “double loopers”.

Towards Reflective Practice

Case based learning, in capacity building, seeks to develop what has been described as reflective practice. Reflection involves the practice of periodically stepping back to examine the meaning to oneself, and others, of what has recently transpired. Through a process of illumination, reflection guides future actions. While often identified as an individual trait, reflective practice, as Raelin has noted, also has a public quality and is undertaken through group based learning dialogues. Case based learning provides one such context for learning dialogues.41

David Hardy, from the Institute for Learning of the Bank of Montreal, has dubbed reflective practice as a form of thinking about thinking. He notes that people tend to confront problems

41 D. Raelin, Work Based Learning (NY: Sage, 2000), pp. 20-57
in work environments and consult their pre-existing solution databases for answers. These databases often provide routinized and habitual ways of responding to uncertainty. These very solution databases, though, can serve as traps and blocks to innovative and creative thinking. One of the functions of reflective practice, then, is to refresh and reconfigure these solution databases, as a foundation for new practices and new ways of seeing the world.

One technique, that is essential to the reconfiguration of the solution databases that we carry and consult, is called reframing. Essentially, reframing entails looking at a problem, or situation, through different lenses, in order to determine whether the nature of the problem changes and the possible solution options enlarge or reconfigure. Lee Bohlman and Terence Deal suggest that there are four different types of frames through which problems can be addressed, each of which has apt applicability to case based learning and case design:42

- **The structural frame**: which emphasizes goals, specialized roles and formal relationships
- **The human resource frame**: which sees an organisation as an extended family populated by individuals and groups who have needs, skills, and limitations which need to be attended to
- **The political frame**: which sees organisations as arena in which conflict, competing interests and negotiation predominate
- **The symbolic frame**: which perceives organisations as cultures, underpinned by rituals, values, and myths rather than by formal rules

In the facilitation of case based learning, problems should be examined at least through these, and other frames, in order to provide a holistic and multidimensional view of their nature and dynamics. This entails multi-frame thinking, a capability that can have substantial spillover benefits to daily practice and a range of organizational settings. The template opposite provides a curriculum planning and process tool for developing case learning that emphasizes different frames in content and facilitation processes.

Another approach to the development of reflective practice, that can be used both in real work settings and in case based learning programs, is the use of a learning team. Within learning teams in organisational settings, people discuss dilemmas and strategies in their working lives and examine, with the assistance of a facilitator, the underlying assumptions, models and theories that guide that practice. They often explore the differences between their espoused theories, what they

tell others about how things work, and their theories in use, what their actions tell about what they really believe to be how things work. Using simulations and real problems in case based learning can also provide a way to test the relationship between espoused theories and theories in use.

Learning teams provide numerous opportunities for members to develop their understanding of, and skills in managing, problems and human relationships. The reason is that, unlike other types of groups, the purpose of a learning team, in case based learning, is to focus on the development of the members, not merely to solve case problems. In this regard, there are a number of capacity building and skill opportunities available to members of learning teams:

- Time and space for reflection
- Support in setting goals
- Insights and inquiries from others
- Receiving different perspectives from others
- Drawing on the knowledge, experience and expertise of others
- Sharing ideas, confusion and successes
- Receiving support and feedback from others when trying out new behaviors
- Receiving challenges from others
- Confidence building by hearing oneself

### Framing Map for Case Design

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<thead>
<tr>
<th>Frame</th>
<th>Structural</th>
<th>H.R.</th>
<th>Political</th>
<th>Symbolic</th>
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<td>Case 2</td>
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<td>Case 5</td>
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<table>
<thead>
<tr>
<th>Frame</th>
<th>Content</th>
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<tbody>
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<td>Case 1</td>
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<td>Case 4</td>
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<tr>
<td>Case 5</td>
<td>X</td>
</tr>
</tbody>
</table>
Opportunity to hear oneself think and reflect
Learning how to manage oneself in a group
Space to experiment and try out new ideas and actions
Opportunity to step outside of one role

Central to the effectiveness of the learning team, is the art of conversation and role of questioning within that process. One of the purposes of questioning is to use it as a device to have people examine problems, and their own perspectives on these, from different points of view; that is, to assist them in reflecting on their practice. This contrasts with the type of questioning that often predominates in formal learning settings, and in some combative approaches to case learning. In these instances, the purpose, often, is to use questions to place the “focal person” on the defensive while demonstrating the cleverness of the questioner. It is questioning as ego-based combat.

In learning teams, questions linked to the exploration and reflection on practice are different. The are open ended and non-defensive questions that reflect the following:

- The question is based upon human curiosity or knowledge gathering
- The question does not assume or presume that the questioner already knows the answer
- The question is given and received in a constructive way
- The question is not stopped for fear that in questioning one will be seen to be ignorant
- The question leads to and does not cut off further inquiry
- The question is not based upon the assumption that a past answer or expected modal response will be the best answer.

As noted earlier in this Handbook, active listening is the other side of the questioning coin and also central to engendering reflection on practice.

Fostering reflection in case based learning involves assisting others to see the world in a new light and examine their predispositions, thinking and actions in that hue. This, of course, hinges, in part, on the degree to which people are prepared, or know how, to make public their views and values. In many ways, people are protective of what they really think or feel and engage in a variety of defensive routines to protect themselves. This dimension of human behavior has been captured through what is known as the Johari Window described in the diagram following.

As the diagram illustrates some behaviors and feelings are known only to the individual, which he/she may choose not to disclose to others in a group. Other feelings and reactions are
known only to team members, which they may not choose to disclose to the person.

The Johari Window

<table>
<thead>
<tr>
<th>Known</th>
<th>Not Known</th>
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<tbody>
<tr>
<td>1 OPEN</td>
<td>2 BLIND</td>
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<tr>
<td>3 HIDDEN</td>
<td>4 UNKNOWN</td>
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</tbody>
</table>

Quadrant 1 is the open area in the window. In this quadrant are things, which are known to self and to others and are discussable in direct forms.

Quadrant 2 is called the blind spot and contains things about the focal person known by members of the group but not disclosed to the person.

Quadrant 3 is the hidden quadrant, or facade, which represents things about ourselves which we wish to keep to ourselves.

Quadrant 4 is the unknown domain things which we do not know about ourselves and nor to others.

The Johari Window can be used in case based learning. One technique is to attempt to enlarge the open area of quadrant 1. It is impossible, and even undesirable, to have everyone functioning only through quadrant 1, but through constructive feedback and questioning, people can benefit from enlarging their capacity to function in quadrant 1. The purpose is to expand the arena in which reflection on practice can function, for what goes on in quadrants 2-4 often impact that practice and thinking.
Compared to performance or task teams, effective learning teams tend to exhibit the following types of norms and codes of practice:

- We should strive to be more and more open and honest with each other
- We try to be supportive of one another and we are concerned about each other
- We actively listen to each other
- We are interested in giving and receiving constructive feedback
- Our main purpose is learning and to reviewing our individual and group learning processes
- We commit to and distribute our work equally
- We are committed to the group’s agenda as our own

As in all facets of case based learning, facilitation is central to the effective instructional use of learning teams. In using a learning team model, the facilitator must walk a thin line between offering direction and allowing the group to develop on its own. In this regard, the art of facilitation of learning teams, in case based learning, is knowing when and why to intervene. In this regard, there are at least six types of intervention in the life of learning teams:

- Prescriptive interventions deliberately offer advice and give direction.
- Informative interventions offer leads and ideas about how to proceed or how to get unstuck from a problem or issue.
- Confronting interventions directly challenge members of a team on issues and their way of dealing with issues and problems.
- Cathartic interventions address emotional and other undercurrents and seek to remove tension and defensive blocks.
- Catalytic interventions provide a structure or framework through which new ideas and approaches can emerge, but do not specify in advance what these ideas are or could be.
- Supportive interventions display care and attention and provide empathic support.

Knowing when and how to deploy these interventions is a key skill set for facilitators of learning teams in case based learning. The starting point, of course, is to recognize that there exists more than one type and style of intervention in the first place. Facilitators of learning teams in case based learning need, as do their teams, to engage in reflective practice experi-
menting with different strategies and receiving feedback from the teams, as well as from third person observers, on the effectiveness of each type of intervention.

Group facilitation in case based learning is a complex, rewarding and demanding role. It incorporates content knowledge, process leadership and a sense of timing. It demands that the facilitator have skills in each of four critical processes:

- **Understanding** – having a good sense of the membership of the learning team, their backgrounds, jobs, frame reference and nature of the tasks they confront.

- **Intervening** – knowing how and when to act to influence the team.

- **Reviewing** – providing feedback to the team on its original intentions and commitments and the progress to date in those efforts.

- **Integrating** – establishing links between members and ideas.

### Facilitation Feedback Checklist

<table>
<thead>
<tr>
<th>Facilitator</th>
<th>Observer</th>
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<tbody>
<tr>
<td><strong>Behaviors That Help</strong></td>
<td><strong>Behaviors That Hinder</strong></td>
</tr>
<tr>
<td>Listens actively</td>
<td>Oblivious to group needs and process</td>
</tr>
<tr>
<td>Maintains eye contact</td>
<td>No follow up on concerns raised</td>
</tr>
<tr>
<td>Helps identify needs</td>
<td>Poor listening</td>
</tr>
<tr>
<td>Surfaces concerns</td>
<td>Strays into content too much</td>
</tr>
<tr>
<td>Defines problems</td>
<td>Loses track of key ideas</td>
</tr>
<tr>
<td>Involves everyone in the discussion</td>
<td>Ignores conflicts</td>
</tr>
<tr>
<td>Paraphrases</td>
<td>Offers no alternatives for structuring discussion</td>
</tr>
<tr>
<td>Provides feedback</td>
<td>Gets defensive</td>
</tr>
<tr>
<td>Checks time and pace</td>
<td>No paraphrasing</td>
</tr>
<tr>
<td>Asks relevant and probing questions</td>
<td>Lets a few people dominate</td>
</tr>
<tr>
<td>Stays neutral on content</td>
<td>Tries to be the center of attention</td>
</tr>
<tr>
<td>Monitors and adjust process</td>
<td>Group gets sidetracked</td>
</tr>
<tr>
<td>Focuses on process</td>
<td>Does not know when to stop</td>
</tr>
<tr>
<td>Make notes that summarize</td>
<td>Searches for answer that he wants</td>
</tr>
<tr>
<td>Ping-pongs ideas</td>
<td>Provides negative reinforcement to new ideas</td>
</tr>
<tr>
<td>Summarizes what is said</td>
<td>Does not build group skills</td>
</tr>
<tr>
<td>Knows when to stop</td>
<td>Seems bored</td>
</tr>
<tr>
<td>Stacks conversation</td>
<td>Does not synthesize or summarize</td>
</tr>
<tr>
<td>Add others</td>
<td>Add others</td>
</tr>
<tr>
<td>Add others</td>
<td>Add others</td>
</tr>
<tr>
<td>Add others</td>
<td>Add others</td>
</tr>
</tbody>
</table>
A good way to improve your facilitation skills in case based learning is to ask a friend or colleague to observe you in action and give you feedback. Above is a feedback sheet, which can be used in such a process of observation and feedback. Initially a simple check mark is used to record the presence or absence of the helping and hindering behavior. Later a frequency chart can be used to determine the persistence or dominance of particular behaviors.
Part 7
Problem Solving Strategies in Case Based Learning

One of the critical roles of the facilitator or instructor in case based learning is to guide learners through a systematic analytical process of examining and interrogating the case. Each step in this process should be designed and implemented to allow participants to examine the case from different vantage points by engaging them in different types of learning processes. By examining various cases in this manner, learners not only acquire substantive content knowledge, but also develop a problem solving strategy that is generalizable to situations, that they confront in real life. The acquisition of this problem solving methodology is one of the transferable learning outcomes of case based learning.

There are occasions, in a case based approach to learning, in which it is desirable to systematically introduce participants to a key concept, or methodology, that they will be expected to employ in a case examination. The use of a problem solving methodology is one such instance. In this regard, it may be appropriate for the instructor to select a sample case and, with the entire group, take learners through the case illustrating the steps in a problem solving methodology.

Geoff Easton has developed one such problem solving framework for cases which provides the conceptual skeleton for the discussion that follows.43

43 Geoff Easton, Learning from Cases (London: Routledge, 1999)
Step One:
Understanding the Situation

The basic element in the case study is information. In the first step of a problem solving approach to cases, instructors help learners to become familiar with this information and begin to work with it. The goal at this point is to build a descriptive and qualitative model, or image, of the situation. The learner should organize the information in order that patterns and trends can be discerned. The information in the case also needs to be evaluated. Not all information is of equal value, relevance or precision, in terms of the case problem.

Several techniques are useful in accomplishing the objectives related to understanding the situation:

1. Initial Reading

   - Skimming

   The first step for the learner, in the process of examining the situation, is to skim-read the case. This means that you do not stop and re-read everything, which flows from the page to your eyes. Your objective, in skimming, is to try to grasp the significant elements in the case and to highlight these factors. To an extent, you read the case and allow the material to “mature” in your head. This is somewhat like the process of making a good soup; the ingredients need to simmer in the pot before serving.

   The first reading of the case should be like the process of reading a story or novel. Very little evaluation should be undertaken in the skim reading of the case. Participants may need to practice skim-reading material and, in this instance, some practice paragraphs should be used. Far too often learners, particularly in university contexts, are engaged in analytic reading and take too much time in this stage of the case based learning process.

2. Organizing the Information

   The next step in understanding the situation is to organize the information in the case. The end result of this process should be a compact description, or model, of the situation. It must be stressed that, at this stage, the focus is on crafting a description, and not on undertaking an analysis, of the situation. Participants should not look for solutions at this stage. The instruc-
tor may have to insist, through several discussions, that students not “leap to analysis”, as they are often prone to do.

There are many tools to aid in the organisation of case information. As in the case of using any tool, for analysis or description, an instructor must decide whether or not to train students in the use of the tool itself. Some deliberate training and supervised practice in the use of “thinking tools” is desirable if the instructor is unsure of the degree to which students are familiar with them.

A selection of information organizing tools are discussed below:

❑ **Indexing**

In long cases particularly, learners can be taught how to index the information in the case. Typically, a case has major component themes, which can be used as headings for indices. Cases often also have a time sequence of events, which can also be used as headings. In a case which is centered on strategic management issues, for example, an index might look as follows:

1. External Environment Trends
2. Internal Strengths and Weaknesses
3. Current Strategy
4. Problems with Current Strategy
5. Alternative Strategies being Proposed
6. Criteria for Evaluating Strategies
7. Decision Options
8. Decision Consequences

Another way of indexing is the development of a key topic file.

❑ **Restructuring**

In certain instances, it is helpful to restructure the material in a case to better fit learners’ understanding of the key themes and tasks. Kenneth Schnelle, for example, suggests the following framework which can be used to restructure cases which have to do with organisational case studies:

*The Organisation:* Information, which relates to the organisation’s position with respect to other organisations, its structure, goals and objectives.

*Operations:* Information, which relates to how the organisation operates and sub-functions within this area.

*History:* Information related to past actions, people and decisions.
Almost any analytic framework in use in the social sciences can be employed as a frame for descriptively organizing information in a case. One quick result from restructuring information in a case is that it reveals critical elements, which may be missing, or items, which you may have overlooked in your reading of the case.

❑ **Extending**

Extending is a stage beyond restructuring. Extending means to combine information in ways, which create new information and hence greater understanding. Using tables and concept maps are examples of techniques for extending information. Below is an example of such a tabular format:

<table>
<thead>
<tr>
<th>UK Brewers</th>
<th>Sales (000)</th>
<th>No. of Hotels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bass</td>
<td>1700</td>
<td>104</td>
</tr>
<tr>
<td>Whitbread</td>
<td>842</td>
<td>6</td>
</tr>
<tr>
<td>Allied</td>
<td>644</td>
<td>42</td>
</tr>
<tr>
<td>WDB</td>
<td>588</td>
<td>35</td>
</tr>
</tbody>
</table>

The use of computer graphics and programs such as EXCEL can significantly enhance an understanding of a case through creative extensions and elaborations.

❑ **Relating**

Relating is the process by which relationships between variables are uncovered. It is the last stage in building the model of the situation. Both qualitative and quantitative techniques can be used to establish relationships. In this regard, everything from diagrams to computer based statistical packages, such as SPSS, can be employed depending upon the nature of the variables involved in the case.
Step Two: Evaluating the Information and Argument

Up to this point, in the problem solving process, all information has been assumed to be the same. This is clearly a dangerous assumption. The information in a case differs in some fundamental ways and should be evaluated at least from three perspectives: precision, validity and relevance.

- **Precision**

Precision refers to the degree of uncertainty inherent in a piece of information or statement. The case examination strategy highlights imprecise information, either through very careful reading, or moving the information forward to another area of the case to test its precision.

- **Validity**

The validity of information is tested on the basis of whether or not it is an accurate representation of the situation it purports to describe. There is no necessary relationship between precision and validity. A lie can be stated in very precise terms. In establishing the validity of information in a case, it is useful, at the outset, to categorize whether or not the information that is presented, in a particular area of the case, is a statement of fact or an expression of an opinion.

Opinions differ from facts in several ways:

- Opinions are seen through another person’s eyes and therefore they will be partial.
- Opinions are often concerned about events or other happenings in relation to which it would be hard to produce factual evidence.
- Opinions are also often concerned with relationships in the case.

In case analysis, the treatment of opinions should be undertaken with a good deal of skepticism. However, in some cases, it should be noted that the “force of opinion”, rather than the “clarity of facts”, is what is actually creating the problem and the strategies suggested to deal with the situation must account for this “fact”.

Extrapolation from the Information

Extrapolation, or inference, is a common activity in case analysis. In case analysis, there are at least four categories of extrapolation that are and can be used:

- **Facts**
  This involves taking the information as given with little in the way of extrapolation of meaning.

- **Inference**
  In inference you are rearranging existing facts and adding some new meaning to them.

- **Speculation**
  Speculation involves mixing facts from the existing case with facts imported from outside of the case. For example, extrapolating the patterns in one market to another market situation. Speculation hinges on the degree of congruence between the two situations.

- **Assumptions**
  An assumption is not based upon the facts in the case. It is made because without it you cannot complete the picture or maintain a logical argument. Assumptions should be visible, plausible and rare in the case analysis. It is a critical role for the instructor to illustrate, during case discussions, how to surface, or make assumptions visible, so that they can be assessed for potential probability. Assumptions, in other words, must be plausible. Otherwise it is easy to resolve a problem by “assuming it away”.

Step Three:
Diagnosing the Problems

Step three, in a problem solving approach to case analysis, is concerned with identifying problems, analyzing their nature and structure and deciding the order in which to approach them.

Problems, Opportunities and Threats

Just what is a problem in the context of a case? The most useful definition is that a problem is “the difference between a current, or expected future situation, and a desired situation.” Problem identification involves the search for these differences.
Another way to talk about problems is through the use of the concept of “problem area.” Usually there are many problems facing organisations, not just one. These problems are also typically related to each other and form “clusters” around certain themes. These clusters can be termed “problem areas”, in which several linked sub problems exist.

Some authors like to distinguish, as well, between problems, and opportunities and threats, facing an organisation. An opportunity is something that provides the organisation with the chance to improve its performance. The “problem” here is a strategic one: how to improve performance. A threat is the reverse.

Categorizing Problems

In most cases, problems are presented that require the learner to make a decision. Different types of problems, however, often require different types of decision. People often overlook this fact and treat all problems as if they were the same. In some situations, people actually end up spending 90% of their time dealing with problems, which represent only 10% of the difficulties being experienced by a transition.

Most decisions, in relation to problems, fall into one of the following categories:

- **Parameters**
  The first category is parameters. The least important decision reflecting the least important type of problem, should take up the least amount of your time. In these cases, minimum standards should be established and often the first alternative that meets the standard is the one to accept. This frees you to focus on other types of problems, which require more sustained attention and possess greater impacts.

- **Policy Decisions**
  The second category is policy decisions. This category relates to the most significant decisions. These types of problems often relate to the basic mission of an organisation, or its key values. In these instances, you often need to create a new policy or significantly revise an existing one. Changes in corporate strategy, for example, fall into this category.

- **Analysis**
  The third category is analysis. In decisions of this kind, you need to analyze what will work and what will not; or to assess consequences of decisions. Decisions, which are empirical in nature, fall into this category.
Judgment
Fourth come decisions requiring judgment. Often several choices are available to you and you have to determine which option is the best. While facts can help you, the bottom line is that these choices involve the exercise of judgment on your part.

Synthesis
When many factors must be brought together to produce a new solution, the need for synthesis is invoked.

Intuition
Periodically we face the need to make a decision when the facts before us are unclear and the consequences of exercising choice options are confusing, ambiguous and uncertain. We are, in these cases, certain about our uncertainty. It is at this point that intuitive reasoning comes into play. We decide by sensing what should be done.

Knowing what type of problem and decision you are facing can help immensely in the analysis of a case. But how do you know in what category a problem belongs? One way of dealing with this requirement is to ask yourself the following questions during the problem identification phase of case analysis:

✔ Does the problem require a complex decision?
The complexity of a problem relates to the number of variables operating within it and the long-term consequences of not resolving the problem. If this complexity is low, then use a parameter to deal with the problem and focus the remainder of your time on truly complex problems.

✔ Is it a problem or an opportunity?
Take a look at the decision facing you in the case. Is it a problem that needs to be fixed or is it an opportunity presenting itself to you? If it is an opportunity, then it will likely require analysis and synthesis, as well as strategy.

✔ Are there existing guidelines to follow?
One of the key things to look for in decision-making and problem solving is whether there exist precedents, of any kind, for the type of problem being dealt with. Most legal processes, for example, make extensive use of case precedents. But precedents also exist in the everyday world of organisations and businesses practices. The wheel does not always have to be reinvented. Benchmarking, in fact, is a technique based, in part, on the assumption that others have solved some of the problems facing your organisation and that you can learn from this experience.
✔ Is the problem real or imagined?
In far too many cases, people spend countless hours on problems, which turn out to be illu-
sionary. This does not mean that, if people in a case perceive there to be a problem, that for
them it is not a problem. Perceptual problems are real enough in their impact and their resolu-
tion, in most instances, does not lie in the realm of empirical evidence.

✔ Is it a resource or a people problem?
The two most important resources in any organisation are money and people and many prob-
lems fall into one or other of these categories. One of the traps in problem solving is to assume
that money can solve people problems or vice versa. The two problem types are interrelated
often but do require a different focus and set of strategies.

✔ What would happen if you did nothing?
This may sound strange but, in some instances, a problem may be caught in a flow of events,
which are inexorably moving to some point at which the problem will disappear. This is the
process of dissolving a problem. Recognizing problem-dissolving processes requires judg-
ment and intuition and should not be ignored in any approach to problems.

Steps in Case Problem Analysis

Once you are clear as to the type of problem we face, the following steps provide a useful
guide for further problem analysis.

1. Listing Problems
The first step involves listing all of the problems, which you can identify in the case. From the
earlier situation analysis, the learner should have a clear idea of “what is” in the case. The next
step involves determining what “should be” and expressing the difference between what is
and what is desired in terms of a problem statement.

A typical problem statement might be as follows: “ABC company, which once had a 50%
market share in terms of product X, now has a 20% share and desires to regain its competitive
market position by at least achieving 40% market share in a two year period.” Use the “one
sentence rule” in problem statements.

2. Understanding Problem Areas
You now have a list of “raw problems”. Some will be important and some will be of less
importance. Some will be clear and others will be vague and diffuse. And of even more impor-
tance, many of the problems will be related to one another. The task, in this step, is to clarify, and better understand, the relationships, between and among, problems in the case.

The first step in this process is to organize the specific problems identified in the raw list into “problem areas”. A problem area is a grouping of related problems. Problems can be grouped in numerous ways depending upon the case situation. Examples of how to cluster these problems were provided earlier.

The next task is to link the problem areas together. In linking problem areas together, the learner must understand at least three key concepts, that deal with causal relationships: symptoms, multi-causality and mutual causality.

❑ **Symptoms**

Not all problems are of equal importance in a case and some problems actually cause other problems to occur. A virus can produce a range of problems in the human body, from headaches to sore throats, and stiffness in joints. The latter are symptoms of the basic problem of the virus. They are problems, but symptomatic problems. Diagrams can be used in case analysis to illustrate these symptomatic problems and their relationship to a root problem.

One way of testing a symptomatic problem in case analysis is to see if it disappears if the root problem is solved. This “rooting out” process works in most instances, but not all. A virus can disappear, but a person’s psychological make up may be such that he/she still perceives, or believes, that she/he is ill and continues to experience the symptoms of the virus. Many people who have had limbs amputated, for example, continue to feel the imaginary limb, even though it has been removed from the body.

❑ **Multicausality**

A second major concept to use in linking problem areas, is that of multicausality. This merely recognizes that many symptoms are caused by more than one problem. The diagram below illustrates the relationship.

The diagram opposite shows that there are a variety of possible reasons for the development of a financial crisis for a country. In other words, there is multicausality behind the symptom.

Causality may also work both ways. That is, problem A is impacted by, and impacts, problem B. These types of problems are often called a “vicious circle”. For example,
often the link between inflation and unemployment is said to be a vicious circle. In using diagrams, the vicious circle relationship is highlighted through the use of double-headed arrows.

With an understanding of the concepts of symptoms, multicausality and mutual causality, you can now draw problem diagrams which show the interrelationship between problem areas in the case. A sample diagram is provided opposite. The linkages between the problem areas are hypotheses about relationships in the case which can be verified by further analysis.

The next step is to use the problem diagram and draw a final problem relationship diagram which specifies the problem(s) as the student sees them.

The final step in this phase of case analysis is to select the problem(s) which will be worked on as part of the actual analysis. While not totally complete, the following factors should guide the student in deciding which problems will be worked on in the actual analysis phase:

- The first criterion is the degree of importance the problem exhibits in relation to the role player you are assuming in the case. If a student has been told, in a case, that he is the CEO, then the problem’s importance is affected by the likely perception of the CEO.

- The second criterion is that of urgency. Other things being equal, which they never are of course, urgent problems are dealt with first.

- Some problems have more leverage than others. That is, a solution to them will generate multiple positive benefits to the organisation. This criterion is an important one in deciding upon which problems to solve and their priorities.
Some cases are designed by instructors to highlight the use of particular techniques or strategies. If this is part of the design, then the student should be advised to focus on problems, which demonstrate the use of such skills.

**Step Four:**

**Generating Alternative Solutions**

Step four, in the problem solving approach to cases, involves the generation of alternative solutions to the problems identified in steps two and three. The process of generating alternative solutions works somewhat in the same way as the generation of problems. First a bank of potential solutions are created and then grouped by area and relationship to the problem areas.

Problems and solutions do not necessarily have a one-to-one relationship. This is an important point to stress with learners. The diagram below illustrates the relationships between problems and solutions:

<table>
<thead>
<tr>
<th>P1</th>
<th>S1</th>
<th>P1</th>
<th>S1</th>
<th>P1</th>
<th>S1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Situation One</td>
<td>Situation Two</td>
<td>Situation Three</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In situation one, the solution fits the problem exactly. This does not necessarily mean that it is the best solution; only that it fits the problem. There may be a solution that fits this problem and other problems simultaneously. The second situation is where a solution is only a partial solution to a problem and another solution needs to be added to completely solve the problem. In Situation Three one solution may be applied to several problems.

**SCAMPER**

The process of generating solutions to problems involves a good deal of creative thinking. There are numerous techniques, which can be applied to stimulate creative thinking, as part of the solution generating process in case examination. A number of these are explained in the appendices.

One technique, called SCAMPER, integrates a number of creative thinking tools and is well suited to the process of solution generation in case analysis.
SCAMPER, developed by creative thinking experts Bob Eberle and Alex Osborn, is a checklist of questions, which can be used to generate ideas.\textsuperscript{44} To use SCAMPER, you first isolate the challenge or subject you want to think about. In this context, it is the generation of alternative solutions to a problem in a case. The next step is to pose the SCAMPER questions to the question or challenge and see what new ideas emerge.

The mnemonic SCAMPER stands for the following:

- **S** = Substitute
- **C** = Combine
- **A** = Adapt
- **M** = Modify or Magnify
- **P** = Put to other uses
- **E** = Eliminate or Minimize
- **R** = Reverse or Rearrange

**Substitute?**

In thinking creatively, you can attempt to substitute things, places, procedures, ideas and even emotions. Substitution is a trial and error method, which involves replacing one thing with another thing until you find the new or right idea.

To find new ideas using substitution ask:

- What can be substituted? Who else? What else?
- Can the rules be changed?
- Can other ingredients or materials be used?
- Other processes or procedures?
- Other sources of power?
- Other places?
- Other approaches?
- What else instead? What other part instead of this one?

\textsuperscript{44} See M. Michalko, \textit{Thinkertoys} (Ten Speed Press, 1993)
One example of a new product borne of substitution was the shopping cart, which came about as a result of a storeowner asking what he could substitute for the hand held shopping basket that would cause customers to buy more things.

**Combine?**

Much of creative thinking involves synthesis; the process of combining previously unrelated ideas, goods, or services to create something new. Guttenburg created the printing press when essentially he combined the coin punch with the winepress.

To combine ask:

- What ideas can be combined?
- Can we combine purposes?
- How about an assortment?
- How about a blend, mixture, alloy or an ensemble?
- Combine units?
- What other things could be merged with this?
- How could we package a combination?
- What can be combined to generate multiple uses?
- What materials could we combine?
- What prevents us from combining things?

**Adapt?**

One of the paradoxes of creativity is that in order to think creatively one must be aware of the ideas and experiences of others. These ideas and experiences may not be applied exactly as practiced to another context, but can potentially be adapted and applied, to a new context, in a new way.

To adapt ask the following questions:

- What else is like this?
- What other idea does this suggest?
- Does the past offer a parallel?
- What could I copy?
What could I emulate?

What would I have to change to use this?

What other process could be adapted?

What different contexts could I put my concept in?

What ideas outside of my field could I incorporate?

**Magnify?**

This aspect of SCAMPER provides questions, which can help you to magnify, add to, or multiply your idea, product or service.

Ask:

- What among my ideas can be magnified or made larger?
- What can be exaggerated or over-stated?
- How about greater frequency? Extra features?
- What can add extra value? More sales and customers?
- What can be duplicated?
- How could I carry it to an extreme?

**Modify?**

Just about any aspect of any idea or thing can be modified, often with startling results. Making larger computers smaller is a modification of an original design.

To modify your ideas ask:

- How can this be altered for the better?
- What can be modified?
- Is there a new twist?
- Change meaning, color, sound, odor, shape, name, location?
- What changes can be made in the plans? In the process? In marketing? In costs?
- What other form could this take? What other package could be used?
- Can the package and form be combined?
Put to Other Uses?

These questions help you to find an idea and then imagine what other uses it might be put to. The classic example of putting things to other uses was the recognition in the 3M company that the sticky paper they were producing, as a by-product of another product, could be used as post it notes. Another example is the whole concept of recyclable waste.

To put to other use ask:

- What else can this be used for?
- Are there new ways to use as is?
- Other uses if modified?
- What else could be made from this?
- Other extensions? Other markets? Other customers?

Eliminate or Minimize?

Ideas sometimes come from minimizing, or eliminating something. Through repeated processes of elimination, you can gradually focus your idea on your real problem or target.

To minimize ask the following:

- What if this was smaller?
- What should I omit?
- What should I divide up? Split it up?
- Separate into different parts?
- Understate?
- Subtract? Delete?
- Can the rules be eliminated?
- What’s not necessary?
- What can I do without?
- What is the most basic unit?
Rearrange?

Creativity can be thought of as a process of rearranging what we know in order to find out what we do not know. When a coach in soccer sends in a substitute player, he is rearranging the team in hopes of getting better performance.

To rearrange ask:

- What other arrangements might be better?
- Interchange components?
- Other pattern? Other layout?
- Other sequence? Change the order? The space? The time? The people?
- Transpose cause and effect?
- Change pace?

Reverse?

Reversing your perspective on things opens your mind to new ideas, which may seem strange, if you do not reverse. If you look at opposites, you will normally find things, which you missed.

To reverse ask:

- Can I transpose positive and negative?
- What are the opposites?
- What are the negatives?
- Should I turn it around? Upside down? Move it laterally?
- Consider it backwards?
- Reverse roles?
- Do the unexpected?

While there are many skills which people require in today’s fast changing world, none is perhaps more essential than the capacity to engage in creative problem solving. Michael Michalko, in his book *Thinker Toys*, describes the process by which Sony created the Walkman and the role of SCAMPER techniques in that process. Perhaps more than anything else this vignette illustrates the practical value of the creative mind at work:
In 1978, Sony engineers attempted to design a small, portable stereo tape recorder. They failed. They ended up with a small stereo tape player that couldn’t record. They gave up and used the useless machine to play music while they worked on other projects.

One day, Masaru Ibuka, honorary chairman of Sony, wandered into the workshop and noticed the engineers listening to this failed machine. He also remembered an entirely unrelated project going on somewhere else in the building in which an engineer was working to develop portable, lightweight earphones. What if you combined them he asked? (COMBINE). Could you leave out the recorder altogether and make a product that just plays music? (MINIFY).

Ibuka was mixing up functions. The idea that tape recorders also record was so well ingrained in peoples’ minds that no one thought of reversing it. (REVERSE). Even after he made his creative assertion no one wanted to hear about it. He was not discouraged. “Young people who want to listen to music while playing tennis or walking, and not disturb others—that is the market”, he said. Think of it not as a tape recorder but as a new concept in entertainment. (PUT TO OTHER USES). “Add headphones”, he said and you will dramatically magnify the music played”. (MAGNIFY)

Sony agreed finally to produce only a limited quantity of the new product. Moreover, they decided to narrow the marketing to only youths. (MINIMIZE) Guess what? Teenagers did not respond to the marketing but young yppie executives did and the rest is history. Sony recognized this quickly and introduced several customized Walkman for different customer groups—sports, business etc. (MODIFY)
Step Five:
Evaluating Alternative Solutions

With your alternative solutions generated, the next step is to evaluate each of them in terms of their capacity to: (i) solve the critical problems, on which you are working, and (ii) not generate new critical problems in this same process.

If you have generated a list of, for example, 25 solutions to the problem you are working on, it is advisable to group, or “chunk”, them. In this process, you will find that some solutions are mutually exclusive or discrete; that is, they are not linked to or a part of other solutions. These solutions should be kept for evaluation. In other cases, you will find that a single solution is really a part of a larger more encompassing solution. These solutions should be group under that larger solution.

In this process, you should end up with a smaller list of “generic solutions” which can be evaluated. The difference represented in the above process is somewhat similar to the difference between developing broad strategies for an organisation and the tactics used within each broad strategy.

Beware of Your Biases

Human beings are very imprecise in the ways in which they gather and use information. Roger Dawson has called this “information drift”. It is the same thing in the process of evaluation and decision-making. Many variables can cause you to “drift off course”, even though you may be unaware of their impacts upon you. That is why it is important to be self conscious about the decisions you are making and be open to others regarding how and what you are deciding. Before, during and after you evaluate your options undertake a “consciousness check” about the possible impact of information drift on the decision you are taking.

There are at least eight types of information drift which can potentially impact the nature of the decisions that you may make in a case:

- **Availability Drift**: You give more weight to information, which is readily available to you. The more you are aware of something the more you give emphasis to it, which it may not deserve.

Experience Drift: You tend to see things in terms of your own personal or professional interest. If you are a soccer fan, for example, you tend to think that soccer is the most popular sport in the world.

Conflict Drift: Your natural tendency is to avoid or filter out information that conflicts with your beliefs or values.

Recall Drift: You more easily recall information with which you are familiar.

Selectivity Drift: Since you are unable to absorb everything, you screen out information and observations about things that do not interest you. In case based learning, students often screen out accounting information.

Anchoring Drift: If you lack expertise in a specific area, right or wrong, you latch on to or anchor to the first piece of expert opinion or information you receive.

Recency Drift: You place greater stress on recent events in decision-making and the information you attend to. In these cases, you may not notice that there is a cycle of events at work over time and that some patterns recur.

Favorability Drift: This is the opposite of conflict drift in which you tend to concentrate on and give more weight to information, which supports your beliefs and values.

All of us are subject to the impact of information drift. In case analysis, one way to structure for the impact of information drift is to have learners work in heterogeneous groups, in which they must arrive at consensus decisions. In these situations, much of the group discussion centers on the information drift, that impacts various people’s decisions in various ways. Unfortunately, “group think” processes can also emerge in case groups. If groups are not used, then always subject your case analysis to an independent party’s evaluation before finalizing your views.

Choice Making Aids

There are numerous models and approaches to the evaluation of alternatives, and whole disciplines within the decision sciences have emerged in recent years, that bear on this process. It is not possible in this Handbook to include all possible approaches to choice and decision-making under uncertainty. Rather, what will be suggested are a few simple mnemonics that can be practically used as guides to making choices among alternative options or solutions.
The T-Form Assessment

In deciding among alternative solutions in the process of case analysis, at least two factors need to be clearly borne in mind: goals and impact. Begin with goals. Goals describe the end, or desirable state, to which your solution must contribute. If one of the objectives of a company, in a case under examination, involves raising market share for a product, then this becomes one of the goals to which the solution must contribute. Put another way, this goal becomes a criterion that is applied in choosing among potential solutions.

The keys to deciding among alternative solutions are the criteria, that are used to weigh the alternatives. This is a function of being clear about the goal state of the problem. Recall that a problem was defined as the gap between the existing state and goal state.

A technique, which can be used to apply criteria to potential solutions, is the use of a T-Form Assessment. A simple T-Form is developed for each goal and the alternative strategies are placed on a pro-con listing, in terms of the extent to which they will contribute to the goal. The T-Form can also be adjusted to build in the dimensions of relative importance of the goal and the likelihood of the solution being implemented and workable in terms of achieving the goal. A sample of such a T-Form is provided below:

<table>
<thead>
<tr>
<th>T-Form Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROS</strong></td>
</tr>
<tr>
<td><strong>TAKE OVER MOVE</strong></td>
</tr>
<tr>
<td>Likely</td>
</tr>
<tr>
<td>Increased take over protection</td>
</tr>
<tr>
<td>Joint sales and profits grow</td>
</tr>
<tr>
<td>Shareholders happy</td>
</tr>
<tr>
<td>Synergies gained</td>
</tr>
<tr>
<td>New markets</td>
</tr>
<tr>
<td>Take over succeeds</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Management expertise</td>
</tr>
<tr>
<td>Transferred</td>
</tr>
<tr>
<td>Scale economies gained</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
The Criteria Grid

Often, in making decisions about the selection of solutions in cases, there are multiple goals, which are desirable and can be pursued to varying degrees. Moreover, these goals, while all of value, may have different degrees of relative importance. In these instances, a useful technique to employ, as an aid in choice making, is a Criteria Grid.

As the diagram below shows, a Criteria Grid arrays goals against solutions to the goals. Unlike the T-Form, however, the Criteria Grid allows for the assignment of different weights to each goal, or criteria, indicating its relative importance to the eventual solution. Each solution is then judged, or rated against, the degree to which it exhibits, or manifests, the particular criterion and an appropriate number weighting is inserted in the intersecting box.

Thus, while a particular solution may strongly exhibit a particular criterion, the criterion may be weighted relatively low and, hence, the score will be smaller, than a solution which exhibits a strong degree of association with another criterion. After each solution has been scored, the numbers are totaled and the result shows the relative strength of solutions against all criteria.

It is important to note that the criteria grid is a guide to enable choice making. But it does not make the choice per se. The learner must do that based on the evidence amassed in the case and the various analyses undertaken. In case study analysis, in other words, there is no way in which the ultimate responsibility for judgment does not rest with the learner.

### Process Improvement Selection Matrix

**Job Placement System**

<table>
<thead>
<tr>
<th>Process</th>
<th>Result</th>
<th>Effectiveness</th>
<th>Efficiency</th>
<th>Subtotal</th>
<th>Agency Impact</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intake</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Data Enter</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>10</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Referral</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>9</td>
<td>4</td>
<td>36</td>
</tr>
<tr>
<td>Counsel</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>14</td>
<td>4</td>
<td>56</td>
</tr>
<tr>
<td>Job Search</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>Follow up</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>9</td>
<td>3</td>
<td>27</td>
</tr>
</tbody>
</table>

**Scale**

1 = Excellent  
2 = Good  
3 = Fair  
4 = Poor  
5 = Unacceptable

**Scale**

4 = Vital  
3 = Important  
2 = Necessary  
1 = Unimportant

**Target?**
Reaction Tables

A reaction table aids in decisions which are one-stage (works or does not) and incorporates three major components of any decision situation:

- **ALTERNATIVES**: The choices that are available to you
- **VARIABLES**: The responses that might come from choosing each of these alternatives
- **REACTIONS**: A projection of what the reaction by others might be to a combination of each of these alternatives and variables

In setting up reaction tables there are seven steps to take:

1. Check to be sure that the situation involves only one decision to be made at one point in time.
2. List the alternatives available.
3. Specify all of the variables that could result from these alternatives.
4. Construct a table by assigning and labeling a column for each alternative, each variable and each possible reaction.
5. For each alternative, decide the financial reward or penalty for each possible reaction. Start a process of elimination by weeding out alternatives that have an insignificant effect on the reaction.
6. Check for and eliminate variables that would have an insignificant impact on the return.
7. Quantify the reactions. How likely are they to happen? From this choose the optimum alternative.

<table>
<thead>
<tr>
<th>Alternatives</th>
<th>Variable</th>
<th>Reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Decision Trees**

Decision trees are used for multiple-choice decisions, where the outcomes of each choice are uncertain and multi-stage decisions are required. Multi-staged decisions mean that you will make a decision and then make further decisions based upon what happens next, or is forecasted to happen next. Strategic planning and implementation, for example, often entail multi-staged decisions.
The diagram opposite provides a format for constructing a decision tree. Suppose the decision involved is “building a house” and there are three alternatives: a. Build the house; b. Don’t build the house and c. Build the house later but not now. These three alternatives are placed in the first three squares of the decision tree.

The next step is to determine what reactions and consequences might flow from each alternative and put them in the boxes to the right of the alternative. Let us say on the build now box the alternative reactions could be: I go broke; I fall in love with someone who wants to rent not build a house; I die before finishing the house; I underestimate the cost of the house. These are inserted in the appropriate box and then the process is undertaken again only focusing on alternative reactions to the reactions.

Once all of the possibilities are placed on the decision tree, the next step involves rating the probability of any of these things actually happening. There is a circle on every line leading to a square. In this circle you place the percentage probability of the event occurring (0 means no probability; 100% is perfect probability; 50% is chance). With the probabilities assigned, you can scan the tree and determine what effects are most likely in relation to alternatives and their variables. You are aiming for alternatives and variables with minimum negative effects and high probabilities of occurring.

The Tows Matrix

The TOWS Matrix is a matching tool that is useful in developing and evaluating strategies in cases, which focus upon strategic and other planning issues, which face business firms or other organisations. TOWS stands for: Strengths, Opportunities, Weaknesses and Threats. A schematic representation of a TOWS Matrix is provided below.

<table>
<thead>
<tr>
<th>Internal Factors</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-10 Internal Strengths</td>
<td>Generate strategies here that use strengths to take advantage of opportunities</td>
<td>5-10 Internal Weaknesses</td>
</tr>
<tr>
<td>External Factors</td>
<td>SO Strategies</td>
<td>WO Strategies</td>
</tr>
<tr>
<td>Opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-10 External Opportunities</td>
<td>Generate strategies here that use strengths to take advantage of opportunities</td>
<td>Generate strategies here that take advantage of opportunities by overcoming weaknesses</td>
</tr>
<tr>
<td>Threats</td>
<td>ST Strategies</td>
<td>WT Strategies</td>
</tr>
<tr>
<td>5-10 External Threats</td>
<td>Generate strategies here that use strengths to avoid threat</td>
<td>Generate strategies here that minimize weaknesses and avoid threats</td>
</tr>
</tbody>
</table>
A TOWS Matrix is composed of nine cells. As illustrated, there are 4 key factor cells (strengths, opportunities, weaknesses, threats), 4 strategy cells (SO, WO, ST, WT), and one blank cell. The blank cell is used to summarize the desired strategy, which may be a combination of elements from other strategies, or a single strategy choice.

The four generic strategies in the TOWS Matrix can be described as follows:

◆ **SO Strategies**
  These types of strategies use a firm’s internal strengths to take advantage of external opportunities. This is of course an ideal situation for a firm and many managers use the other strategies as a tool to get to this strategy.

◆ **WO Strategies**
  These strategies aim at improving internal weaknesses by taking advantage of external opportunity. Sometimes a firm faces a key external opportunity but its internal weaknesses prevent it from exploiting them. Often firms will try to acquire new technology as a way of allowing it to exploit an opportunity. The same can be said of building a new core competency.

◆ **ST Strategies**
  These strategies use a firm’s strengths to avoid or reduce the impact of an external threat. Certain airlines have used their state of the art reservation systems to meet the threats posed by low cost competitors in the industry.

◆ **WT Strategies**
  These are defensive tactics aimed at reducing internal weaknesses and avoiding environmental or external threats. Typical strategies are merger, alliance, retrenchment and even bankruptcy.

There are eight steps involved in creating a TOWS Matrix in case examination:

1. **STEP ONE:** List the key external opportunities facing the firm or organisation in the case.

2. **STEP TWO:** List the firm’s key external threats.

3. **STEP THREE:** List the firm’s key internal strengths.

4. **STEP FOUR:** List the firm’s key internal weaknesses.
5. STEP FIVE: Match internal strengths with external opportunities and record the resultant SO strategies in the appropriate cell of the matrix.

6. STEP SIX: Match internal weaknesses with external opportunities and record the resultant WO strategies.

7. STEP SEVEN: Match internal strengths with external threats and record the resultant ST strategies.

8. STEP EIGHT: Match internal weaknesses with external threats and record the resultant WT strategies.

The purpose of the above steps is to generate feasible alternative strategies, not to select or determine, at the outset, which strategy is best. Not all of the strategies selected will be chosen. The Matrix though portrays the strategies as part of a pattern and allows synthetic approaches to be developed. These can be placed in the blank cell.

The Selection Window

The selection window is a creative thinking technique developed by H. James Harrington as a tool for selecting among alternatives in problem solving. The tool allows one to consider each option in a systematic fashion. It uses two criteria for selection among options: effort (resources) and probability of success. The starting point is to generate a list of options for a problem or decision. Each option should then be given a number as an identifier. The next step is to evaluate each option on your list against the criteria of effort and probability of success.

Do this by asking the following questions:

- How much effort will it take to accomplish this?
- How likely is it that this idea will succeed?

Give a score of 1-10 for each answer. Place the number of the option at the point in the window where the two answer points intersect.

The example below illustrates the use of the selection window in relation to an issue of how to help a friend who has AIDS.

---

Step One: Develop a List of Ideas: What Can You Do to Help Your Friend Who Has AIDS?

1. Change nothing
2. Never see the person again
3. Call the person every day or week
4. Participate in an AIDS walk
5. Develop a cure for AIDS
6. Walk your friend’s dog
7. Shop for groceries for your friend

Step Two: Give Each Idea a Score

<table>
<thead>
<tr>
<th>Option</th>
<th>Probability of Success</th>
<th>Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Change nothing</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>2. Never see the person again</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3. Call the person every day</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>4. AIDS walk</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>5. Cure for AIDS</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>6. Walk dog</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>7. Shop for groceries</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
Pursue First: First pursue options that have a high probability of success and low cost in effort
Pursue Second: High probability of success but with high effort and may require support of others
Pursue Third: Low probability of success and low effort
Pursue Last: Low probability of success and high effort

It is possible to use the selection window and yet apply different approaches to the ultimate categorization. If for example, one happens to believe strongly in high risk and high reward, then obviously the options to be pursued and their relative sequence would change. The basic methodology of the selection window can also be used employing other variables, rather than effort and probability of success. For example, one might construct a window based upon opportunity to learn and level of investment, complexity of problem and resources, strategic importance and effort or researchable and verifiable. It is also possible to further subdivide each section in the window in terms of relative priority.

Creative Problem Solving

Problem solving demands integrative thinking and an overall capacity to engage in convergent and divergent processes. Creativity, moreover, is needed in all phases.

Creativity is not the province solely of gifted individuals. Creativity does require the development of a habit of mind and an orientation toward the world in which open exploration is a core element. Ernest Schuttenberg suggests that creativity requires a set of skills that can be learned, in part, through the posing of key stimulating questions:47

- **Ideational Fluency**: the ability to generate many different ideas
  Question: What additional ways are there to ...?

- **Possibility Thinking**: The ability to see many ways of doing something
  Question: What are the possibilities...?

- **Scenario Thinking**: The ability to conceive of a range of different future possibilities
  Question: Can we look at it this way...and this way...and this way...?

- **Combinational Ability**: The ability to see relationships among seemingly unrelated objects or ideas
  Question: What are the similarities between A and B...?

---

❑ **Provocation Skills**: The ability and will to challenge traditional ways of thinking and doing things
   Question: Why does it have to be done this way?

❑ **Disruptive Tendency**: The ability to disassemble familiar ways of doing things and reassemble them in new ways
   Question: How about it if we changed the positions of A and B to C and D...?

❑ **Paradigm Flexibility**: The ability to change one’s frame of reference from prevailing ideas and myths
   Question: Maybe what we have been doing all these years is no longer productive? What about trying...?

One of the key ingredients in problem solving is the creative process that underpins it. The preceding problem-solving model contains elements of this process, but there are others that highlight this dimension and are well worth employing in case-based learning. One of these is the model developed by Osborne and Parnes and is called the creative problem-solving process. We highlight here in order to emphasize the need for creative thinking in the problem solving process. As the diagram below illustrates, the Osborne-Parnes model stresses the universal process of finding or discovery.
Mess Finding

At the outset of problem solving, people sometimes are vague as to the nature of the problem they face. Frequently, we may be faced with a situation that “bothers” us, or is confusing to our existing perceptual frameworks. We also often face undefined situations in which there is a need to do something or “figure things out”. Mess is the term given to this type of situation.  

At this stage in the CPS model you are looking to develop a rough sketch of the situation you face. The situation is described in terms of wish fulfillment language. It contains our images and general ideas of what we would like to see happen. Unlike other models of problem solving, at this stage in the CPS framework, you are using divergent thinking processes to capture the many dimensions of the essence of the problem. The tool below is a guide to this divergent process.

```
Write a number of statements that begin with “I wish...” or “What I’d like to see is...” or “Wouldn’t it be nice if....”
```

The next step in the process is to deploy convergent thinking and apply it to the list above that you created through divergent thinking. On your divergent list above place a star besides the items that:

- Bother you most
- Are most important to you and others
- You most want to attain
- Capture your imagination and curiosity
- Other criteria of importance

From this starred list select the key issues you will deal with in the CPS process.

Data Finding

In this stage of the process, the focus is upon developing a current description of the situation by gathering relevant facts. The process is undertaken in three steps:

---

48 D. Daupert, *The Osborne-Parnes Creative Problem Solving Manual* (Ideastream, 2001)
Step One: Write your mess statement here:

Wouldn’t it be nice if....

➢ Why is this important?
➢ Why can’t this be ignored?
➢ What keeps me from getting past this?
➢ What will I lost if I do nothing?
➢ Where, when and how does this thing occur?
➢ Who could help me with this?
➢ Who stands to gain/lose if the problem is solved?
➢ When does this not seem to be a problem?
➢ What resources do I have?
➢ What information would I like to have?
➢ How did this come about?
➢ How does this situation affect me?

Step Two: Assign letters (High, Medium and Low) indicating the degree of relevance of the information generated.

Problem Finding

At this stage, we are interested in developing a focused, heuristic problem-solving statement. This entails a process of defining and redefining your problem until the focus is exact and clear. Two techniques are useful at this stage and are described below.

IWWMI....

This acronym stands for the phrase In What Ways Might I. The statement has the effect of reorienting one from a negative toward a positive focus. Suppose that the problem is currently seen, as I do not have enough money. The IWWMI technique is applied to this problem by asking the question 7 to 8 times and jotting the answers down:

- In what ways might I _____________________________
- In what ways might I _____________________________
- In what ways might I _____________________________
- In what ways might I _____________________________
A variant on the techniques is to take the IWWMI statements and alter words in the formula. In other words one can substitute new words for the words I, get, money and see what happens. This is done by using the following structure of the IWWMI formula:

“IWWM somebody do something with/to/for/about something”

The Five Whys

Another focusing technique involves using the five whys. Take your problem statement and ask why do I want that? And ask the same question to the response in a series of five question posing processes.

<table>
<thead>
<tr>
<th>What do you want?</th>
<th>Why do you want that?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I want some money</td>
<td>1. Why do I want money?</td>
</tr>
<tr>
<td>2. Because I want to travel</td>
<td>2. Why do I want to travel?</td>
</tr>
<tr>
<td>3. I want to see different cultures</td>
<td>3. Why do I want to see different cultures?</td>
</tr>
<tr>
<td>4. Because it will be fun and provide me ideas</td>
<td>4. Why do I want fun and new ideas?</td>
</tr>
<tr>
<td>5. For personal growth and a sense of fulfillment</td>
<td></td>
</tr>
</tbody>
</table>

As the example illustrates, the five whys technique often surfaces the underlying goal that is truly driving the problem solving process.

Idea Finding

At the idea finding stage in the CPS framework, the focus is on developing a list of potential solutions that seem to be promising. There are a host of techniques for idea generation that can be used at this stage and many are described in the appendix of the Handbook. One technique often used in the CPS framework is an attribute matrix. Below is a simple matrix, which was as its headings topics, skills and people. Write down items under each category. The next step is to make several passes through the matrix selecting a different item from each category and then thinking about the combination. Thus one might have on the first pass val-
ues clarification, writing and who go to courts. On the second pass it may be stress management, play therapy who go to courts, etc.

<table>
<thead>
<tr>
<th>Topics</th>
<th>Skills</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value clarification</td>
<td>Writing</td>
<td>Who go to court</td>
</tr>
<tr>
<td>Stress management</td>
<td>Play therapy</td>
<td>In colleges</td>
</tr>
<tr>
<td>Families</td>
<td>Organizing</td>
<td>In business</td>
</tr>
</tbody>
</table>

**Solution Finding**

At this stage in the process you select a set of criteria against which to evaluate your proposed solutions. Using the criteria grid explained earlier in this section is an excellent technique to deploy at this stage.

**Acceptance Finding**

At this stage of the CPS framework one shifts to the issue of implementation of the solution.

Problem solving capability is a core skill developed through case based learning. However, it is not an automatic process, nor a facile one. Regardless of the challenging nature of case content, ineffective and idea blocking instructional and group processes can hinder the development of creative problem solving. So too, content in cases, which does not relate to the needs, interests and realities facing learners, or their life and work, is not likely to provoke creative thinking.

Even group processes and challenging content may fail to energize creative problem solving, if the outlook and disposition of the learner is negative, or the willingness to devote energy to it is very low. In this regard, it well to remember the types of attitudes and capabilities we are attempting to develop when we stress creative problem solving in case based learning:

- The ability to wonder and to be curious
- The ability to be spontaneous, enthusiastic and flexible
- The ability to be open to new experience and to see the familiar from an unfamiliar point of view
- The ability to make desirable but unsought after discoveries
- The ability to make one thing out of another by shifting perspectives
❑ The ability to generalize in order to examine the universal or larger application of ideas

❑ The ability to find disorder, to synthesize and integrate

❑ The ability to be intensely conscious and yet aware of the unconscious and below the surface dimension of life

❑ The ability to visualize and imagine new possibilities

❑ The ability to be analytical and critical

❑ The ability to know oneself and stay true to that knowledge even in the face of opposition

❑ The ability to be persistent and work hard and long

❑ The ability to put two or more known things together in a unique way thus creating a new or unknown thing
Analysis and reflection are undertaken in case based learning, not only to develop substantive knowledge of the situations presented, and to apply key managerial and organisational concepts to the material, but also to develop skills, and other attitudinal qualities, in learners related to effective decision-making. While each decision and each decision-making situation is to some extent unique, there are, nevertheless, certain traits, that have been found, through research, to be associated with effective decision-makers.

Some of the core traits of effective decision-makers are listed below and can serve as a guide in the assessment of decision making capabilities of learners:

**Effective Decision Makers:**
- have a high tolerance for ambiguity
- have a well ordered sense of priorities
- are good listeners
- attempt to build consensus around the decision
- avoid stereotypes
- always remain resilient
- are comfortable with hard and soft input
are realistic about cost and difficulty
avoid decision traps
use their intuitive as well as their analytical powers

In developing decision making capabilities through cases, whether the focus is on the participant’s own decision-making, or the analysis of the decision making of an actor in a case, two dimensions of decision making must be borne in mind: the normative and the descriptive. The normative dimension of decision-making refers to the processes of decision making that one feels decision-makers should use, because of its value or effectiveness. The descriptive dimension addresses the processes people actually use in their decision-making. Needless to say, the normative and descriptive dimensions of decision-making are not always neatly congruent or aligned. Both elements in decision-making can be addressed through cases, but it is important to recognize what element is being designed into the case, or the case based learning process.

In many cases, and the learning processes associated with them, a normative model of decision-making tends to predominate in the design and subsequent interaction process. This model is one of rational choice, or what James March has called the logic of consequence.\(^{49}\) Rational theories of decision making assume that decision processes are consequential and based upon the preferences of the decision-maker. They are consequential, in that the action depends upon the anticipation of the future effects of current actions; that is, alternatives are assessed in terms of their expected future consequences. They are preference based, in the sense that consequences are evaluated in terms of personal preferences. Thus, alternatives, in a decision-making situation, are assessed in terms of the extent to which their expected consequences are thought to serve the preferences of the decision maker.

A rational procedure for making decisions asserts that the decision maker’s choice is conditional on answers to four basic questions:

- The question of alternatives: What actions are possible?
- The question of expectations: What future consequences might follow from each alternative and how likely is each consequence assuming that alternative is chosen?
- The question of preferences: How valuable to the decision maker are the consequences associated with each of the alternatives?
- The question of decision rule or criteria: How is a choice to be made among the alternatives in terms of the values of their consequences?

When used in the context of case based learning, the rational model of decision making asks learners to examine the decision making of actors, or their own decisions, in a case, by pursuing seven questions:

- What determined which alternatives the decision maker considered?
- Were there other alternatives, which could and should have been considered?
- What determined the expectations about consequences for the alternatives and particularly the one chosen?
- Were there other possible consequences not examined by the actor?
- What preferences or criteria did the decision makers use to make the choice?
- Were there other criteria that could or should have been used?
- What was the decision rule that was used? (For example, utility maximization, pleasure..)

A rational framework, such as the one described briefly above, is inherent in many conventional theories of human behavior. It is used to understand the actions of firms, marriage partners, bargaining, resource allocation, coalition making in politics and decision sciences. Unquestionably, when applied to cases, the rational model of decision-making can illuminate many dimensions of decision making which may remain hidden, to both the learner and the actor in the case. Such frameworks for rational decision making function, in case based learning, as ideal types against which the qualities of decision making of participants and actors in cases can be assessed and developed. At the same time, such ideal type models of decision making, when they serve as the only framework for decision making analysis and development in case based learning, can distort a person’s understanding of how decision making actually occurs and the constraints on that process.50

For that reason, in case based learning, it is important that decision-making, as it actually occurs, be explored and designed into cases. Perfectly rational decision making, particularly in the context of organisations, is rarely achieved due, in no small measure, to the following types of information constraints imposed upon people:

• Limited attention: Time and capabilities for attention are limited and it is not possible to pay attention to everything that is important at the same time.

• Limited memory: Even though MIS systems can improve the situation, the capacity of the human mind to store in memory is limited or at least the capability to recall is constrained.

• Limited comprehension: Decision-makers vary enormously in their powers to comprehend, to organize information and to make causal inferences let alone predictions.

• Limits to communication: In organisational settings there are limits to what can be communicated let alone understood.

These, plus other factors, have given rise to the notion that rational processes in decision-making are bounded and that rationality in decision-making is limited. Herbert Simon, in this regard, has proposed that, within bounded rationality, individuals and groups often base their decisions on satisficing, the search for what is good enough in the circumstances, rather than optimizing.51

The cognitive and organisational constraints on decision making have been researched by psychologists and organisational theorists who have found numerous information and decision making strategies that people use to cope with these limitations:

• People use stereotypes in order to infer unobservables from observables
• They form typologies of attitudes (liberal, conservative, etc.) and categorize people on these bases
• They attribute intent from observing behavior or from the consequences of behavior
• They abstract central parts of a problem and ignore other parts
• They adopt understandings of the world in terms of socially developed theories, scripts, schemas and stories that fill in missing information and suppress discrepancies
• They edit and simply decision situations

This muddy, and rationally incomplete dimension of decision making, can, and should be explored, in case design and case based learning. Cases can be designed, which contain within them, actors who use heuristics for decision-making, stereotyping, scripts and other devices.  

The nature of these devices and the strategies attached to their use can be examined. Rational analysis of the irrational, if a pun can be used, is a potent form of interrogation.

James March has suggested that decision-making situations are akin to a garbage can with choices attaching themselves to incoming problems in an infinite number of combinations. Garbage can cases provide an insight into the world as it actually works and should form part of the design of cases utilized for decision-making. While we may want to move decisions toward the rational, we must be careful in case based learning that the shift is not so great as to move the learning that occurs toward the unreal.

Balance is important in the design of cases geared to the processes of decision-making. Too often cases are constructed in which there is an underlying assumption that only one type of

### Types of Decision Making

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRREVERSIBLE</td>
<td>Commits you irrevocably when there is no other satisfactory course of action. Dangerous as an escape from decision making.</td>
</tr>
<tr>
<td>REVERSIBLE</td>
<td>Allows you to acknowledge a mistake early in the process rather than perpetuate it</td>
</tr>
<tr>
<td>EXPERIMENTAL</td>
<td>Requires a feedback mechanism in place before decisions are made</td>
</tr>
<tr>
<td>TRIAL AND ERROR</td>
<td>Allows one to adjust and adapt plans continually before full and final commitment</td>
</tr>
<tr>
<td>MADE IN STAGES</td>
<td>Allows close monitoring of risks as evidence of obstacles and outcomes at each stage is accumulated</td>
</tr>
<tr>
<td>HEDGING</td>
<td>Limits the risks inherent in decision making but may also limit overall gains</td>
</tr>
<tr>
<td>CONDITIONAL</td>
<td>Gives an alternative course of action in changed circumstances</td>
</tr>
<tr>
<td>DELAYED</td>
<td>Prevents rushing into decisions just to make decision</td>
</tr>
</tbody>
</table>

decision-making situation and one style of decision making exists. Decisions are vested within situations and the traits and demands of these contexts often affect the type and strategy of decision making which is warranted. The chart opposite developed by Robert Heller illustrates this principle well and provides a useful heuristic to guide case designers.\(^{53}\)

With the idea firmly in mind that there does not exist any pure form of decision making geared to all situations, the section below introduces a number of frameworks and techniques, which can be employed in the design of case based learning for decision making.

**The PrOACT Decision Making Model**

Based upon extensive research, Hammond, Keeney and Raiffa have proposed what they describe as a PrOACT model or framework for decision making.\(^{54}\) The PrOACT model offers a flexible process framework which can be applied, both by participants in the examination of a case and the instructor in the examination of the quality of decision making evidenced by participants.

In the PrOACT model, the focus is on developing eight competencies in decision-making:

- Working on the right decision problem
- Specifying your objectives
- Creating imaginative alternatives
- Understanding the consequences
- Exploring tradeoffs
- Clarifying uncertainties
- Thinking about risk tolerance
- Examining linked decisions

We will briefly review each of these dimensions from the perspective of case based learning.

**Working on the Right Decision Problem**

Many errors in management and public policy flow from a fundamental flaw of solving the wrong problem precisely, or applying muddled thinking to the entire problem solving pro-

---

cess. These types of errors can occur in the process of case based learning and teaching, in which people are seduced by the quality of the rationale and argumentative style applied to a problem, rather than confronting the definition of the problem in the first place. One of the central themes in case based learning is to concentrate, and focus the attention of learners, on the definition of the problem; that is, ensuring that the right problem is being defined and addressed in the context of a case.

Ian Mitroff has illustrated this “problem” of solving the wrong problem precisely with the following matrix: Mitroff uses a four-step process in problem solving:

1. Recognizing the existence of a problem,
2. Formulating the problem,
3. Deriving the solution to the problem
4. and implementing the solution.

The matrix is created by linking steps two and three as illustrated in the diagram following.

```
<table>
<thead>
<tr>
<th>Problem Formulation</th>
<th>Deriving the Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Right</td>
</tr>
<tr>
<td></td>
<td>Wise and Competent</td>
</tr>
<tr>
<td></td>
<td>Unwise and Competent</td>
</tr>
<tr>
<td>Right</td>
<td>Wise and Incompetent</td>
</tr>
<tr>
<td>Wrong</td>
<td>Unwise and Incompetent</td>
</tr>
</tbody>
</table>
```

In cell one, the problem is formulated correctly and the correct solution is derived from it. In cell two, the problem is formulated correctly, but the wrong solution is derived from it. In cell three, both the problem and the solution are formulated incorrectly. And in cell four the problem is formulated incorrectly, but the right solution is derived from the formulation of the wrong problems.

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55 I. Mitroff, *Smart Thinking for Crazy Times* (NY: Continuum, 1999)
The way you state your problem frames your decision and, for that reason, problem framing is critical to decision making in cases and real life. Cases present ample opportunity to explore problem definition. One strategy in case design, in this regard, is to develop situations in which there are represented a number of potential problem definitions with bases in the situation and then ask learners to search for the real problem.

While there is no one best way to frame problems in a decision-making situation such as a case, there are some useful techniques, which can be used to prevent solving the wrong problem precisely.

- **Look for Triggers**
  Problems are triggered, or set in motion, by many factors. It is useful to ask what triggered the particular problem, which is at issue. But it is also important not to confuse the trigger with the problem itself. A depression may be triggered by a crash in the stock market on a given day, but that does not necessarily mean that the trigger of the stock market explains the nature of a depression.

- **Question the constraints in the problem statement**
  All problem definitions will constrain the range of alternative conceptions of the problem, which are possible. Both as a case learner, and a case teacher, it is important to examine the constraints that are nestled within your definition of the problem and whether they are viable, necessary and relevant.

**Specifying Your Objectives**

In cases, participants are often expected to put themselves in the position of an actor in the case, perceive the situation from his/her point of view, and make a decision. In this regard, it is important, before rendering a decision from this perspective, to be clear about what the objectives are that drive the decision. Objectives are important, since they form the bases of evaluating alternatives that may be open to actors in a case. Objectives function, in this regard, as decision criteria.

In working with a case, it is important to distinguish between ends and means in formulating objectives. Some objectives are really means toward other objectives, which represent the ends sought. One way to cull a list of objectives, and drive them toward end objectives, is to pose the question why after each objective has been stated and to repeat this when a response is given. This questioning process will typically lead a person to propose another objective, to which the original objective serves as a means. Constant “why questions” will inevitably lead to a better understanding of the end objective and the end objective is the one, which should be used as an evaluative criterion.
Creating Imaginative Alternatives

Alternatives represent the range of possible choices one has for pursuing objectives in a decision-making situation. In case teaching, it is desirable to encourage participants to creatively explore and imagine alternatives—that is expand their range of choice. In fact, cases can be written with this as the central theme adding an ever expanding and complex array of alternatives.

Not all alternatives are the same, nor suited to all types of decision situations. There are at least five types of alternative, which can be explored in and through cases:

- **Process Alternatives**: Sometimes the best alternative may be a process, rather than an actual choice. Techniques, such as arbitration, sealed voting, stakeholder reviews and consultation, and sealed bids, provide examples of process alternatives. Arbitration, for example, is paradoxical, in that it both creates a process alternative and leads to the selection of another substantive alternative.

- **Win-Win Alternatives**: Sometimes alternatives must be crafted which address, not only your needs, rights and interests, but also those of other stakeholders and parties. In this situation, one must examine the decision problem faced by others in crafting the decision, which you will take. In case teaching, this provides excellent opportunities for testing proposed alternatives against how each will be viewed from another party in the case. The process of aligning someone else’s decision problem with your own is called creating a win-win alternative.

- **Information-Gathering Alternatives**: Sometimes the alternative chosen is to gather more information on the alternative being contemplated. The call for more research, although frequently genuine, is often such a decision-making avoidance ploy.

- **Time Buying Alternatives**: Occasionally deferring a decision is the best decision of all to make. One of the latent dangers in case teaching is that there tends to be a rush to decision or judgement. Cases and situations in cases can be crafted which actually make the alternative of suspending judgement the best course of action. Waiting to see what might unfold is often a good course of action.

- **Meta Alternatives**: In some circumstances, particularly those that employ dialogue techniques, alternatives emerge from the collective process of a group thinking together and creating new higher level understanding of the situation at issue or at hand.
Tools for Expanding Alternatives

Effective decision-making depends, to a great deal on the capacity to generate alternatives and, in so doing, to expand the field of possible and potential decisions. Avoiding premature closure on decision-making options is a hallmark of most effective decision makers. In this regard, Roger Dawson suggests that, in the process of decision making, one take the time to subject the current array of options to the following expansion techniques:\textsuperscript{56}

- **Visualize the Opposite of the Situation**
  This technique entails, as the words suggest, visualizing the opposite of the situation in which the decision is set. One way to do this involves reversing the objective. Consider for a moment that your objective in a situation is to increase profits. Reverse this objective and look at how you could reduce or lose profits. Now examine this in the light of what it tells you about potential opportunities to make a profit. Another technique is to ask why everyone including yourself is thinking in a similar vein and ask what would happen if all were proven to be wrong.

- **Examine the Context**
  This technique involves shifting your perspective from the problem to the context in which the problem exists. Young people who often show poor results in school are tested to determine whether they have learning problems and given remedial help. In some cases, this is not the root cause of the problem. The real problem is the context: the fact that they have friends who like to avoid doing well in school because of the status concerns that they have. Examining this context can often lead to new insights into the nature of the problem and the range of options available.

- **Visualize Yourself Finding the Perfect Answer**
  Visualization involves imagining, in your mind, what a future state might look like and creating images and sounds that express that. Golfers often visualize a complete shot and where it will land as well as their technique before actually shooting. Far too frequently in decision-making we use our visualization capacities to imagine what might go wrong. This is a useful exercise, but more effort is also needed in visualizing what could go right and how that would actually work.

- **Remove All Constraints**
  This technique involves removing all constraints to the problem solving process. Assume there are no physical constraints, no social barriers and no economic hurdles.

\textsuperscript{56} R. Dawson, *Make the Right Decision Every Time* (London: Nicholas Brealey, 1998)
What decision would you make in a world free of constraints. Now compare that decision to the options you have developed in a world of constraints. This will reveal to you that removing constraints is a key element in expanding your pointed decision making options. Constraint removal in fact becomes an option.

- **Examine the Options From Different Role Perspectives**
  This technique involves examining your options from the perspective of how different people might view them. What would an engineer say? What would a doctor say, a friend, a priest, a pilot etc. Role perspectives often illuminate weaknesses in options and lead to an expansion of perspectives.

- **Think Backward From the Solution to the Problem**
  This technique involves imagining the solution or the basis of the decision and then thinking about how that solution would actually unfold or how it came together in the first place. This often generates a clear understanding of missing links in the solutions posed to problems or the process of decision-making itself.

**Understand the Consequences**

Once you have defined the problem, formulated your objectives and generated a set of alternatives, you need next to compare and assess the pluses and minuses of competing alternatives. This entails probing how well each alternative may help you, or the actor in a given case, achieve his/her objectives. One technique to assist in this process, as depicted in the diagram, is to build a consequences table.

**Examine the Trade-Offs**

Often objectives and alternatives do not fit neatly together. They may rub against one another and be in conflict. There may be tradeoffs necessary in your decision-making, and in real life there often are. For this reason, cases should rarely be designed wherein there is an automatic one best course of action. In making tradeoffs, within a decision-making situation, two techniques are useful: eliminating dominated alternatives and making even swaps.

- **Dominated Alternatives**
  This approach involves seeing whether you can eliminate, or weed out, some alternatives before engaging in tradeoffs. The fewer the alternatives, the fewer the trade offs you have to make. In using the dominated alternatives technique, one follows this simple formula: if alternative A is better than alternative B on some objectives and no worse than B on all other
## Consequences Table
### Smith Family Decision to Move

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Option</th>
<th>Tokyo</th>
<th>New York</th>
<th>Vancouver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly Salary</td>
<td></td>
<td>$10,000</td>
<td>$9900</td>
<td>$7000</td>
</tr>
<tr>
<td>Cost of Living</td>
<td></td>
<td>High</td>
<td>High</td>
<td>Moderate</td>
</tr>
<tr>
<td>English Schooling for Children</td>
<td></td>
<td>Difficult and Costly</td>
<td>Accessible and Variable Quality</td>
<td>Accessible/Free</td>
</tr>
<tr>
<td>Commuting Time</td>
<td></td>
<td>2 hours</td>
<td>1 hour</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Potential for Promotion</td>
<td></td>
<td>High</td>
<td>Moderate</td>
<td>Low</td>
</tr>
</tbody>
</table>

objectives, then B can be eliminated from consideration. In these cases, B is said to be dominated by A.

For example, suppose you feel that you need a break and want to take a long weekend. You have five places in mind and you have three objectives: low cost, good weather and short travel time. In looking at your options, you notice that alternative C costs more, has worse weather and requires the same travel time as alternative D. Alternative C is dominated and therefore can be eliminated. A consequences table can of course assists in this process when several alternatives are in play.

### Even Swaps
The essence of the even swap method is that, if all alternatives are rated equally for a given
objective, for example cost, then, you can ignore that objective in choosing among alternatives. Put another way, this is what people mean when they say “all things be equal”. In doing even swaps the following steps are employed:

- Determine the change necessary to cancel an objective. If the cost of A is $10 and the cost of C is $20 then adjusting C’s cost downward is the change necessary to cancel A.
- Assess the change necessary in another objective to compensate for the needed change. What is needed to be changed in C to drop its price to $10. For example a multiple purchase at a discount rate.
- Make the even swap.
- Cancel out the irrelevant objective

**Explore Uncertainties**

Much of what has been described, thus far in the decision making process, relates to examining choices, when the consequences are known in advance. In many situations, however, the consequences of selecting and acting upon different decisions are not known in advance. This does not alter the fact that decisions must be made in the face of uncertainty. Part of the decision process, in this situation, is to examine possible and probable consequences in advance of their occurring and feeding this analysis into the decision choice.

Cases can be crafted that place people deliberately in the context of uncertain situations. This is done by designing a complete case as a series of linked situations which are entered into separately by the participants and which provide new information or results as the case progresses. For example:

- Situation One: the actor faces a choice and the participants make the choice
- Situation Two: the second situation the actor finds out that there is bad reaction to the first choice and he must make another choice
- Situation Three: the third situation the actor revises his decision but the entire problem changes and he must re think again etc., etc., etc.

A technique, which can be used, within a case as part of its design, or by participants in approaching the case, is a risk profile. A risk profile arrays potential outcomes of choices against uncertainties in the situation. The following are the steps in constructing a risk profile:
• Identify the key uncertainties
  List all the uncertainties that might significantly influence the consequences of any alternative. Examine the uncertainties and eliminate those, which have marginal impact.

• Define Outcomes
  Specify the outcomes of each uncertainty in terms of its impact on the objective in the decision-making situation and the alternatives.

• Assign chances
  This step involves a rating of the degree of likelihood of the outcome occurring. This can be done quantitatively with a formal scale or through judgement either alone or with others using such techniques as nominal group technique.

• Portray the options and possibilities in a risk profile. In this regard, one visual technique useful for displaying risk profile is, as the diagram illustrates, a decision tree.

**Look for Potential Problems**

Another technique for assessing uncertainty is potential problem analysis. A potential problem is any unplanned or negative change that can accrue as a result of implementing a strategy. Ironically, even successful implementation of a strategy can generate potential problems, through unintended consequences, side effects and a change in the context of initial strategy formulation to the context at which time the strategy is implemented.

**Potential Problem Worksheet**

<table>
<thead>
<tr>
<th>Plan/Situation Statement:</th>
<th>L = Low</th>
<th>M = Medium</th>
<th>H = High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Problems</td>
<td>Probability</td>
<td>Serious</td>
<td>Accept Risk</td>
</tr>
<tr>
<td>P 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P 4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The potential problem assessment is undertaken through a number of steps:

1. Define the potential problem statement: the statement is negative and focuses upon the downsides of a strategy; that is, what could go wrong with it?

2. Identify the attributes of the potential problem
   - What controllable conditions is this dependent upon?
   - What uncontrollable events and conditions is this dependent upon?
   - What other actions, conditions and events are dependent upon this?
   - What is based upon inference, supposition and speculation?
   - What is inflexible, unchangeable and locked in?
   - What unneeded and undesirable consequences accompany this?

3. Decide which potential problems to pursue using the PPA assessment grid
   - Probability of it happening
   - Its seriousness
   - Low probability and seriousness: forget it
   - High probability and seriousness: contingency plan
   - Medium probability and seriousness: watch brief..

**Explore Links Through Forward Thinking**

Many decision situations involve selecting alternatives now, that will have impacts on decisions you may have to make in the future. A choice of a program to study in college will often impact your future career options. These types of decisions are called linked decisions. In these situations, in order to determine what to do now, you have to examine what you might want to do in the future. Some people recognize linked decisions when they use the phrase “keeping their options open”. By investing money now, which will reduce your ability to consume, for example, but increase your consumption ability in retirement is an example of a linked decision.

Alternatives created today open the range of choices available in future. In exploring linked decisions, one follows the same decision process outlined in the foregoing description and adds another component: identification of future decisions linked to the basic decision and the relationships among them. This form of forward thinking allows you to re-examine your alternatives in light of future consequences and the range options available. Again a decision tree
ACTIONABLE LEARNING

can be used for this purpose. Linked decisions force one to look for “feed forward” impacts as well as feedback.

The PrOACT model is a useful framework for decision-making. From the perspective of case writing and teaching, the framework allows cases to be designed, and instructional techniques to be used, that develop the skills in each component of the model, as well as to construct complete cases, which involve all elements of the model. One of the purposes of case teaching is to hone decision-making skills and the PrOACT model provides a framework within which this can be done on a systematic basis.

The developers of the PrOACT model have also produced a very valuable checklist, or diagnostic, which can form the basis for questioning dialogue in training sessions, as well as analytic tools to be employed by the learner when examining a case:

- What is my decision problem? What broadly do I have to decide? What specific decisions have to be made as a part of my broad decision?

- What are my fundamental objectives? Have I asked “why” enough times to get at my bedrock needs?

- What are my alternatives? Can I think of new ones?

PrOACT: Eight Elements of Smart Choices

- Problem
- Objectives
- Alternatives
- Consequences
- Tradeoffs

Uncertainty
Risk Tolerance
Limited Decisions

-
• What are the consequences of each alternative in terms of the achievement of my objectives? Can I safely eliminate any alternative?

• What are the tradeoffs among my most important objectives? Where do conflicting objectives concern me most?

• Do any uncertainties pose serious problems? If so, which ones and how do they impact consequences?

• How much risk am I willing to take?

• Have I thought ahead and examined the future impact of my current decision?

• Is the decision obvious and clear or complex and ambiguous?

• What should I be working on? If the decision is not obvious what do I need to do to make it more so?
Modern policy making is a much more dynamic process than the traditional issuance of rules and regulations that were intended to deal with static situations and remain in tact over extended periods of time. Policy, in fact, has shifted from a control to a guidance function within the context of societies providing ample room for manoeuvrability and massaging of means. This is evident, for example, in what the Government of the United Kingdom has termed the nine essential features of modern policy making:

- **Forward Looking**
  The policy making process clearly defines outcomes that the policy is designed to achieve and where appropriate take a long term view of the future likely effects of the policy.

- **Outward Looking**
  The policymaking process takes account of contextual and influencing factors beyond the jurisdiction and control of the nation.
Innovative, Flexible and Creative
The policy making process is innovative and flexible when it questions established ways of dealing with issues and problems and encouraging new and creative ideas. Wherever possible the process is open to criticisms and suggestions by others. Risks are identified and actively managed.

Evidence Based
The advice and decisions in the policy making process are based upon the best of available evidence from a variety of sources and all stakeholders are involved in the process at the earliest possible stage in the formulation.

Inclusive
The policy making process takes account of the impact on and/or meets the needs of all people directly or indirectly affected by the policy.

Joined Up
The process takes a holistic view looking beyond institutional boundaries to the government's strategic objectives and seeks to establish the moral, ethical and legal base for policy. Cross cutting objectives are clearly spelled out and the organizational structures needed to insure that they are met are put in place at the outset.

Review
Existing and established policies as well as new policy initiatives are subjected to continuous review to insure that it is effective and continually vibrant.

Evaluation
Systematic evaluation of the effectiveness of policy is built into the policy making process.

Learns Lessons
The policy making process has built in devices and processes to continuously learn from the policy implementation and formulation process.

While case based learning has cemented a long tradition in private sector management training, it is relatively recent in its use in the public sector. Without question, many of the tools and techniques developed for case based learning in the context of private sector management training are of value in the public sector context, but there is a special flavor to management situations in the public sector, One source of uniqueness revolves around the fact that much problem solving and decision making in the public sector centers on policy making and analysis, in which multiple goals of various types come into play and multiple stakeholders and interest groups are involved. Moreover, the public sector invariably confronts issues related to
the public good, equity, distribution and the regulation of market behavior. Using cases for capacity building in the context of the public sector, as a result, requires the application of frameworks and methodologies, that, to a degree, recognize the uniqueness of the context.

One such framework, that can be used in case based learning in the public sector, is drawn from the field of policy analysis. In this regard, a useful framework for policy analysis, applicable as a tool in case based learning, has been developed by Eugene Bardach and described as “the Eight Step Path” of policy analysis.57

The eight-step path framework is briefly outlined below with its applications to case based learning highlighted.

### Define the Problem

As with most decision-making and problem solving models, defining the problem is the first step in the eight-step path. In this regard, Bardach, though, injects some useful advice for defining problems in the context of a policy analysis:

- Some issues identified in policy work may, in fact, connote more than one problem. Teenage pregnancy, for example, can be construed as a sexual problem, a medical problem, a moral problem and a cost problem. For this reason, it is important to be aware of what the primary problem is.

- Deficits and Excesses. In policy making, it is often helpful to think in terms of deficits and excesses. For example, there are too many children in developing countries. Or in terms of deficits: The level of education in the Third World is well below that required for development. A deficit excess lens can be used to sort out people’s perceptions of problems and this lens is often the basis upon which people frame policy problems.

- Market failure. It is frequently useful to explore the definition of the problem in terms of market failure. In other words, what would justify state intervention or provision given perfect markets. This does not mean markets should always be used, but the process of asking the question narrows down the “public” in public policy problems. The reverse process, of course can also be used: public failure.

- A special case of a problem in public policy is missing an opportunity. Not all policy problems have to be defined as problems. The space program, and the subsequent race for the moon, was not just a problem, it was an opportunity.

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One danger in policy analysis is defining the solution implicitly into the problem. For example, saying that the problem is too little shelter for the homeless implies that the answer is more housing. Another way of posing this problem is to say that there are too many homeless families.

Assemble Some Evidence
Evidence in the eight step path is collected using various methods and for three purposes:

- To help assess the nature and extent of the problem you are trying to define
- To assess the features of the policy situation you face: people, institutions etc
- To assess policies which other have generated to the problems, which you are addressing.

Construct the Alternatives
Many of the techniques dealt with earlier on constructing alternatives can assist at this stage. Bardach, however, suggests certain techniques that can further this search for alternatives in the policy making context.

- Search for Systems. It is often useful in policy analysis to ask whether there is some system that holds the problem in place or keeps it going. Most conventional views of policy tend to overemphasize either bad people or bad motives. Examples of systems which contain problems are: a market that under prices some goods; a bureaucratic agency that is driven by its own concerns and operating procedures; or vicious circles such as crime, flight, business withdrawal, job loss and more crime. In their book Reinventing Government, for example, Gaebler and Osborne pointed out that many of the problems in government are due to good people being trapped in bad systems.\(^{58}\)

- Explore Variants. While it is important to get at the core alternative being pursued or recommended, it is often useful to explore variants of the core strategy. Styles of implementation for example can be as important as the intervention itself. Variants to policy alternatives allow one to craft strategies, which are flexible and workable.

Select the Criteria
While policy analysis utilizes criteria for the selection of alternatives in terms of the outcomes they produce, which are similar to criteria discussed in this handbook, it brings into play other criteria germane to its field:

• Legality: A feasible policy alternative must not violate existing laws or statutory frameworks
• Political Acceptability: A feasible policy must be politically acceptable or at least not to unacceptable
• Robustness: Policy alternatives must face the test of implementation and survival in the real world
• Improvability: Good policy must be capable of being improved through practice and not locked into the initial design.

☐ Project the Outcomes
With the list of policy options in front of you, then next step, in the eight-step path, is to project the outcomes of each option. In this step, a range of techniques can be used from constructing causal chains and decision trees to formal computer based simulation

☐ Confront the Trade Offs
The PrOACT model discussed previously offers excellent techniques for engaging in tradeoff analysis.

☐ Decide

☐ Tell Your Story
Telling your story may sound strange as a way to present your policy analysis in a case, but as noted earlier in this Handbook, storytelling is a major mode of human thought and communication. This is particularly so in the world of policy making and analysis, in which shaping perceptions, articulating visions and ideals, playing with images, mobilizing support, defusing opposition and “selling the message” are so predominant. It is not that we want learners in case based learning to be able to write a “Harry Potter” book, but appreciating the “flavour” of such storytelling, and why it is so attractive to millions of readers, is definitely worth the effort.
Stakeholder Analysis and Case Based Learning

The world of policy making is filled with opportunities for case design and case based learning. And the world of policy making is changing. Today, it is conducted in a context characterized by increasing levels of unpredictability, ambiguity, and complexity, all of which are impacted by rapidly accelerating change. How does one “do policy” in such a context? How can a large, and in some ways cumbersome edifice, such as government, adapt to such a changing world? These issues, surely, are ripe for case design and case based learning.

Governments are not like business enterprises, it is true, but in some ways their organisational structures and strategies bear some interesting similarities. As businesses, governments have really only two options: to make offers to the citizens or to respond to their requests. Governments, as many traditional businesses, have operated on what can be called a “make and sell” model of policy. Government has been conceived, in this model, as a machine, efficient or not, for producing policies to be sold to, or forced upon, the compliant public. All of its organisational forms and strategies have been geared to this fundamental make and sell proposition. In the case of government, of course, the citizenry can be compelled to buy what the government offers through regulation, law and other forms of incentives and coercion. The make and sell model of government specializes in planning and control.

However, when citizens’ needs and demands change rapidly and unpredictably, and when a new participatory ethos infuses them, the make and sell model of policy begins to break down. The capacity to make policy and sell it is different than the capacity to sense emergent needs and changes and respond to them. A make and sell government may be an efficient offer making machine, but it is not inherently flexible.

In this context, Stephan Haeckel of IBM talks of the emergence of the sense and respond organisation, which shifts its primary orientation and strategy from a firm forward position towards a customer back process.59 The hallmark of the sense and respond organisation is its adaptive, not its production, capacity.

Much of the discussion and activity in the movement to reform or reinvent government, in essence, is an attempt to move government, and its policy making apparatus, approach and processes, from a make and sell, toward a sense and respond orientation. In a sense and re-

Spond framework for policy making, customer and citizen wants and needs constitute the engine which drives government processes and policies. Of course, all governments, democratic at least, have customer concerns, and consistent failure to address these, have meant that they eventually are voted out of business.

When customer and citizen needs are stable, predictable or controllable, governments can afford to look inward, focusing on what they can do to meet these needs efficiently. As long as these citizen and customer targets move slowly, the internal apparatus can be honed with greater precision and time lags between needs and their satisfaction will be tolerated.

When customer and citizen needs become unpredictable, filled with voice and urgency, and demanding just in time response, then governments must find ways to move the center of their attention to understanding these changing needs, demands and the ways in which they are configured. This demands that government become an adaptive organisation, with the systematic ability to search out, capture and interpret clues about emerging citizen’s needs and demands.

Sense and respond does not always mean listen and comply, for government has ethical and other public goods concerns to be concerned with. However, even these matters cannot be effectively attended to in the absence of a capacity, by government, to sense needs and wants and respond to the terrain in which they exist. Governments can also sense and respond in order to anticipate and preempt which is, of course, one of the core features of covert political strategy.

**Stakeholders: The 6’s**

The Multi-Dimensions of Effectiveness

- Contractors want efficiency, fiscal integrity, credit, no problems
- Customers want value for money and speed
- Constituents want vested member interests served
- Coalitions want changes to or protection of status quo
- Consumers want quality, timeliness user friendly service
- Colleagues want job satisfaction, skills, promotion respect, involvement

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**Public Agency**
Whether this shift from make and sell to sense and respond in the world of policy is universal is a debatable point; although there appears to be greater evidence of the shift, than of the maintenance of the status quo. At a minimum, it seems that those who work in, or are affected by government policy, require skills and capacities to understand, and potentially manage, the transition from make and sell to sense and respond. Here again the opportunity to use cases and case based learning presents itself.

In the public sector, policy choices and strategies are often strongly affected by the competing interests and demands of stakeholders. Stakeholders frequently are so powerful that they affect the ability of government, and other quasi-public agencies, to achieve their goals. A stakeholder is anyone (person, group institution) that has an interest in and, or is affected by, the decisions and actions of an organisation. The “interest” in the organisation is, not only an interest in the success of the organisation, but can also be an interest in the demise of the organisation. In the public sector, there are stakeholder groups who actively work against policies and pressure to have the demise of agencies involved in them.

The concept of an organisation interacting with its environment, and attempting to manage and balance the competing interest of stakeholders, provides a source of powerful ideas for the development of cases. Almost all public policies can be developed within a case mode through a stakeholder design. In crafting policy cases using competing stakeholders, as the organizing principle, one of the most dynamic forms of learning that is set in motion is role

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Types of Stakeholders

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taking: being able to see the world from the perspective of another. Role taking capacity infuses all dimensions of management and leadership.

One of the important things about stakeholders is that, as society becomes more complex, the range of types of stakeholders, that emerge, grows with equal complexity. Ian Mitroff has suggested that most stakeholders can be classified according to their stance, or orientation, and predisposition toward the issue or organisation, and their functional role. As the diagram opposite indicates, though, most stakeholders are a combination of one or more elements of each dimension. 61 For example, one can be both an enemy and a legal expert at the same time; or one can be active, powerful and a competition. The chart provides a starting point in determining what the mix of stakeholders will be designed into, or form part of, a particular case:

- What stance does the stakeholder have
- What role does the stakeholder play
- What is the combination of role and stance

The Stakeholder Grid

Cases that invoke the competing interests of stakeholders can be enhanced by applying, in the process of learning and teaching, a set of tools drawn from the emergent field of stakeholder analysis. In this regard, a useful tool for analysis and discussion of stakeholder cases is the stakeholder grid.

Stakeholders can be categorized along two dimensions:

- **Their Interest:** in the organisation or issue at hand
- **Their Power:** to influence the achievement of the goals of the organisation or resolution of the issue at hand.

As the grid illustrates, there are at least four types of stakeholders in a given situation:

- **Actors:** With high power to affect and issue or organisation, but little interest in the issue or organisation.

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61 Mitroff, ibid, pp.10-40
**Bystanders:** With low interest in or power to affect the issue or organisation.

**Players** with high interest in and power to affect the issue or organisation.

**Subjects** with little power to affect the issue or organisation but who are directly affected by both.

The stakeholder grid can be used as an organizing principle for the design of written cases, or role-play cases, by insuring that the different types of stakeholders are designed into the case and variations therein. The grid is also an analytic tool for participants in examining stakeholder cases and a pedagogical tool in the discussion and learning from the case.

**Oval Mapping**

**A Framework For Team Based Learning and Policy Analysis**

Involving stakeholders in the policy and budgeting process of government is increasingly perceived to be a valuable process for strengthening both policy relevance, as well as policy accountability. Cases offer ideal contexts to explore this issue of stakeholder participation in policy and the technique of oval mapping provides a framework through which groups in case based learning, using both in print and live cases, can examine stakeholders’ perceptions and interests. The methodology is described briefly below.
Oval mapping is a technique that involves diverse interests and perspectives around a common problem or issue. The purpose of oval mapping is to draw out, from participants, their mental model of the issue at hand and the dynamics they perceive to be in operation. Essentially, people use post it notes as a way of generating ideas and then configuring these into a mental and visual map of the issue or problem.

Oval mapping has numerous benefits:

- Converts ideas into visual form
- Allows each individual to contribute ideas
- Draws all people into the idea generation process
- Stimulates group discussion immediately
- Depersonalizes ideas
- Provides a mental map of group thinking and the processes which underpin that thinking
- Provides a dynamic rather than static model of processes and relationships
- Brings diverse people together

Oval mapping is an ever widening process that moves from individual input of ideas, through group analysis and the development of a group map and the exchange of perspectives among different groups, to the creation of a collective map.

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Steps in the Process

Oval mapping occurs in a number of steps or phases. Each step is described briefly below:

#1: List all enabling factors (+)
The process begins with each individual identifying, on a post it note, factors which are enabling, that is, facilitate the solving of a problem, making of a decision or resolving an issue. At this stage, there is no critique of the ideas individuals develop. It is desirable to limit the number of ideas to ten per person; one idea placed on one post it note. These ideas, when completed, are pasted on a flip chart by all individuals.

#2: List all constraining factors (–)
Step two is a repeat of step one, with the exception that the focus is on those factors which act as constraints on solving the problem or dealing with the issue. For purposes of this explanation, we use the issue of public sector reform as a focal point.

#3: Place the (+) and (–) factors on a flip chart
In step three, both the enabling and constraining factors, developed by all individuals, are placed on a flip chart, or wall, in one of two sections as illustrated in the diagram.

#4: Eliminate duplication and overlap
In this step, the group members review the post notes on the chart and eliminate duplicated or overlapping items

#5: Resource person clarify and look for missing ideas
At this point, the facilitator, and resource persons if they are available, look at the post notes of each group and explore two questions:
Clarify: Do you understand what the factor is?
Gaps: Are there other factors you think the group should consider?
At this point in time, the resource persons or groups should make no judgments about the factors or their importance.

#6: Group the factors into clusters
In this step, each group begins the process of grouping the ideas on the post it notes into clusters, or categories, that fit together. A short title is also provided for each cluster.

#7: Resource persons: Analyze the logic of the clusters
When the groups have completed their initial clustering, resource persons engage in a dialogue with the groups regarding the logic of the cluster they have created. The resource persons explore four questions:
- Do the factors belong together?
- Does the title capture the cluster?
- Should other factors be added to cluster?
- Is there duplication in elements in clusters?

This dialogue provides the opportunity for the group to clarify their logic, through a process of explaining it to someone outside of the group. At this point, it is often the case that the group will want to revise their categories by adding a new one, moving ideas from one category to another or eliminating a category completely.

#8: Draw causal links among the clusters
With the clusters clarified, the next step is for the group to draw causal links among the clusters using (+) and (–) signs to indicate the nature of the influence. In this regard, it is possible for one cluster to exert a number of impacts on other clusters.
#8: Draw causal links among the clusters

#9: Resource persons: Analyze the causal maps

With the initial causal maps drawn the resource person again engage the group in a dialogue about the maps focusing on the following questions:

- Links: clear, valid?
- New Links?
- Possible new clusters?
- Road map clear?

Again, it is very likely that the team will revise its map during and following the discussion with resource persons.

#10: Team presentation of group's oval maps

The next step involves each team presenting its oval map to the larger group. Following the presentations, at which point only clarification questions are allowed, the facilitator engages the group in an analysis of the different maps exploring the following:

- Shared perspective? Are there areas in which all groups see the issue the same?
- Areas of divergence? Are there areas in which their perception diverges?
- Reasons for difference? What are the reasons in the mind of group members for their areas of agreement and disagreement?
- Alternative strategies: Are their strategies, which no group has included but which might be salient to the issue or problem.

#11: Final revision

Following the larger group discussion, each group is given the opportunity to revise their causal maps. Final maps are posted on the wall for all to examine.
#12: Benchmark against research and international best practice

In this step, the facilitators and resource person benchmark the map against research on the issue and best practice experience. The purpose here is to enlarge the conceptual framework and thinking of the groups.

#13: A collective oval map?

If time allows the next step in the process is to attempt to have the groups create one collective map from their various maps. This process can be undertaken using a designated redesign team of members selected from each group with the task of attempting a consensus map to be reviewed by the group as a whole or through a series of stages similar to the initial process.

#14: Debrief

The final step in the process is to review the process with the participants exploring what and how they have learned. In this step one also wants to focus on the applications of the process of oval mapping to policy making in other areas and in terms of the roles of the participants in their own spheres of work.

Applications of Oval Mapping

Oval mapping techniques offer numerous applications:

✶ **Working with Stakeholders**

Oval mapping provides a technique for involving diverse stakeholders in policy to come together to share their perceptions, similarities and differences in relation to a problem or issue to be contended with in the policy process. It provides a context in which participants can give voice to their views of the world, but do so in a common format, which allows the comparison of similarities, difference and opportunities for consensus.

✶ **Strategic Planning and Strategy Formulation**

The process of strategic planning often entails broad-based consultation with stakeholders and clients of the organisation undertaking the process. Oval mapping, conducted in focus or other group settings, can assist in this process. The technique can also be used to assess an issues and options agenda generated in the process of planning.

✶ **Training**

Oval mapping is an obvious training technique, not only in case based learning, but also in other forms of training and capacity building.
**Team Based Learning**

One of the strengths of oval mapping is that it provides a framework through which to enhance team-based learning. In this regard, the technique does not have to be confined in its use to workshop settings, but can be used as a teamwork tool.

**Presentation and Reports**

Oval mapping is also a technique that can be used to make presentations and reports. Its visual quality allows complex ideas and relationships to be more clearly understood and grasped than a voluminous written document.

**Management Decision Making**

Oval mapping is a tool that can aid managerial decision making, since it concentrates on the dynamic interrelationships among variables and the potential direct and impact of actions. Oval mapping is an excellent tool for clarifying the landscape of decision making in management situations.

**Modeling**

Oval mapping can be taken to a more formal level and used as the basis for the development of models of processes and relationships. In this regard, it can serve as an initial step in the design of systems models within which simulations can be undertaken. 63

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**The Political in Policy**

The stakeholder model has been expanded in a number of ways in recent work. One interesting elaboration, which is very applicable in case based leaning, is a software program, developed at the Harvard School of Public Health, called Policy Maker. 64 Policy Maker is a computer based simulation tool, which provides an assessment method for analyzing and managing the politics of public policy. Politics affect all dimensions of public policy and cases provide an opportunity to introduce participants to the feasibility issues in policy making. While the computer based version of Policy Maker is ideal, in that it allows one to graph and represent data, the model upon which it is based is an excellent framework for case based learning.

Policy Maker is based upon the application of five analytic steps to policy issues: policy content, players, opportunities and obstacles, strategies and impacts of strategies. In fact, a case can be created in which you are given a set of circumstances and as a participant you design a policy and test it through the Policy Maker process.

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The analysis of policy in Policy Maker unfolds in a series of steps:

1. **Step One: Policy**

   This step requires that you define and analyze the content of your policy or the policy you are evaluating. In this step the following sub steps are taken:
   
   ⚫ Identify the major goals of the policy
   ⚫ Specify the mechanism that is intended to achieve each goal
   ⚫ Determine whether the goal is on the policy and action agenda
2. **Step Two: Players**

This step involves determining the key players involved in the policy and its potential implementation.

- Determine the key players
- Analyze their positions on the policy
- Analyze their power in relation to the policy
- Analyze their interests in the policy
- Assess the consequences of the policy for each player
- Analyze any networks or coalitions among the players

3. **Step Three: Opportunities and Obstacles**

This step involves an assessment of the opportunities and obstacles to implanting the policy successfully.

4. **Step Four: Strategies**

This step involves the design of strategies to improve the feasibility of your policy. The program offers a range of sources of expert advice for the crafting of strategies that can be drawn upon in the analysis.

5. **Step Five: Impacts**

This step involves estimating the impacts of your strategies on the positions, power and interests of the mobilized players identified earlier. The program allows you to graph these assessments through a comparison of current and future feasibility maps of your polices.

Policy Maker can help you systematically structure a case and provide a highly interactive process for case based learning. Its capability to represent graphically options and consequences, plus drawn in expert systems and analysis of data generated by participants in a case, make it an excellent mindtool for case based learning.
Symbolism in Policy Making

Public policymaking occurs within the context of community and entails more than merely the calculation of individual utilities and self-interest. Policy is also more than the accumulation of the values of maximizing individuals, as the market model of economists would suggest. Policymaking is about communities trying to achieve something as communities. Given this public goods orientation, it is not surprising that, since communities differ, policy and policy making is a highly contested process. As the chart opposite illustrates, there are a range of differences between market models and policy models in terms of how they define and approach policy and policymaking.

In this section, we go beyond the logical model of policy analysis, which is nevertheless a valuable tool, and introduce the muddier and metaphorical side of policy making. One advantage of case based learning, depending upon the key design features, is that it can be used to introduce participants to the nuances, grayness and imaginative dimensions of policy making. It can be employed to illustrate how policy is constructed in the mind of the policy maker, shared with others and interpreted by still others, who add their own various shades of meaning.

One avenue through which this can be done in developing and using cases is to explore the symbolic dimension of policy making. In policies, symbolic representation plays a central role in problem definition and strategy formulation. A symbol is anything that stands for something else. Its meaning depends upon how people interpret it, use it and respond to it.

### Two Models of Policy Framing

<table>
<thead>
<tr>
<th></th>
<th>Market Model</th>
<th>Political Model</th>
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<tbody>
<tr>
<td><strong>Policy Focus</strong></td>
<td>Individual</td>
<td>Community</td>
</tr>
<tr>
<td><strong>Motivations</strong></td>
<td>Self Interest</td>
<td>Public Interest as well as Self Interest</td>
</tr>
<tr>
<td><strong>Chief Conflict</strong></td>
<td>Self Interest versus Self Interest</td>
<td>Self Interest versus Public Interest (commons problem)</td>
</tr>
<tr>
<td><strong>Source of Peoples Ideas and Preferences</strong></td>
<td>Self generated within the Individual</td>
<td>Influence from outside</td>
</tr>
<tr>
<td><strong>Nature of Collective Activity</strong></td>
<td>Competition</td>
<td>Cooperation and Competition</td>
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can be an object, a person, a place, a song, a picture an event, a logo or even a tee shirt. A good symbolic device captures the attention of people and can frame how they see the world.

Symbols play an important role is policy making. In particular, the world of policy making is infused with narrative stories, which provide explanations of how the world works. These stories often form part of our assumed and tacit knowledge of the world and exert strong impact on how problems are defined, and how policies are created and implemented. Stories function, often, as the containers in which policy analysis and preferences are held, interpreted and shared. As recent research in cognitive science has shown, moreover, the human mind often creates, interprets frames and captures knowledge of the world scripts schemas and other narrative constructs. This constructed world of policy stories offers fertile ground for the design of cases and the examination of reasoning and thinking in case based learning.

Definitions of policies, and the public explanations given for them, tend to have a narrative structure: they are stories with a beginning, middle and end involving some change or transformation. They often have heroes and villains. In the world of policy making, there are a number of recurrent stories, which frame the definition and approach to problems. These storylines can be used as a basis for the construction of a case, or better yet, as a way of surfacing the stories which inform the analysis that participants often bring to case problems and decisions. The purpose of this latter process is to surface the underlying story in the analysis offered participants and to have them become aware of the degree to which these narrative structures frame their approach to the world. Alongside their stories, part of the process entails placing alternative stories before them, as a way of widening and deepening understanding.

In policy making, as Deborah Stone has shown, the following storylines tend to be prevalent:

- **The Story of Decline**

The story of decline when used in policy making unfolds as follows: “In the beginning things were pretty good. But they got worse. In fact, right now they are intolerable. Something must be done to return us to the good days.” This style of storytelling in policy making often leads to recitation of facts which demonstrate how bad things are (poverty, crime etc.) and to policies which are based upon values and norms which presumably were strong in past eras (family values in the case of the USA, Asian values in development).

The Blocked Progress Story

This storyline proceeds as follows: “In the beginning things were terrible. Then things got better thanks to a certain someone or action. But now somebody or something is interfering with our hero or the action so things are getting terrible again. Something has to be done to let our hero do what he has to or the actions started to continue.” Many groups who want to resist regulation or to deregulate often tell this story. Political leaders often not only tell but also revel in this story.

The Change Is Only an Illusion Story

Here the storyline is as follows: “You always thought things were getting worse (or better.) But you were wrong. Let me show you some evidence that things are in fact going in the opposite direction to what you think. Decline (or improvement) is an illusion. The endless debates on defining the poverty line or what poverty is often couched in this storyline.

The World Works in Cycles Story

The storyline here is: “You think things are new and different. But you are wrong. Let me show you a graph which will illustrate that we are really only in a phase of a recurring cycle and things will revert back to what we knew before.” The famous use of the business cycle by economists is a classic example of this story. So too, when people predict oncoming war etc as inevitable in human societies the cycle story is at work.

The Story of Helplessness and Control

This story runs as follows: “The situation is bad. We have always believed that the situation is out of our control; something we had to accept but could not influence. Now however let me show you that we can influence things”. In many instances technology driven policies represent this style of storytelling or when over confident economist prescribe cures for inflation rates or what have you.

The Story of Conspiracy

This story is a variant of the control story: “The situation is bad. We have always believed that the situation is out of our control. Now however let me reveal to you the fact that there is a small group of influential people who really are in control and who have generated the illusion that no one is in control.”
The Story of Blame the Victim

The following describes this story: “The facts of the situation are clear and there is a problem. But the reality is that the people who have been most affected by the problem actually produced the problem themselves. They did it to themselves and it is they who must change for the problem to go away.”

How can these policy stories or stories which underpin policies be used in case based learning? Beyond designing these stories into cases, or better yet designing cases around conflicting stories, a process called surfacing offers an insightful approach. Surfacing entails making the tacit explicit and placing the resultant explicit knowledge alongside other forms of knowing. In case based learning, the following steps offer a guide to surfacing:

- Have the case presented by the participants with their reason and analysis
- Ask the group what story is being told by this case presentation: what story does it reflect or what story frames the analysis
- Reconstruct the story with the group and confirm it
- Ask the group what the story may leave out – why it might not be complete
- Ask the group what other stories could be told about or frame the case
- Outline the other stories and apply to the case
- Ask why the particular story was used—what motivated and caused the group to select the story
- What does the selection of the particular story tell us about the participants and the substance of the case
- Explore the implications for policy making and implementation of the fact that we all carry different stories around in our heads through which we frame policy and make decisions
- Challenge the participants to create a story free analysis of the case
Part 10
Culture and Case Based Learning

Case based learning stresses the importance of developing problem solving, analytical, dialogic, creative and decision making skills, in the context of examining situations which have occurred, or might occur, in a particular setting. While each of these skills may be universal across all cultures, the ways in which they are practiced vary substantially. Culture, in other words, plays a role in case based learning, as it necessarily does in all forms of learning. By culture, what is meant is the shared basic assumptions about the world, which people, in a given collectivity, maintain.

Case based learning can partially accommodate the substantive variations in cultures, the issues, problems and opportunities, which are evident and emergent, through the development of case material, which is indigenous to the culture itself.

The cultural context can also affect a person’s approach to any dimension of the case based learning process: from understanding the situation, to ways of evaluating and generating alternative courses of action or solutions. As the Russian psychologist Vygotsky so clearly demonstrated, all cultures contain cognitive tools, and other mediational means, for human adaptation and learning.67 Most people, in most cultures, engage in problem solving of one kind or another. But how they solve problems, their problem solving style if you like, may vary enor-

mously. What is seen as indecisiveness, from one cultural point of view, may be perceived as an expression of wisdom from another cultural vantage point.

Does this mean that case based learning, with its stress on decision-making, problem solving and other forms of thinking and action, is inherently culturally biased? The answer is that it depends upon how the methods are utilized in a given situation.

If the method is used in such a way that only certain styles of problem solving, or decision making, are allowed, or encouraged, foreclosing on other styles, then the answer is affirmative. If, on the other hand, as has been noted in this Handbook, the case based learning approach, while assuming that problem solving for example is important, is employed in a way which is open to a range of possibilities and styles of thinking, in given situations, then the answer is negative.

If all of us, regardless of our cultures, are open to expanding the range of cognitive and cultural tools available to understand and grapple with problems, then doing so, within the context of a range of cases drawn from different cultural settings, is an excellent way to begin that process.

Culture can also affect the style of case based discussion and learning. In some cultural environments, the role of the instructor is to clearly instruct learners, whose role is to listen and absorb. Introducing more interactive styles of discussion, within such a setting, is to pose a challenge to the assumptions, which people make about how learning occurs. Is such a practice justified?

The answer to this question is difficult at best and exceedingly complex at worst. The starting point is the matter of choice. Case based learning, and its associated techniques and processes, should not be forced upon any instructor or institution, or be mandated in any program. For it to succeed, like any pedagogical approach, it will succeed best if it is freely chosen and if instructors have the opportunity to acquire the skills to practice it effectively and with their own adaptations.

On a larger level, a different answer can be given to the knotty question posed above. In recent years, a growing body of research, in the cognitive and learning sciences, has begun to clearly show that human beings learn in a variety of ways and that no one learning style suits all people at all times.68 One of the underlying themes in such research is that people often optimize their learning, retention and transfer when they are actively involved in the construction of meaning.

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The world of industrial and business training has recognized this and new approaches to learning in these areas are being developed on the basis of active experiential methods.

Case based learning represents such an active learning model and, while it should not be seen as the only approach within such frameworks, it can and does broaden the learning and skills repertoire of learners who participate in it. If breadth and flexibility in learning is one of the goals being sought in capacity building and learning today, and if adaptive skills are being demanded in industry, government and business, then a case based model of learning can contribute to those goals.

Cases, regardless of the themes that permeate them, contain cultural content; that is, they are located in particular cultural settings. Increasingly, cases are being developed, in various management education programs, which contain “cultural content” from different nations and which reflect the values and mores of different socio-cultural groups. These cross and inter-cultural cases require a new dimension of analysis by students, regardless of what country they happen to reside in. These are skills of cultural sensitivity and analysis. Or to put it another way, students in case based learning need to acquire and use what can be described as “culturalitic skills”.

Understanding the nature and dynamics of culture is a field, which is vast indeed, and to which many of the social, and increasingly biological sciences, contribute. Space does not allow a review of the myriad of approaches, which can be employed in undertaking a cultural sensitivity analysis. In the context of case based learning within a capacity building program, as this Handbook is designed to address, though, four frameworks can be introduced which illustrate the need for cultural analysis in case based learning.

**Culturalitic Skills**

Rather than base their analysis solely on a limited understanding of cultural patterns in a given setting, or worse yet on stereotypical views of such contexts and the people within them, learners in case based learning need “culturalitic skills”: conceptual frameworks and techniques for understanding and analyzing the meaning of cultural patterns, symbols, practices and values. Participant observation methods and organisational ethnographies have arisen in recent years as techniques in management training programs for this very reason.

In case based learning, participants require conceptual frameworks which can be applied to settings, and through which cultural universals and variations, and their meanings, can be
better understood and included in their overall case analysis. Two such frameworks are des-
dcribed briefly below.

**The Kluckhohn-Strodbeck Framework**

One of the most continuously referenced frameworks for analyzing variations among cultures is the Kluckhohn-Strodbeck model. It identifies six universal dimensions, which are argued to be represented in all cultures: Relationship to the environment; Time orientation; Nature of people; Activity orientation; Focus of responsibility; Concept of space. These dimensions, or orientations, are said to exist in all cultures, with the variation being in terms of the specific points of view within each orientation. Each of these variables are described briefly below:

- **Relationship to the Environment**

  To what extent do people, in a given culture, feel that they are subjugated to their environment, in harmony with it, or able to dominate it? This is a perceptual, rather than empirical, question. In this dimension, the focus is on how people perceive their relation to their surrounding environment; not on what that relationship actually is. Many people in industrialized countries feel that they can “dominate” the environment, but things such as tornadoes and global warming trends indicate this is not a correct view. Nevertheless, people continue to hold to this view.

  These orientations to the environment, the outside social and ecological world, often impact organisational practices. Consider the setting of goals and the development of strategic plans as an example. In a “subjugation society”, goal setting is not likely to be a paramount activity. Why set goals and establish strategies, if you believe you cannot do much about achieving them. Fatalism replaces planning in such societies. Or, put it another way, fatalism is “the” approach to planning.

  In “harmony societies”, goals are likely to be used, but deviations are recognized, with importance being placed on a person’s ability to flow with events, or balance the press of on going opposing forces. In “domination societies”, goals are clearly set in organisations, with achievement benchmarks and specific strategies for their achievement.

  In a given case setting, individuals, or groups from communities, which represent these three different orientations, are likely to make different types of decisions based on different understandings of what the situation requires. Moreover, it is impossible to predict which decision may be the most successful, or indeed whether all decisions can be successful simultaneously, but for different reasons.
❑ **Time Orientation**

Does the culture, or individuals within it, focus predominantly on the past, present or future? Societies differ, in terms of the relative value they place on time. In many Western societies, time is viewed as a scarce resource. Hence, the oft used phrase that “time is money”. In North America, there tends to be a focus on the present and short-term future. Evidence for this can be seen in the desire of stockholders in corporations to receive a quick return and for companies to be judged in yearly cycles in terms of their performance. So too, most employees are evaluated on a yearly basis.

By contrast, the Japanese tend to take a longer view and this is reflected in their methods of performance appraisal. Japanese executives are often given years to prove their worth. At the same time, there are ironies in a culture’s conception of time. The Japanese for instance, in developing their competitive strategy in the auto industry, invented the concept of “just in time” inventory, which was more short term focused than any management tool employed in North America. Still, other cultures take a different view of time and focus on the past. Until recently the UK, for example, tended to focus on the past “age of empire” in which Britannia “ruled the waves”. Buddhist cultures tend to take a cyclical view of time.

Understanding a culture’s view of time can provide the case analyst with insights into a variety of things: the model of planning in use; the time scales of performance appraisal; the view of the processes of innovation, change and development; customer expectations for service and response times to requests. Time is present in most case studies and its analysis is a critical component of the overall examination. Orientations toward time also change in different cultures with younger people often adopting views, which are different from their parents. These dynamic processes of cultural change are also vital in the analysis of cases.

❑ **The Nature of People**

All cultures tend to have modal views of people, in the generic sense of that term. Cultures tend to assume that people are inherently good, evil or some mix of these factors. One can see how a prevailing cultural view of people can affect the leadership style employed in an organisation. Autocratic leadership styles, one can argue, assume that people are evil, or untrustworthy, while more participatory styles suggest the opposite. Cultural predispositions are one of the factors that must be taken into account in any effort to change the organisational culture or leadership style in place in an organisation or system. Solutions proposed by learners to case problems should examine and reflect these possibilities.
❑ **Activity Orientation**

Some cultures emphasize doing, while other stress being. And some focus on controlling. One can argue that in North America action and doing predominates. That is why managers in North America are always demanding action plans. Mexico, in contrast, is being oriented. The afternoon siesta is sacrosanct. Understanding the activity orientation of a culture can give you insights into how people approach work and leisure and the relationship between each of these.

❑ **Focus of Responsibility**

All cultures make certain decisions regarding where the responsibility for the welfare of others resides. Americans, for instance, are highly individualistic in this matter. They define themselves in terms of personal characteristics and accomplishments. They believe that it is primarily the individual’s responsibility to take care of themselves and their families. In many South East Asian societies, however, the group is seen to have responsibility for the welfare of its members. Decision making patterns, communication, reward systems, and the role of the state in business affairs are all affected by a culture’s focus of responsibility.

❑ **Conception of Space**

This orientation refers to the idea of ownership of space. Some cultures conduct business in the public arena and others insist on privacy. Many societies mix the two dimensions in accordance with the issue. In Japanese offices there is little in the way of private space, while in North America and Europe private office space is a much sought after resource for the person.

In dealing with cases which have inter or cross cultural content, or indeed even in cases which are set totally within a given cultural context, the KS framework is a useful device for, not only analyzing the situation in a case, but also developing solutions which are culturally sensitive, appropriate and feasible. The KS framework, and its dimensions, can provide a useful device for assessing the cultural orientation factors, which may be operative in a case. One danger to be avoided, however, is an inadvertent tendency to stereotype cultures on the basis of these dimensions. One must always be cognizant of the fact that there is often as much intra-cultural variation as inter-cultural variation. This is particularly the situation today, when there is increasing movement of individuals across cultures for either business, humanitarian or study purposes.
Dilemmas of Culture

Fons Trompenaars and Charles Hampden-Turner have elaborated the Kluckholm and Strodbeck model and suggested that culture is a way in which a group of people solves problems and resolves dilemmas. They suggest that every culture faces dilemmas in how to reconcile the following value orientations:

- **Rules versus relationships:** whether universal rule based standards should govern human relationships or whether these relationships should be formed and governed on the basis of the particular features of individuals and circumstances.69

- **Groups versus individuals:** The second dilemma relates to what each of us wants, as an individual, and the interests of the groups to which we belong. Do we relate to others by finding out what each one of us individually wants and then trying to negotiate the differences, or do we place ahead of this some shared concept of the public, group or collective good?

- **Specificity or generality in involvements:** This dilemma relates to the degree to which we segment and isolate aspects of legitimate relationships, or have a broad context for them. Do we separate the personal from the task, or do we consider it legitimate to discuss all of our personalities in relationships such as work? Cultures differ in how far personal involvements are considered legitimate and important.

- **Achievement and ascription in according status.** Cultures vary in the degree to which they base their determination of status on achievement criteria (knowledge, skills, credential) or ascriptive criteria (age, seniority, group affiliation and experience).

- **Time orientation:** Cultures vary on the relative degree to which they focus attention on the past, present or future.

- **Relationship to Nature.** Cultures vary in the ways in which they relate to the external environment. In some cultures the focus is on inner control of individuals while other cultures impose external controls through rule systems.

The specific differences in these dimensions are described in the chart below. The framework developed by Trompnaars and Hampden-Turner provide opportunities to use the theme of

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## Relationships and Rules

### Universalist
- Focus on rules not relationships
- Legal contracts strictly followed
- Trustworthy person honors contract
- Strives for consistency, uniformity in procedures
- Fairness is treating all cases the same way

### Particularist
- Focus on relationships not rules
- Legal contracts modifiable
- Trustworthy person honors changing relationship
- Reality depends upon who is perceiving
- Focus on informal networks and private understandings
- Fairness is treating all cases on their own unique merits

## The Group and the Individual

### Individualism
- Frequent use of “I”
- Decisions made by delegated person responsible
- Assume individual responsibility
- Belief in incentives and personal recognition
- Individual competition
- Give freedom to pursue individual initiatives

### Communitarianism
- Frequent use of “we”
- Shared decision making
- Joint group responsibility
- Attention to esprit de corps and morale, cohesiveness
- Avoid favoritism or excessive individuality
- Superordinate goals which all should meet together

## Feelings and Relationships

### Neutrals
- Do not reveal what they are thinking
- Cool self possessed conduct valued
- Avoid warm, expressive behaviors
- Loss of control to be avoided

### Affectives
- Reveal thoughts and feelings verbally/non-verbally
- Transparency, animated
- Touching, physical contact common
- Displaying true self valued
### How Far We Get Involved

<table>
<thead>
<tr>
<th>Specificity</th>
<th>Diffuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Direct and to the point and purposeful in relating</td>
<td>• Indirect, circuitous in relating, often evasive, opaque</td>
</tr>
<tr>
<td>• Principles applied independent of the person</td>
<td>• Decision making highly situational</td>
</tr>
<tr>
<td>• Management is realization of objectives, standards</td>
<td>• Management is nested in personal relationships</td>
</tr>
<tr>
<td>• Private and business separation</td>
<td>• Private and business interrelate</td>
</tr>
<tr>
<td>• Clear and precise rules and procedures</td>
<td>• Vagueness in expectations allowing for modifications</td>
</tr>
</tbody>
</table>

### How We Accord Status

<table>
<thead>
<tr>
<th>Achievement Oriented</th>
<th>Ascription Oriented</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Status based on competence and skill</td>
<td>• Status based on ascribed qualities</td>
</tr>
<tr>
<td>• Authority rooted in performance</td>
<td>• Authority rooted in seniority</td>
</tr>
<tr>
<td>• Decisions are challenged on technical grounds</td>
<td>• Decisions challenged on personal grounds — who is making them</td>
</tr>
</tbody>
</table>

### How We Manage Time

<table>
<thead>
<tr>
<th>Sequential</th>
<th>Synchronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Do only one activity at a time</td>
<td>• Do more than one activity at a time</td>
</tr>
<tr>
<td>• time is sizeable and measurable</td>
<td>• Schedules subordinate to personal relationships</td>
</tr>
<tr>
<td>• Relationships subordinate to schedules</td>
<td>• Performance over a career most important</td>
</tr>
<tr>
<td>• Employees most recent performance is what matters most</td>
<td>• Time is relative</td>
</tr>
<tr>
<td>• Time is money</td>
<td></td>
</tr>
</tbody>
</table>
dilemmas as a basis for crafting cases, particularly in inter-cultural contexts. The seven dimensions, or value orientations, developed by the authors can serve as templates for the exploration, through cases and case based learning, of the role of culture in problem solving, decision making, issue framing and formulation of strategies.
Hampden-Turner and Trompenaars have also proposed a broad methodology for reconciling cultural differences, which can serve as an analytic and learning tool in case based learning. One of the tools in this framework is called synergizing, or virtuous circling. As described in the first diagram, using as examples the value orientations of universalism and particularism, the beginning of the process can lead to a vicious circle where universalist tendencies swamp or drive out particularist tendencies or the reverse. This would be the classic case of inter-cultural conflict. As diagram two illustrates, however, the process of reconciling cultural differences can lead to higher order understanding and improved effectiveness. In a sense, reconciling differences develops meta knowledge and new ways of seeing things as interrelated and mutually reinforcing when previously they were seen as in competition. The use of virtuous circling in case based learning, as a technique for challenging mental models and becoming aware of differing perspectives provides opportunities for growth in understanding.

The Hofstede Framework

A somewhat parallel approach to the study of cultural differences, and their impacts on organisational behavior, is that of Hofstede. His work grew out of a major study of over 100,000 employees in the IBM Corporation worldwide. Given that one company was studied variations, which emerged, could then be attributed to culture.

Hofstede found that managers and employees differed along four dimensions of national culture. 70

- **Individualism Versus Collectivism**

  Individualism refers to a loosely knit framework in which people are supposed to look after their own interest and those of the immediate family. This is made possible because of the large amount of freedom accorded to individual and guarantees for that freedom in law etc. Collectivism represents a tight social framework in which people tend to expect others in the group to which they belong to look after them. Hofstede also found that the degree of individualism in a culture is closely correlated with the wealth of that society.

- **Power Distance**

  People vary in their physical and intellectual abilities and these distinctions often turn into variations in wealth and power. How a society deals with these inequalities, Hofstede called, power distance. That is, a large power distance factor in a given society represents the accep-

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tance of inequalities in society. Cultures vary enormously in their power distance factor. Ne-
gotiations of all kinds inevitably run up against the power distance factor in a given society.

❑ **Uncertainty Avoidance**

We live in a world of uncertainty and in Hofstede’s framework there is a great variation in a
society’s response and approach to uncertainty. A society with high uncertainty avoidance has
in place many mechanisms and rituals to attempt to help it to deal with this. Such societies
have a lower level of toleration of new or deviant ideas, preferring the predictable to the
ambiguous. Other societies reward just these factors.

❑ **Quantity Versus Quality of Life**

The last dimension in Hofstede’s framework refers to the degree to which a national culture
values such quantitative things as the accumulation of money, status or possessions or prefers
the more qualitative and interpersonal dimensions of life. Religious practices are one indica-
tor of such differences. The Hofstede framework can also serve as a template for the design of
cross-national cases.

### The Culture of Organisations

Culture applies, not only to ethnic and national configurations, but also to organisations as
well. Within organisations, culture exists at several levels, from the very visible and codified,
to the tacit and often invisible. Culture, in Schein’s view, represents the learned shared tacit
assumptions on which people base their daily behaviour. In this regard, it is important to note
that culture is acquired, shared with others, often tacit and linked to actual behaviour. It results
in what people often claim to be “the way we do things around here”. But culture matters very
much to the way organisations function, engage in or exhibit the capacity to change and adapt
and provides a context for meaning and value for those who work in the organisation.

Cases based learning provides a range of opportunities to explore the formation, adaptation
and dynamics of culture in organisations:

❑ Using novels or short stories as the material basis, cases can be constructed to
illustrate culture in action.

❑ Movies and video also provide a rich context for dramatised cases
Ethnographies developed in anthropological and sociological research through participants’ observations can also form the basis of a case as can detailed case studies.

Conducting interviews to unravel the concept and operation of culture in organisations is also a useful technique.

In unravelling the concept of culture in organisations, case designers need, as the above examples illustrate, to use material in which there is “thick description,” and a variety of live roles played over time, according to Clifford Geertz, the noted anthropologist.

With this material available, and cases designed around it, what frameworks are available through which to define and assess the impact of culture? Edgar Schein, in this regard, offers a comprehensive model for the understanding of culture, which can serve as an approach to this issue in case based learning. According to Schein, as the diagram below illustrates, culture exists at three levels within organisations:

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To grasp the culture of an organisation, then, it is necessary to be able to unpeel it, like an onion, exposing its different levels and meanings. Culture is deep, broad and tends to be stable rather than volatile. Schein provides a detailed methodology for the understanding of culture that is a useful guide in case based learning. He distinguishes the cultural content in organisations as the product of three challenges:

- Surviving in the external environment
- Integrating the human organisation
- Assumptions about reality, time, space, human nature and human relationships

In this Handbook, it is not possible to explore the richness of the framework developed by Schein. However, as a useful guide, the key questions which are explored in relation to each of these dimensions of the expression of culture provide a framework through which to design and engage with culturally rooted cases:

**Surviving in the External Environment**

A. Mission Strategy and Goals

- What is the fundamental mission of the organisation?
- What is its reason for existence?
- How does the organisation’s strategy and goals fit the mission?
- Where did this set of strategies and goals come from?
- Is the strategy based on formal reasoning or logic or is it also based upon a set of beliefs and biases of the organisation’s founder’s or leaders?

B. Error Detection and Correction Systems

- What are the error detection systems in the organisation?
- What counts as an error in the organisation and why?
- How do people discover that they are not meeting their goals?
- What do people do when they discover errors or failure to meet goals? Are there variations in the organisation as to how errors are defined and treated?
Integrating the Human Organisation

A. Common Language and Concepts
   - Does the organisation use common language and jargon that are taken for granted but will be found strange by an outsider?
   - What do outsiders find different about the language used by employees?
   - To what degree is the meaning of language embedded in the context of the organisation rather than in the literal meaning of words?

B. Group Boundaries: Who’s In Who’s Out
   - What are the badges of membership in the organisation?
   - Are there special symbols or privileges used to designate membership?
   - How are the insider and outsider perceived and defined?
   - What is the process of inducting someone new to the organisation?

C. How are relationships defined?
   - How appropriate is it to interrupt the boss when he/she is speaking?
   - If one disagrees with the boss can disagreements be aired? How?
   - How is performance assessed in the organisation? Is it formal or informal?
   - Can family and personal problems be brought to work or is there a taboo against this?
   - At informal events with colleagues in the organisation what is talked about?

D. Allocating Rewards and Status
   - In the work situation what is considered a reward and a punishment?
   - To what signals do people pay attention to in order to figure out how they are doing?
   - When some people get visible rewards is it clear what they did to deserve them?
   - What is the basis for higher and lower status in the organisation?
   - What are the Norma and rules for getting ahead?
Deeper Assumptions

A. Relationship to the environment
   ❑ How does the organisation define itself relative to other organisations in its area of expertise or business?
   ❑ Does it view itself as dominating, just fitting into a niche or passively accepting what comes along?

B. Assumptions About Human Nature
   ❑ What are the assumptions or “messages” behind the incentive and control systems in the organisation?
   ❑ Do these systems communicate trust or distrust in the employees?
   ❑ Does the organisation believe employees can be developed or is it a matter of selecting the right kinds of people?
   ❑ When decisions are made in the organisation what is the process used?
   ❑ What are decisions based on: facts, values, biases hunch?

C. Time and Space
   ❑ What norms about time exist in the organisation?
   ❑ What does it mean to be late or early?
   ❑ Do meetings start and end on time? Is there variation? What explains the variation?
   ❑ Do people do two or more things at the same time or one thing at a time?
   ❑ How does the organisation react to missed targets or schedules?
   ❑ How does the physical layout of the organisation reflect working style and status?
   ❑ How do people express their rank through spatial arrangements?
   ❑ How is privacy defined?

Although culture often manifests itself in espoused values, overt behaviour, rituals, rules and artefacts, its essence rests in shared tacit assumptions. Culture, as a result, is the product of social learning. Ways of thinking and behaviour that are shared and that work become elements of the culture of organisations. These can be stubborn elements blocking needed efforts to change organisations or increase their adaptability. As Edgar Schein wryly notes, “you cannot create a new culture, but you can create the conditions out of which new thinking and behaviour will emerge.”
Culture and Mind

In recent years, cognitive and neuroscience has spawned a revolution in our understanding of the workings of the human mind, the brain, which the mind contains, and the cultural and social context with which both interact. Thinking and reasoning processes have been redefined, in this line of research, as simultaneously physical, symbolic, metaphorical, social, logical, intuitive and cultural. Moreover, there is an immense range in the styles that people bring to each of these processes and dimensions and culture has a profound effect on all of them. In any case based learning context, all of these forces of the mind will be alive and operative. If the goal of case based learning, as all learning, is to foster, broaden and deepen understanding, then our approaches to learning must be “mindful” of this immense variation in the human propensity to learn and understand. It will simply not do to define intellectual and cultural diversity out of existence, or operationally remove it, through the superimposition of a dominant style of thinking and learning.

An approach to the reality of the multi-dimensional mind flows from the work of Howard Gardner on Multiple Intelligence’s. In essence, the theory of multiple intelligences proposes that there is no “g” factor in intelligence; no single attribute, or function, that defines its nature and functioning. Rather, Gardner suggests that there are multiple intelligences; multiple ways in which people come to understand the world, process information, perceive, select and prioritize. Moreover, each form intelligence is applied using a range of learning styles. People tend to emphasize particular forms of intelligence, which is a reflection of their early socialization, neurological make up, cultural context and success or failure experienced in learning. The following chart briefly portrays the defining attributes of each type of intelligence.

The idea that there are multiple intelligences, multiple ways of knowing if you like, is an insight that holds exciting promise for case based learning and for its applicability across cultures. The most significant implication is that, in case based learning, instructors need to provide for, and encourage, both in the design and interaction with cases, multiple entry points to the case. An entry point is an access channel to the content and process of the case that allows a person to encounter it on his/her own chosen and preferred terms. Consider the following entry points:

73 H. Gardner, *Intelligence Reframed* (NY: Routledge, 1999)
The Multiple Intelligences Framework

**Verbal/Linguistic Intelligence** Involves reading, writing, speaking, and conversing in one’s own or foreign languages. It may be exercised through reading interesting books, playing word board or card games, listening to recordings, using various kinds of computer technology, and participating in conversation and discussions.

**Logical/Mathematical Intelligence** Involves number and computing skills, recognizing patterns and relationships, timeliness and order, and the ability to solve different kinds of problems through logic. It may be exercised through classifying and sequencing activities, playing number and logic games, and solving various kinds of puzzles.

**Visual/Spatial Intelligence** Involves visual perception of the environment, the ability to create and manipulate mental images, and the orientation of the body in space. It may be developed through experiences in the graphic and plastic arts, sharpening observation skills, solving mazes and other spatial tasks, and exercises in imagery and active imagination.

**Bodily/Kinesthetic Intelligence** Involves physical coordination and dexterity, using fine and gross motor skills, and expressing oneself or learning through physical activities. It may be exercised by playing with blocks and other construction materials, dancing, playing various active sports and games, participating in plays or make-believe, and using various kinds of manipulatives to solve problems or to learn.

**Musical Intelligence** Involves understanding and expressing oneself through music and rhythmic movements or dance, or composing, playing, or conducting music. It may be exercised by listening to a variety of recordings, engaging in rhythmic games and activities, and singing, dancing, or playing various instruments.

**Interpersonal Intelligence** Involves understanding how to communicate with and understand other people and how to work collaboratively. It may be exercised through cooperative games, group projects and discussions, multicultural books and materials, and dramatic activities or role-playing.

**Intrapersonal Intelligence** Involves understanding one’s inner world of emotions and thoughts, and growing in the ability to control them and work with them consciously. It may be exercised through participating in independent projects, reading illuminating books, journal-writing, imaginative activities and games, and finding quiet places for reflection.

**Naturalist Intelligence** Involves understanding the natural world of plants and animals, noticing their characteristics, and categorizing them; it generally involves keen observation and the ability to classify other things as well. It may be exercised by exploring nature, making collections of objects, studying them, and grouping them.
**Narrative Entry Points:** People of all ages and in all cultures find stories interesting and compelling. Cases contain, and embody stories and if they approached and designed in this manner they open doors to learners with a bent toward linguistic intelligence.

**Numerical Entry Points:** Some people like to deal with numbers and numerical relations using their mathematical intelligence. Cases can include data and call for the analysis and manipulation of such information.

**Logical Entry Points:** For other people they prefer to engage with logical propositions, their interrelationships and implications. These people find the decision-making elements of a case to be interesting and challenging.

**Existential Entry Points:** The deep questions of meaning often draw the attention and interest of some people and cases which emphasize systems consequences can be used to spark their interest.

**Aesthetic Entry Points:** Ambiguity, shades of meaning, questions of style, tone and nuance often draw people with a highly developed aesthetic intelligence and cases can accommodate this both in words and graphics.

**Hands-on Entry Points:** Role play cases or cases in which people are required to actually do something to test an idea provide entry points for people who learn best by doing.

**Interpersonal Entry Points:** Some people prefer to learn collaboratively with others sharing and honing ideas in a group setting and case study groups provide excellent vehicles for the stimulation of this learning style and mode of approaching the world.

A case, and the learning process associated with it, can be represented in numerous ways drawing upon the multiple intelligences of people. Providing multiple entry points to the content of a case, and to the learning process through multiple styles of learning, prevents a foreclosure on the expression of interest and ideas and is one way to insure that cultural bias in learning styles does not unintentionally pervade a case. Multiple entry points to a case also develops a context in which people can explore the dimensions of their ways of seeing the world and to broaden, extend and deepen their understanding which is, of course, the ultimate purpose of the case itself. As noted at the outset of this handbook: the purpose is learning.

The education and training of people can no longer be undertaken “within the skin”, so to speak, of a given national culture. While capacity building activities must, of course, be sensi-
tive to the national cultural context in which they occur, the fact of the matter is that global economic and communications forces are widening the cultural ambient in which capacity building functions. Capacity building is becoming the archetype example of a pan-cultural process. By pan-cultural is meant a capacity to understand and to span cultural boundaries. For this reason, case based learning must include situations, skills and frameworks for understanding the meaning and nuances of culture, regardless of the locus of its expression and practice.
Part 11

Toward the Cybercase

The information and communications revolution opens up new vistas for case development, capacity building, and case based learning. The range of possibilities are such that an entire book could be devoted to this subject alone. In the context of this Handbook, three dimensions of the use of computer and communications technology in case based learning will be introduced briefly: the use of computers in case based learning, using the Internet as a context for case based learning and the development of virtual case communities.

Computers as Mindtools

Computers can be seen simply as machines that provide learners with a device to manipulate larger amounts of symbols and data, or they can be seen as mind tools that extend and deepen the cognitive functions of human beings. When computers are treated in the former sense, they are utilised primarily as digital assistants to the learning process; somewhat like a book or calculator. As mind tools, computers form part of the very context of learning itself. Used as a mindtool, computers open a myriad of possibilities for enhancing, extending and deepening the process of the case based learning. Listed below are just some of the possibilities:

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1. **Visualisation**

By augmenting simulation engines, symbolic calculators and other software with graphical output it becomes possible to support learner visualisation of highly abstract processes and procedures. In case based learning, computers can be used to provide graphical representations of problems through concept and mind mapping. Flowcharting and process mapping can also be part of using computers in case based learning.

2. **Diagnosis**

By tracking learners’ work on related tasks, it becomes possible to distinguish ‘accidental’ errors from those which provide statistical evidence for failure to understand key concepts or to master crucial skills. This function of computers allows for the tracking of the development of skills and competencies within a case learning process. Key problem solving and decision making skills for example can be assessed though computer programs built within actual cases and the performance of individuals and groups can be compared.

3. **Remediation**

By systematically giving learners greater access to relevant information or rehearsing them on weak skills it becomes possible to focus remediation on areas that the learner, tutor or software has diagnosed as requiring attention. Cases can be designed with built in remediation and mini learning exercises that can be accessed on demand and during the analysis of a case. For example, when mathematical operations are required, failure in performance can be remediated with computer based tutorials.

4. **Reflection**

By giving the learners access to records of their past working, the response of the peers, tutors and system they were working with, and by providing them with tools with which to annotate and file such work, it becomes possible to support systematic reflection on what they have learnt and on their own learning processes. Cases can be designed in which there is recurring attention to the development of various skills and computer programs can be used to chart the ongoing development of these skills in learners. The learners can have a record of their accomplishment and the gaps in theory capacities. This provides a way for participants to examine the development of their own thinking and learning processes.
5. **Memory Prostheses**

By giving learners comprehensive access to their past computer mediated work and by providing them with appropriate search engines it becomes possible for them to have the self confidence to be very selective and focused about what they choose to attempt to memorise at any point in time, thus supporting much greater cognitive economy on the part of the learner. The computer provides a memory storehouse in which learners can deposit their thoughts and analyses in relation to a case. This is particularly valuable in cases that require extensive research.

6. **Scaffolding**

By tracking learning gains and by human of system dialogue with the learner it becomes possible to dynamically vary the level of scaffolding provided for learners. Cases can be developed using this application at varying levels of complexity demanding increasingly more sophisticated reasoning abilities. Thus, a common core case can be provided and various learners can engage the case at varying levels of complexity. This provides the opportunity to use the same case for a group composed of individuals with differing levels of experience and capability.

7. **Tackling the Hypothetical**

By making it possible for learners to set up counterfactual situations in simulations, or to break laws in symbolic reasoning systems, it becomes possible for learners to investigate the fundamental principles which underpin formal scientific, mathematical and other models. This application allows learners to engage in if then, or conditional reasoning, and to test various scenarios as they apply to the resolution of issues and problems presented in a given case. Moreover, using computers allows the application of formal modelling techniques and decision frameworks to case analysis. In this process, learners also indirectly learn how to exploit the potential of computers generally for analysis and modelling.
8. **Time Travel**

By facilitating ‘time travel’, as a matter of routine in simulations and databases, it becomes possible to help learners augment their understanding, by focusing on the key issues of chronology and causality. The computer, particularly when linked to the Internet, permits learners to overcome barriers of time and space. The removal of these barriers also offers the potential for case designers to build into their designs unfolding and emerging events on a global basis, as well as to communicate asynchronously with people around the world about issues in a case or to become part of a virtual case study group.

9. **Autonomy**

By taking the learner’s viewpoint when designing instructional software, it becomes possible to give the learner greater control over the degree to which there are external interventions in their learning processes. Cases can be developed as self-learning processes using the power of computers. Learners can for example proceed through a case when designed on a modular basis at their own pace and in their own time. This allows for large groups of learners to proceed through a case on their own terms and not be driven by the demands of scheduled group meetings.

10. **Pacing**

By providing a ‘clock’ based on the planned work of a cohort of learners or on an appropriate instructional design it becomes possible for learners to increase their motivation when engaged in sequences of learning activity over longer time periods such as term and years. Computers allow cases to be wrapped around the working and life schedule of learners, rather than forcing these to fit within the demands of the case. The benefits in learner motivation are substantial.
11. **Redundancy**

By encoding the same learning material using different media elements, it becomes possible for heterogeneous groups of learners with different learning style and media preferences, to study the same curriculum content. The capacity of the computer to represent the same information in different forms, from print to interactive visual graphics, means that learners are not denied access to the case because of a modal learning style assumed in the case. Moreover, software programs exist through which such things as concept and mind maps, as well as decision trees, can be utilised by the learner to express their views on a case.

12. **Motivation**

By addressing the issues of intrinsic and extrinsic learner motivation explicitly in the design of learning sequences supported by instructional software, and in the design of educational interfaces, it becomes possible to enhance motivation in ways that depend on the characteristics of the individual learner. Here again the independent and self-paced dimensions of learning are enhanced through computer mediated case learning.

13. **Group Working**

By supporting synchronous or asynchronous group working modes, and by appropriate choice of design to support competitive, collaborative or complementary activity, it becomes possible for learners to work in teams and to acquire higher order learning skills from each other. The computer is a powerful tool for the facilitation of group working just as it is in the context of the modern workplace. In fact, this dimension allows people to apply their working styles to the learning processes in case-based learning removing the artificial divide which often exists between training and working.

14. **Knowledge Integration**

By taking a chronological view when designing instructional software, by deliberately incorporating appropriate elements of media redundancy and by planning for student use of memory prosthetics it becomes possible for the learner to integrate diverse knowledge acquired at different times. This application is particularly useful in integrating knowledge gained by moving through a series of cases.
15. Access

By incorporating diverse electronic prosthetics in learner interfaces and by designing for learner autonomy and pacing, it becomes possible to extend access to learners who cannot take advantage of conventional modes of classroom delivery because of their special social or physical circumstances. The power of the computer, when linked to the Internet particularly, opens up access to case based learning anytime, anywhere and with anyone.

The Internet and the Web

The convergence of computers and communications, in what Daniel Bell referred to as “compunications”, is the real revolution underpinning the emergence of the knowledge and information age. Central to this development, of course, is the Internet. The Internet offers a vast depository of information in various forms and a context for human exchange and communication. To a large degree when, as Nortel Networks asks the question in its television ad: “What do you want the Internet to Be?”, they are right. The Internet is not one thing to all people. The Internet is many things and is being created in the minds of users on a continual basis. There are as many Internets as there are people surfing it. It is a work in progress. This author, then, can only provide a glimpse into the possibilities of the Internet in case based learning from the vantagepoint of his engagement with it. The reader is invited to contemplate other dimensions based on his or her own experience.

The Internet, at this stage in its development, is best seen as a learning vehicle, which can supplement and extend traditional classroom based instruction, rather than replace it entirely. It may be in the future that the Web will, indeed, emerge, as the dominant mode of learning, but, at this point in time, this is more a matter of potential than reality. In considering using the Internet for case based learning, it is important to ask what unique features of the Internet and World Wide Web can be leveraged for the benefit of learning. In this regard, the Web has a number of features, which open up the possibility for unique contributions to the learning process:

- The Web provides the opportunity for learning when the process need not happen at a particular time and place, but does require access to timely information.

- The Web also provides the opportunity for learners to configure their own learning environments through the use of bookmarks and customised searching.
The Web provides instructors with customised sources of information so that they can spend the bulk of their time assisting the learning process rather than on content creation and transmission.

The Web enables synchronous and asynchronous collaboration and conversation between instructors, learners and other experts who are at a distance from each other.

The Web gives the learners the opportunity to contribute directly to the learning process by publishing their ideas.

The Internet is not just one environment; it is a multiplicity of different types of environment. Each environment affords different types of behaviour and enables different forms of learning. The first environment is the World Wide Web, when it is being used primarily as a library of information, or a self-publisher. Having such a library of information on the desktop or lap, is of course a tremendous asset to the learning process. In order to maximise this information source, however, facility with search techniques, and some understanding of the different structures of knowledge, are important. It is of little benefit to provide a person with access to electronic economic databases, if that person has no knowledge of statistics or economics.

Electronic mail is another environment on the Internet. This is the primary interactive communication function within the Net and allows for group discussion and individual expression of views.

Another environment is asynchronous discussion; that is discussion that occurs anytime and any place. These environments provide ongoing conferences in which participants start topics (or threads), post replies to each other and read and react to what others are saying. They are asynchronous in that you can join a discussion at anytime. A variant of the asynchronous discussion are mailing lists which automatically route discussions of topics to your computer. Yet another asynchronous environment are newsgroups which post news about topics on electronic bulletin boards.

Synchronous chats provide yet another environment. People who are online at the same time can enter chat rooms and engage in a real time conversation and discussion.

Another environment is the MUD, an acronym that once was used to describe multi-user dungeons, that is, the dungeons and dragons game. These are text based virtual reality environments that mix a number of ingredients together to create a stronger sense of place and participation among users. The users are often called players and are involved in playing roles in a game context.

Lastly, live Internet-based interactive video and voice is already developing at a rapid pace. When the technical limitations that affect the quality of video particularly are overcome, this environment promises to dwarf the others mentioned above.
Before plunging into the use of the Web in case based learning, it is advisable to ask just how the Internet can be used to accomplish the learning goals, which have been set. One way of formally addressing such an important matter is to conduct what Valerie Beer has called a Learning-Technology Assessment or LTA. An LTA explores the potential value of the Web from two perspectives: suitability of the content for the Web and acceptability of the Web as a learning environment.\footnote{V. Beer, The Online Learning Fieldbook (NY: Jossey Bass, 2000)} The LTA contains a set of questions the answers to which will assist in determining whether the Web is a tool which can be used in a particular instance of case based learning.

### Learning Technology Assessment Form

<table>
<thead>
<tr>
<th>Part One: Determining The Suitability of the Web for Content</th>
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</thead>
<tbody>
<tr>
<td>• Can the Web contribute to meeting the learning goals?</td>
</tr>
<tr>
<td>• Is the Web the appropriate container for the content; that is, the information to be purveyed?</td>
</tr>
<tr>
<td>• Is the way the content is presented now amenable to Web presentation?</td>
</tr>
<tr>
<td>• Can the learner gain information and practice new skills on the Web?</td>
</tr>
<tr>
<td>• Can you be reasonably sure that the learners have the new skill, based upon what they learn on the Web?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part Two: Determining the Acceptability of the Web for Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>• How do the target group currently learn and do they want to learn this new way?</td>
</tr>
<tr>
<td>• Who if anyone is asking to learn in this new way?</td>
</tr>
<tr>
<td>• How do you envision learners using the Web?</td>
</tr>
<tr>
<td>• Do the learners know how to use the required technology? Do you have the technology?</td>
</tr>
<tr>
<td>• Will learning in this new way require changes in other aspects of how the organisation functions and how will these changes be designed and implemented?</td>
</tr>
</tbody>
</table>

It is a paradox that, while the Internet is perhaps mostly accessed on an individual and private basis, the context provides a rich opportunity for fostering what we have described earlier as a collaborative community of practice. Etienne Wenger, a research scientist at the Institute of Research on Learning, describes a learning community as being bound by:\footnote{E. Wenger, Communities of Practice (NY: Cambridge University, 1998)}

- **Language**: including the documents images and symbols that employees use to communicate with each other.
- **Tools**: that are used to get work done
- **Explicit rules, procedures and regulations** that structure how work is done
- **Implicit behaviours**: unstated rules of thumb that make the culture of a workplace unique.
# Developing Communities of Learning on the Web

<table>
<thead>
<tr>
<th>Social Learning Principle</th>
<th>Web Learning Application</th>
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| **Learning is fundamentally social:** A matter of changing “identity”, not just acquiring knowledge | • Learners can contact real people in a web based learning environment by email, chat, discussion and other means  
• Learners do not have to be separated from work or other social functions while learning on the WEB  
• Activities can be provided to learners where they try out new ideas and skills with others after they have acquired them on the WEB |
| Knowledge is integrated into the life of communities: sharing values, perspectives, and ways of doing things creates a community of practice. Communities can form anywhere, formally and informally, virtually and face to face, and you can be a member of many different communities simultaneously | • WEB learning communities can be developed those mirror communities in which learners already participate.  
• Actual learning commentates can be used as the basis for case based learning activities on the WEB |
| **Learning is an act of membership:** the motivation to learn is the desire to participate in a community of practice | • In WEB based learning contexts participants can be encouraged to share knowledge by posting their work and thoughts for others to see and comment upon or enlarge.  
• WEB based learning contexts can provide opportunities for new communities of practice and learning to form, particularly among people who may never have the chance to meet face to face.  
• Instructors can develop coaching skills, which facilitate people’s active participation in a community of learners |
| Knowing depends upon engagement in practice: people glean knowledge from observations and participation in a variety of situations and activities | • WEB based learning offers many opportunities for practising skills and applying knowledge with links to real world organisations and people |
| We already have a society of lifelong learners: people learn what enables them to participate in the commentates of practice they want to join | • Lifelong learning means that the development of a WEB learning context, like the Internet itself, is never finished; it is constantly becoming  
• Continuous learning does not mean continuous browsing; the anywhere and anytime aspect of the Internet makes it an ideal tool for continuous learning and for accessing and becoming a part of countless communities of practice and learning which are being formed every hour |
Margaret Riel elaborates this notion of a learning community to include a group of people who have:  
- A shared interest in a topic, task or problem 
- Respect for the diversity of perspectives 
- A range of skills and abilities 
- The opportunity and commitment to work as a team 
- Tools for sharing multiple perspectives 
- Knowledge production as the shared outcome or goal.

The idea of a community of practice and a community of learning, therein, is important for two reasons. Firstly, work is increasingly accomplished in organisations, and other settings, in teams and groups and, thus, the need to develop teamwork skills is rising quite quickly. Secondly, research by such centres, as the Institute for Research on Learning, is demonstrating that learning itself is social. In this regard, the IRL has formulated seven principles, which govern the social nature of learning. These principles, as the chart illustrates, can be nurtured through Internet learning contexts and processes:

Work gets done through collaboration and an increasing amount of workplace communication and collaboration happens on the WEB. Because more and more workplace conversations happen on the WEB, learning the skills of collaboration, through WEB based learning, provides a context for honing virtual skills.

Learning online, not only poses challenges to learners, who must forego their dependency on instructor led classes, but also to instructors, who must adopt new orientations and behaviour in relation to their role in the learning process. Essentially, in an online environment, the instructor shifts from being a director of learning to a facilitator, catalyst and manager of the collaborative learning processes of participants. But there is a crucial difference in how this role is played within an online versus a face to face environment: the opportunity for self correction by reading facial and other body signals, listening to the pitch of the voice, or observing the simultaneous reaction of others, is absent.

Central to effective learning facilitation on the Internet is language. Written language is the core of functioning on the Internet. The dialectizer, a web page on the net, humorously illustrates the importance of language, for example, by converting plain English expressions into various web dialects.

Patricia Wallace, in her groundbreaking examination of the psychology of the Internet, has highlighted the role that registers, or social contexts, play in the style of language people adopt while on the Internet. Linguistics has shown how a person’s styles of speech varies by the context in which they are speaking. When speaking on the phone, for example, people adopt speaking styles which often differ from the style they use in face to face settings. The Internet provides many contexts for language usage and style, as well as a meta-context, which is new. The chat medium on the Internet, for example, affects the register in a number of ways. It pushes conversation toward a highly economical use of language. Words such as “lol”, for example, are deployed to represent the phrase laughing out loud. Anything that can be abbreviated will be: “pls” for please, “thx” for thank you.

The point of this short discussion of language on the Internet is to highlight the importance for instructors, in their instructional use the Internet, to be careful in their use of language. The language style employed will be a primary basis upon which learners will evaluate you, form their impression of who you are and assess whether they feel comfortable with you. Using capital letters, for example, can be interpreted as shouting. From the outset, it is important to come to grips with whether formal language rules and grammar will apply in online learning, or whether language will be treated dynamically and unfold as a unique register for the learning context.

Instructional roles are affected by more than language and the following points need to be clear in your mind as you engage the process of online learning:

- Establish clear participation guidelines that the participants discuss and agree to.
- Be clear about how participation will be evaluated, if at all.
- Create a clear syllabus and structure for the case under consideration
- Be clear about how much time will be devoted to participation online in examining a case.
- Create a case site that is welcoming, easy to navigate and to which there is little difficulty in posting messages.
- Be a good model of online participation by being visible on a daily basis and responding to queries promptly
- Keep any systematic, lecture type presentations short with breaks for participants to contribute
- Provide frequent summaries and reviews

Virtual Case-Based Learning Design

Learning and training are often thought of as synonymous. But they are distinct. Training is the way instruction is conveyed. It supports learning, which is the process by which we transform information into knowledge and take action as a result. In the context of capacity building, learning is the process by which people acquire new skills, or knowledge, for the purpose of enhancing performance. We have traditionally relied upon training as the “default approach” to facilitating and improving performance and direct, face to face instruction as the specific means to make training work.

However, there has been a lingering gap between training and performance. Essentially, the problem has been that new knowledge and skills, obtained through training, have not transferred, to the degree that they might, to actual action settings. At the same time, many action settings have not been transformed to incorporate and apply the new skills. For this reason, capacity building entails a focus upon knowledge, skills plus context. All must be transformed for performance to be affected in the real world.

What Mark Rosenberg calls e-learning challenges the default model of training by incorporating a response to four basic transformations underway in learning and its linkage to action: 79

- From Training to Performance

This shift is about outcomes. Merely focusing on the amount of training, and the act of training, is no longer sufficient. Training must be more accountable by demonstrating a positive impact on individual and organisation performance. Although still powerful, training is limited in its capacity to impact performance. A broader human performance technology is increasingly required; one, which includes incentives, organisational, structures and processes and a variety of supporting tools.

- From the Classroom to Anytime and Anywhere

This shift is about access. Widely dispersed employees, in a given organisation, increasingly demand just in time knowledge and skills. Deferring this learning need may have some personal ego benefits, but do little to impact employee effectiveness, or the capacity of an organisation to adapt to change. This demand for just in time learning can be met, in part, by bringing technology into the capacity building mix.

From Physical Facilities to Networks

While there is much to support well designed physical training facilities, increasingly organisations are developing Internet strategies which link facilities, learners, organisations and content. The network is increasingly emerging as the context in which people develop their capacities. As part of this trend, existing classroom based training centres are changing their roles. They function, less as information purveyors, and more as centres for leadership development, problem solving and teamwork skilling.

From Cycle Time to Real Time

In the digital age, time and attention are the scarce resources. Traditional training entails extensive periods of design of learning, based upon snapshot needs assessment. This inevitably builds in a lag between the identified need for learning and the activation of a learning process to meet it. Today, the cycle time of knowledge creation and diffusion is increasingly becoming shorter, with the result that the demand for real time learning has increased exponentially.

E learning has been described as a process of using Internet technologies to deliver a broad array of solutions to enhance knowledge and performance. It is based upon three basic capabilities:

- E learning is networked; a fact which makes it capable of instant updating, storage, retrieval, distribution and sharing of instruction and information. The capacity to distribute and update information and instruction instantaneously is, perhaps, the hallmark of e-learning and the trait that distinguished it most from traditional face to face classroom instruction.

- E-Learning is delivered to the end user asynchronously through a computer or Internet access device

- E Learning is not confined to the delivery of training, but encompasses a range of modalities.

Elliot Masie, one of the pioneers of online learning, has refined the definition of e-learning by focusing on the meaning of the letter “E” in the word: 80

- E is for Experience. E learning entails changing the character of the experience of learning. A learner in an e-learning environment has the options of time-shifting, place-shifting, granularization, simulation and community support.

80 E. Masie, Newsletter, Dec. 2000
- **E is for Extended**: With e learning an organisation is able to offer and extension of learning options, moving from an event perspective to an ongoing process perspective. The footprint of the learning experience is wider and lasts longer.

- **E is for Expanded**: The opportunity to expand training opportunities beyond the classroom.

- **E is for Exploration**: This E is offered by the author and suggests that learning sets in motion a process of exploration beyond the content being presented. This process flows from the fact that the content is nested within the tremendous informational richness of the Web itself allowing for the learner to constantly explore its meaning and application on a global basis.

- **E is for Experimentation**: This E is also offered by the author and suggests that E learning provides opportunities for learners to engage the content and learning experience through a variety of learning modalities and styles and to undertake, not only in learning experiments of their own, but also to share these with their co-learners.

What are the benefits of e learning? Rosenberg lists the following:

- **E Learning lowers costs**: The cost structure of e learning entails initial investment in equipment and communications, but a decreasing marginal cost, as the access to the learning increases. In addition, e learning dramatically reduces the costs of travel, buildings, resource people.

- **E Learning enhances organisational responsiveness**: E Learning can reach a large number of people simultaneously and this can be critical when capabilities and practices have to change quickly.

- **Messages can be mass customised**: In e-learning, it is possible to give everyone the same message, and within this framework, to customise messages for particular groups.

- **Content is timely and dependable**: Because it is web enabled, the content in e-learning can be updated quickly and in a timely fashion. Accuracy of information can also be enhanced, since the variable of simultaneous interpretation by a vast array of instructors can be minimised.

- **Learning in e learning is 24/7**: What this means is that learning can occur 7 days a week and 24 hours a day.
Limited user “ramp up” time is entailed. With so many people using computers and accessing the web, and with process of learning how to do so becoming more user friendly, the ramp up time involved in e-learning has decreased dramatically.

Builds community. The Web allows people to develop ongoing virtual communities and teams.

Scalability. E-learning solutions are highly scalable. Programs can move from 10 participants to 100 participants to 100,000 participants with little incremental cost.

Client benefit. E-learning programs when made available not only to employees and learning participants, but to actual customers of an organisation provide an added value.

The design of an e-learning strategy in case based learning is, not merely a process of putting a classroom case on the web and conducting a virtual discussion; although there are ample examples of this model. This strategy does not take advantage of the power of the Web or of the diverse capabilities of learners.

An integrated e-learning strategy for case based learning encompasses three components: training, knowledge management, and performance support. The instructional component centres on training; the systematic acquisition of knowledge and skills. The knowledge management component concentrates on providing access to learners to information. There are two types of performance tools. The case interrogation tool component entails the provision of access to tools which enhance the capacity of the learners to analyse, solve problems and make decisions in relation to the case. The learning acceleration support component addresses the need to design into e-learning case based learning processes supports that build the ongoing awareness, on the part of the learner, of the learning process being used and to accelerate the effectiveness of the process.

The section below describes each component in the development of an integrated e-learning design for case based learning.

**The Training Component**

Alistair Fraser of Penn State University has coined the phrase “shovelware” to describe the unfortunate tendency, in online approaches to training, to attempt merely to move classroom-training processes to the Web, without any consideration of how they have to change because of the new technology. In his view, the learning episodes themselves must change.
This observation applies as much to case based learning as to other forms of classroom based learning.

While the Internet is, in some ways, a virtual classroom, in other ways it is not. The absence of face to face interaction and the increasing control of learners is perhaps the most significant difference between the two instructional modes. Unlike hierarchically organised classroom based learning, online learning is more akin to a process of self-organisation, driven and guided by the motivations, intentions and actions of learners functioning as a set of interacting and dynamic elements in a complex system. In such an environment, order and coherence is born out of the patterns of interactions of the parts, rather than by the rules stipulated by the whole.

How then can one design the training component of online case based learning for optimal benefit? The following are what can be described as a set of emergent guidelines in this new field of human endeavour:

❑ **Motivating and Meaningful Goals**

While writing instructional objectives has a long tradition in computer based learning, they have often been neglected in online training. In capacity building applications of online learning, however, it is even more important to move beyond knowledge acquisition objectives and address what learners will be able to do after the course, particularly in their work settings. In other words, it is one thing to say that learners will understand the concept of performance management and quite another to specify that learners will undertake a performance analysis of the workflow in their organisations. Beyond the individual level, meaningful objectives in online training need also to address the benefits of such performance to the organisation itself—that is, the impact it will make in terms of its performance and functioning.

❑ **Learning by Doing**

Effective online learning components in case based learning engage learners in interactive activities. Virtual discussions are, of course, a way to do this. However, cases can also be constructed as simulations in which learners explore different decision options and examine the results of their choices.

❑ **Learning from Errors**

Roger Schank has postulated that one of the major sources of learning occurs when we confront discrepant information or results of our actions, which are counter to their presumed impact. Errors in other words are a key basis for learning. Online training, particularly in case learning contexts, can be designed to provide a context for “safe failure”
Active Coaching and Feedback

While online learning is self-directed learning, it does not follow that, in this self-directed process, interaction with, and feedback from others, is of no value. In fact, the need for a strong feedback and coaching element in online learning is, perhaps, greater than in classroom settings. These elements must be designed into the online training components of case based learning. Instructional coaching and feedback, moreover, can be extended in online learning by bringing into the process virtual experts, with whom the learner can interact.

Reuse

One of the values of online learning is that the learner can re-experience the learning process over and over again. Through a well-designed random access capability the learner can also selectively re-experience key components of the training.

The Knowledge Management Component

Is the Web best seen as a classroom or a library? In fact, it is both. In the design of e-learning in case based learning, the fact that the Web contains a wealth of information should not be treated as of marginal importance. Information related to a case can be provided as part of the case. But even more importantly, the learner has the opportunity to search the web for live information that bears on the case. This information searching activity is a learning process itself.

E-Learning cases provide an excellent opportunity for learners to, not only examine issues in the case, but also to acquire the perceptual frame and skills associated with knowledge management. Knowledge management entails the creation, storing, analysing and sharing of information, expertise and insight within an organisational context. Knowledge management is increasingly being seen as one of the core capabilities, if not the core asset, of many organisations. Effective knowledge management increases the capacity of organisations, and individuals within them, to learn, to provide ongoing feedback about the positioning of the organisation in its environment, to build a corporate and organisational memory, to provide a context for collaborative creativity and generating the conditions for a culture of organisational learning.
The diagram depicts what Marc Rosenberg calls the Knowledge Management Pyramid.

When using e learning, as the context for case based learning, the design should scaffold a learner’s introduction to all dimensions of knowledge management. Learners should be required to access documents online, a level one task. They should also engage as a part of the learning task in the case with level two activities: creating new content, communicating and collaborating with others, managing information in real time and capturing and distributing expert stories and advice. Finally, at even more complex levels learners can be introduced to the use of operational and other data bases, develop their own networks of expertise, use performance support tools and electronically leverage organisational know-how.

**The Performance Support Component**

Today, many knowledge management systems contain a variety of tools that enable people to be more productive, both in substantive tasks and improving their overall learning capabilities. These tools help to integrate knowledge and performance and should be built into e-learning applications in case based learning. The tools help one to increase performance, without necessarily having to know the intricate details of the task itself. A simple example is the use of an excel spreadsheet, which will perform calculations and provide various graphical representations of data, without the person having to understand the mathematics behind the function. Performance centred design of e-learning, then, makes ample use of a range of electronic performance enhancers as part of the overall learning process. There are a host of
such performance support tools available online and through commercial software. The choice of tool of course should relate to the task at hand or the learning process.

An example of a performance support tool in e-learning is provided in the diagram which displays the front page of the Virtual Learning Lab, an Internet based learning and research tool developed by the Asian Development Bank Institute. The VLL is asynchronously accessible on a 24 hours a day basis 365 days a year. The VLL is organised as a set of rooms, each of which offers learners different types of information and functions.

In the policy room, learners can access policy documents on a range of issues of concern to the process of development: education, health, governance, labour markets, agriculture etc. In the tool room, learners have access to computer tools and tools used in such fields as public management. If a learner wanted to know, for example, about accrual accounting, then in the tool room they will find a complete handbook on the design and use of such systems and procedures. In the skill room, learners can access and engage in interactive online learning in relation to a number of topics and skills areas. In the expertise room, learners can contact by email a group of international experts and seek their advice on a range of topics. In the discussion room, learners can engage in synchronous and asynchronous discussion, conferencing and chats with their fellow learners or experts. In the idea generator room, learners are introduced to techniques and systems for expanding ideas, improving problem solving and “thinking out of the box”. The data base room provides data sets on a number of themes and topics. The member’s room provides biographical snapshots of co- and contact addresses. In the countries room, learners can research and be introduced to key data about the countries of
participating learners. Finally, the links room takes learners to other web sites, which offer even more in-depth information on the topics in the various rooms.

The VLL is updated regularly and new sub rooms are also created (for example public expenditure management and skills and development are recent additions). The VLL is used as an e-learning performance support to the capacity building activities of the ADBI. It is also used as a performance support for case based learning. Indeed, the various rooms contain numerous cases which can be pursued by learners and many of the process and analytic supports to that process discussed in this Handbook can be accessed through the VLL. The VLL is also used as a repository of learner-developed presentations on various topics including case analyses.

Customizing Learning Engagement

Another example of the use of performance supports in online learning is customised navigation. Increasingly web sites are being tied to databases, that allow personalised navigation through a common body of knowledge. When a user selects from a drop down menu, types text in a box, or clicks on a graphic, the database selects various “digital assets” (text, pictures, streaming audio clips, flash movies etc) and returns them in a web page that is created on the fly. In this context, the knowledge is constructed by the preferences of the learner and the pathway through the common database is unique to that learner.

Customised navigation is exemplified, for example, by Royal Roads University in British Columbia, Canada in some of its online courses. Below are graphic representations of the actual web pages in a course on digital technologies and the e-economy. Students first access a general web page and then take an online self-assessment of their learning styles. The program uses the learning styles framework of Gregorc which maintains that an individual learns through concrete experience and abstraction either randomly or sequentially. Based upon this research, Gregorc identified four modal types:

- Concrete Learners: collect information directly through the senses. They do not look for hidden meanings, nor do they make relationships among ideas or concepts. They prefer to learn inductively, starting with specifics and practical examples followed by understanding of patterns, concluding with theory or larger concepts.

- Abstract Learners: collect information through the non-physical world of thoughts and mental constructs. They use intuition and imagination and look beyond the immediate
to more subtle interpretations. They prefer to learn deductively: starting with the big picture of concepts and theory and following with examples and practical instances

- **Sequential Learners:** organise information collected in either concrete or abstract manner using a step by step procedure. They think in one or two dimensions. They make plans and follow them.

- **Random Learners:** organise information collected in either the concrete or abstract manner in a creative and non-linear form. They think in multiple dimensions and organise information in chunks. They can often skip steps in a procedure without sacrificing the outcome. They tend to act more on the spur of the moment.

These four modal learning types convert, when related to one another, into four learning styles:

- **Abstract sequentials:** set the premise to be challenged, request sources of authoritative support and ask for a positive statement.

- **Abstract Randoms:** do not need much encouragement from an instructor. However, it is necessary to provide support mechanisms for them. They like being asked for personal experiences.

- **Concrete Sequentials:** like instructors to give clear and precise directions, have orderly presentations, explain expectations and assessment procedures in advance and ask for examples which are based on practical experience.

- **Concrete Randoms:** like an instructor to give open ended questions, ask for practical applications of ideas and ask for creative solutions to real problems.

Following the learning styles assessment, which provides the learner with the relative emphasis in his/her learning style, the student then selects the style he wishes to use to access and navigate the knowledge database (the course). As the web pages show, each style presents a different pathway through the course. In other words, the knowledge base of the course remains the same, but the processes of learning varies, as does the way that the content is presented, structured and absorbed. In fact, nothing prevents a learner from experiencing the same course from the perspective of all four learning styles and constructing four different case experiences in the process.

The capacity through the use of computers, to customise learning and allow a learner to, in fact, construct the course of study represents a major advance in the technology and learning science
Leveraging Training, Knowledge Management and Performance Support in E-Learning

<table>
<thead>
<tr>
<th>TRAINING</th>
<th>KNOWLEDGE MANAGEMENT</th>
<th>PERFORMANCE SUPPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose is to instruct</td>
<td>Purpose is to inform</td>
<td>Purpose is to guide performance directly</td>
</tr>
<tr>
<td>Requires work interruption</td>
<td>Requires less work interruption</td>
<td>Least interruption-integrated into work</td>
</tr>
<tr>
<td>Program dictates how the user will learn</td>
<td>User determines how he/she will learn</td>
<td>Task at hand defines what the tool will do</td>
</tr>
<tr>
<td>Goal to transfer skill and knowledge to user</td>
<td>Goal to be a resource to the user</td>
<td>Goal is to assist performance</td>
</tr>
</tbody>
</table>

of online learning. The applications to case based learning of such customised navigation are many. The learning style pathways, of course, can also be applied to a common case knowledge base. But other pathways, through a case knowledge base, can be imagined. Pathways can be developed based upon role: working through a public sector case from the role of a Minister, Deputy Minister, stakeholder, citizen etc. An infinite number of role based pathways can be developed. Or, one can construct customised pathways based upon country at different stages of development, by discipline, buy profession, by time, by location, by insider and outsider etc.

The capacity to create customised pathways through a case knowledge database represents a movement from interaction to construction in the case based learning process. In fact, the availability of alternative pathways through which case learning experiences are created and case meanings constructed means, in an ultimate sense, that there no longer is such a entity as the case, apart from the meaning making engagement of the learner.

Training, knowledge management and performance support, when integrated in an e-learning based case based learning process, substantially enhance the effectiveness of the learning process. Each of these elements, in an integrated design, adds their unique value to the overall case-based learning process.
Telementoring

Online case based learning opens up the possibilities for the development of what has been called telementoring. Telementoring involves using telecommunications technology, including email, conferencing systems or telephones, to develop and sustain mentoring relationships, where face-to-face ones are impractical. In case based learning, telementoring involves linking learners with knowledgeable volunteers, or paid tutors, who have an interest in fostering the development of the learner. These arrangements allow intellectual partnerships to develop that would otherwise not have occurred. In these partnerships, both the learner and the mentor increase their understanding and engage in a learning process.

For many years, instructors at all levels of the learning system, have invited parents, community members and experts to their classrooms and training sessions. Often the purpose has been for these volunteers to share their unique experiences with learners, or offer specific knowledge on a topic at hand. Telementoring is somewhat different from these traditional voluntary involvement’s in learning. This can be illustrated by comparing telementoring to more traditional uses of outside human resources as part of the learning process.

One way in which volunteers have been involved in learning programs is through one time question and answer, or “ask an expert” sessions. A representative of a local company, for example, may be invited to shed light on a case being discussed. The visitor might make a brief presentation and engage in a question and answer session with learners. These types of involvement are quite worthwhile. One of the limitations of such involvement, however, is that it tends to be time limited. The expert may be there for one or two hours and the session is ended. If, in the interim, learners think of new questions they would have liked to ask, then they are unable to, or may have to ask the instructor who is, in fact, not in a position to respond.

One adjustment to this process is the development, by organisations, of various online ask-the-expert services: Ask-a-geologist, ask-a-linguist, ask-an-astronomer for example. However, even these services have limitations. First, you can usually only pose questions to which there are factual answers and often these questions must be in a prestructured form to allow the computer to deal with them. This is helpful when learners require specific factual information, but less valuable when they are dealing with complex, subtle or nuanced issues in which human intent and decision-making may be involved. Secondly, the ask-the-expert service does not allow learners to develop their ideas with a knowledgeable expert overtime. Often one expert answers the question posed one day and the second question, posed on another day, is routed to another expert. The satisfaction, which a learner can obtain through entering an
intellectually stimulating relationship with an expert, is designed out of the program, as is the reciprocal relationship, which could be possible for the expert.

Another way in which knowledgeable people have been involved in the learning process has been as judges offering feedback on learner’s views, performances and work. One of the limitations of such involvement is again time. Learners usually get only one chance to perform.

Tutoring provides yet another mode of involvement of outside experts in the learning process. Tutoring does involve a brief ongoing relationship with the learner. But there are important differences between tutoring and mentoring. One is the source of the problems, which are worked on. In tutoring, an expert assigns the learner a problem or task and the learner completes it under the tutor’s supervision. The tutor evaluates the resultant performance and provides some on the spot advice. In any event, the tutor is largely in control of the learning process. There tends to be little discussion of the interest and motivation of the learner. A mentor attends to more global concerns.

The idea of mentoring dates back to the ancient Greek poet Homer, and his epic, The Odyssey. In the poem, Odysseus’s son Telemachus is given guidance by a wise old sea captain named Mentor about how to cope with the impacts of his father’s absence due to the Trojan War. Today, mentoring generally means a supportive relationship between older, or more experienced persons, and younger, or less experienced people, that serve to initiate the latter into a profession or stage of life. Grandparents, in many cultures, mentor their grandchildren. Managers mentor the people who work for and with them. Doctors mentor interns and teachers mentor student teachers.

Mentoring is different from tutoring, in that the learner, or mentee, brings the problems to the table. These can be intellectual problems, personal problems, performance problems, information problems or a combination. The mentor offers guidance, advice, information and support, but it is up to the mentee to decide to take the advice or carry out the instructions. Mentoring relationships, in a face-to-face situation, require substantial commitment of time and effort by both parties, for the purpose is to develop a sustained relationship over time.

Because of these limitations, there has been growing exploration of the Internet as a context to support and foster mentoring relationships. One of the reasons for the use of the Internet is that it reduces travel time and allows asynchronous mentoring relationships that fit the demands of both the mentor and mentee.

Mentoring online, like other forms of learning support, does not produce productive benefits simply because the connection to the learner is electronic. Care and attention to the dynamics
of the mentoring relationship and the ways that virtual communication can assist are vitally important. Kevin O’Neil and his associates, in this regard, offer the following advice for effective telementoring based upon an extensive research inquiry into the process:81

Filter Your Advice

It is important to remember that the best sounding advice, and the most well intentioned advice, is not good advice, if in the end it is ignored or cannot be implemented. Effective mentors do not just think of what they would do in a given situation, for example a problem in a case, and then render that advice as to what ought to be done. Rather, effective mentors present options and provide a process through which the mentee can examine the pros and cons of the options leaving the decision to the mentee. O’Neill suggests that, in deciding upon what advice to give and how to give it, effective mentors consider the following:

- The pedagogical point, or overall learning objectives at stake
- What mentees already know about what they are investigating
- The time available for mentees to carry out the advice
- Mentees’ motivation to listen, learn and carry out the advice
- Mentees’ access to necessary information or tools upon which the advice rests

Establishing mentoring relationships, as part of case based learning, can substantially enlarge the scope of learning. The Internet, of course, allows such mentor relationships to be established, on a global level, which is not bound by the location of the case inquiry itself. Online mentoring is also asynchronous allowing for 24-hour access to mentors and their assistance. But mentoring, as noted above, does not just happen as a result of turning on the computer. Mentors, in case based learning, need to understand clearly the learning objectives being pursued and the learning style and personal predisposition’s of the learners. With this understanding, and the experience of mentoring, mentors can also be valuable sources of advice in case design and redesign, for they will see the case and its discussion from a different perspective. For mentors, there is also valuable learning, which flows from their involvement in the process. They have the opportunity to work with, and learn about, others and play a part in their growth and development. They will also learn about themselves through the process of mentoring. Mentoring also provides an ongoing test of the competence and insight of the mentor, a valuable professional development experience itself.

81 K. O’Neil, Telementoring (Toronto: OISE, 2000)
The Cybercase

The Internet offers new venues for case based learning in at least two ways: the case itself and the communications process wrapped around the case. Consider the following uses of the Internet applied directly to the case:

- **Case on the Net**

  The first, and seemingly obvious dimension of using the Internet for case based learning, is the fact that written cases can be put on the Internet. This alone opens up access to the case to countless numbers of people, even if that access is in a passive form. In this regard, there are emerging many repositories for cases on the net and this dramatically extends the variety of cases, which can be used in case based learning. Many of these repositories are user generated in which people post and share cases, which they have developed. This is an important resource for people beginning the process of case development.

- **Transform a Case**

  Cases can be developed in a core, or skeletal framework, and learners can be invited to use the resources on the Internet to complete the case. For example, a case which describes an industry sector can be designed, highlighting key change processes and other developments, leading to the posing of questions related to the future trajectory of the industry. Learners, then, can be invited to find specific examples, from specific businesses, which relate to the case and to the themes in it and add these to the case. Depending upon the number of people involved, the range of case elaborations are sizeable. The process of elaborating a case energises the very same learning and thinking processes that discussion and analysis of a complete case engenders. The fact that the Internet is used increases substantially the range of elaborations and the range of applications of the core case. Many other examples of transforming a case through the resources offered by the Internet can of course be imagined: from filling in a core case with real data from real organisations or situations, to asking a broad and diverse sampling of people, through the communications capacity of the Internet, to compare the case to their real life experience.

- **The Running Case**

  Most cases, by virtue of the fact that they are in print form and delivered in synchronous modes, tend to be rather static; they are completed at a point in time and discussed within a specific time frame. The Internet changes this constraint. With the Internet, cases can shift from being akin to a book to being like more like a movie, that is, constantly running. The case
developer can point learners in the direction of an organisation, or group that is directly involved in exploring key issues, which are deemed to be important in a training program. The learner can then follow the organisation or group over time, and anytime, as a running case providing a stream of updates on the action and decisions as they emerge and sharing this with others. The possibilities for using the Internet as a context to encounter running cases and the various forms of information and people who can be involved in that process are limitless.

- **Shadow a Decision Maker**

  Case designers, as part of their training and capacity building initiatives, can arrange to have a core of people, such as key decision makers, agree to interact on an ongoing basis electronically with a learner. The learner can then “shadow” the decision-maker over time attempting to better understand how decisions are made and the reactions and impact of those decisions.

- **Comparative Cases**

  The Internet, given its global reach, provides an excellent vehicle through which to take an issue developed in a case and examine how it plays out in different national and cultural settings.

- **Case In Progress**

  Case developers can also use the Internet to generate a source of ideas to enhance and elaborate cases, which they are developing. Cases can be posted on the Internet and propel invited to add to the case by increasing its options, database, themes and examples. That is, cases can be created as works in progress.

- **Case Portals**

  Case portals can be developed to underpin case based learning. In such portals, a number of things can be made available: tools for case analysis, online introduction to case analysis, examples of case analysis and good cases, research and search tools, chart and discussion rooms, graphic capabilities etc. Using the Internet as a virtual case toolbox holds tremendous promise in enhancing case based learning and generating independent inquiry.

- **MUDS**

  A MUD is a multi user discussion or dialogue in which commentates of learner’s come together to learn and share best practices. These discussions are structured based upon rules that are built into databases. Participants in a MUD can play out scenarios and practice real world situations without penalty or fear of making mistakes. They can practice with other people.
Distance Education and Case Based Learning

Case based learning can be delivered using distance education. In this regard, the model of distance education selected affects the nature and process of case based learning. The Virtual Learning Center of the University of Maryland, in this regard, has developed a useful framework covering three models of distance education and the differences each exhibits in relation to a number of design variables. The following section describes this model as it applies to case based learning initiatives:

Models of Distance Education

*Model A — Distributed Classroom*

Interactive telecommunications technologies extend a classroom-based course from one location to a group of students at one or more other locations; the typical result is an extended “section” that mixes on-site and distant students. The faculty and institution control the pace and place of instruction.

**Characteristics**

- class sessions involve synchronous communication; students and faculty are required to be in a particular place at a particular time (once a week at a minimum)
- number of sites varies from two (point-to-point) to five or more (point-to-multipoint); the greater the number of sites, the greater the complexity — technically, logistically, and perceptually
- students may enrol at sites more convenient to their homes or work locations than the campus
- institutions are able to serve small numbers of students in each location
- the nature of the experience mimics that of the classroom for both the instructor and the student

**Faculty Role/Experience**

- faculty typically do not change their role significantly from the one they assume in the traditional classroom; however, the use of technology does require adaptability in the manner of presentation
faculty generally find it necessary to reduce the amount of material presented to allow additional time for relational tasks and management of the technology; increased familiarity with the technology and the environment mitigates this to some extent;
faculty usually find it necessary to increase the amount of planning time for each class; advance planning and preparation increases presenter self-confidence, reduces unnecessary stress, and enables faculty to conduct classes with ease.

On-Site Students’ Experience

- because the faculty member is physically present in the space, on-site students generally have an experience similar to that of the traditional classroom;
- may be less tolerant of technological problems and challenges than distant students, because they are unlikely to perceive a personal benefit resulting from the use of technology;
- may resent having to “share” their class with other sites.

Opportunities for Interaction

- all students have opportunity for verbal interaction during class with instructor and each other; on-site students have visual interaction with instructor and other students in class; off-site students may have opportunity for visual interaction with instructor and other students; depending upon technology used;
- on-site students can interact with instructor before and after class;
- out-of-class interaction by telephone; by computer conferencing, voice-mail, or other means if available.

Technologies Supporting Class Sessions

- two-way interactive video (compressed or full-motion)
- or –
- one-way video with two-way audio
- or –
- audioconferencing
- or –
- audiographic conferencing

Technologies Supporting Out-of-Class Communication

- telephone
- mail
- fax
- computer (for e-mail and conferencing; access to library and other on-line resources; submission of assignments)
Model B — Independent Learning

This model frees learners from having to be in a particular place at a particular time. Students are provided a variety of materials, including a course guide and detailed syllabus, and access to a faculty member who provides guidance, answers questions, and evaluates their work. Contact between the individual student and the instructor is achieved by one or a combination of the following technologies: telephone, voice-mail, computer conferencing, electronic mail, and regular mail.

Characteristics

- there are no class sessions; students study independently, following the detailed guidelines in the syllabus
- students may interact with the instructor and, in some cases, with other students
- presentation of course content is through print, computer disk, or videotape, all of which students can review at a place and time of their own choosing
- course materials are used over a period of several years, and generally are the result of a structured development process that involves instructional designers, content experts, and media specialists; not specific to a particular instructor

Faculty Role/Experience

- faculty member structures and facilitates the learning experience, but shares control of the process with the student to a great extent
- must become familiar with the content in the print and other materials prior to the beginning of the semester to develop the detailed syllabus and, if appropriate, plan for effective use of the interactive technologies such as computer conferencing and voice-mail
- tutors students one-on-one; faculty member is more available to facilitate individual student’s learning because of freedom from preparing and delivering content for weekly (or more frequent) class sessions

On-Site Students’ Experience

- students to not attend class, which gives them ultimate flexibility in structuring their time; they are responsible for organising their work and time to meet course requirements and deadlines
- students must be highly motivated; they need good organisational and time management skills, the ability to communicate in writing, initiative, and a commitment to high standards of achievement

Opportunities for Interaction

- instructors provide information in the syllabus about how and when students can
contact them; there is typically wide variation in the amount of student-initiated communication with the instructor
- instructors provide detailed comments on students’ written assignments
- when voice-mail and/or computer conferencing is available, instructors provide a structure for interactive discussions by posing topics or providing some other stimulus for discussion

**Technologies Supporting Class Sessions**
- none, since there are no class sessions

**Technologies Supporting Out-of-Class Communication**
- mail
- telephone
- voice-mail
- computer (for access to library and other on-line resources, e-mail, conferencing, and the submission of assignments)

**Model C — Open Learning + Class**
This model involves the use of a printed course guide and other media (such as videotape or computer disk) to allow the individual student to study at his or her own pace, combined with occasional use of interactive telecommunications technologies for group meetings among all enrolled students.

**Characteristics**
- presentation of course content is through print, computer disk, or videotape, all of which students can review at a place and time of their own choosing, either individually or in groups
- course materials (for content presentation) are used for more than one semester; often specific to the particular instructor (e.g., a videotape of the instructor’s lectures)
- students come together periodically in groups in specified locations for instructor-led class sessions through interactive technologies (following the distributed classroom model)
- class sessions are for students to discuss and clarify concepts and engage in problem-solving activities, group work, laboratory experiences, simulations, and other applied learning exercises.

**Faculty Role/Experience**
- faculty member structures and facilitates the learning experience, but shares control of the process with the student to some extent.
role change encourages faculty to focus on the instructional process and to take advantage of the available media
must become familiar with the content in the print and other materials and plan for effective use of the interactive sessions, which draw upon these resources
identifies additional resources to support student learning
tutors students one-on-one; faculty member is more available to facilitate individual student’s learning because of freedom from preparing and delivering content for weekly (or more frequent) class sessions.

On-Site Students’ Experience
with fewer class sessions, all students (on-site and distant) gain flexibility
the periodic classes help students to structure their work, but the format requires greater discipline and maturity on the part of students than one with weekly (or more frequent) class sessions
interactive focus of group sessions can serve to diminish perceived disadvantages of students who are not in the same location as the instructor

Opportunities for Interaction
all class sessions are designed for interaction with instructor and other students; they are frequently problem-solving sessions, because the time does not have to be devoted to lecture or other means of presenting content
individual interaction between students and faculty member on an as-needed basis by telephone, mail, e-mail, or voice-mail

Technologies Supporting Class Sessions
two-way interactive video (compressed or full-motion)
– or –
one-way video with two-way audio
– or –
audioconferencing
– or –
audiographic conferencing

Technologies Supporting Out-of-Class Communication
telephone
computer (for access to library and other on-line resources, e-mail, conferencing, and for submission of assignments)
mail
Systems Design for Online Learning

Distance education and online learning function very much as learning systems. They link learners, through various communication networks, to content, instructors and peers across time and space. The design of online and distance learning programs, including applications to case based learning, is also facilitated through the adoption of a systems approach. Drawing again on the work of the UMUC-Bell Atlantic Virtual Centre for Teaching with Technology, the following section provides a design template, or framework, to guide the development of case based learning online:

Using a systems approach that includes learning objectives to design online learning activities can save you time and make the learning more effective for learners. Learning objectives are specific statements of what kinds of learning you want learners to experience. By stating the learning objectives and then choosing an appropriate technology, you can use the resources of the Web to enhance learning.

The systems approach described here provides seven steps to follow. Steps 1–4 explain how to think about your course and clearly articulate the learning outcomes you want it to achieve. Steps 5–7, to be used in conjunction with examples of Web-enabled class activities and media, suggest how you might adapt a variety of technologies in different learning activities.

These seven steps provide a roadmap for case based learning using a distance education mode. They offer designers an opportunity to think through their learning program for case learning from start to finish while also learning by example how to successfully integrate technology into the process.

<table>
<thead>
<tr>
<th>Steps 1–4: What do you want learners to learn?</th>
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<tbody>
<tr>
<td><strong>Step 1: Specifying the Course Learning Goals</strong></td>
</tr>
<tr>
<td>• Select the subject matter for the case.</td>
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<tr>
<td>• Translate the case content into learning objectives.</td>
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<tr>
<td>• Select the activities and experiences learners need to achieve the objectives.</td>
</tr>
<tr>
<td>• Prepare learning objectives for all learning domains: cognitive, affective, or motor.</td>
</tr>
<tr>
<td>• List what learners should know and be able to do when they complete the case based learning experience.</td>
</tr>
<tr>
<td>• Sequence the learning goals by cognitive or intellectual levels, if appropriate.</td>
</tr>
<tr>
<td>• Determine the time needed for each learning task.</td>
</tr>
</tbody>
</table>
Step 2: Relating Learning Task Performance Objectives to the Course Learning Goals

- Select the subject matter for each learning task.
- Translate all content for each task into learning objectives.
- Select the activities and experiences learners need to achieve the objectives.
- Determine the learning domain: cognitive, affective, or motor.
- If cognitive, determine the intellectual level of critical thinking: comprehension, application, or critical thinking.
- Sequence all objectives by cognitive or intellectual level.
- Determine the time needed for each learning task.

Step 3: Designing Valid Assessment Procedures

- Design a dynamic assessment framework for the case based learning program.
- Design self-assessment tools so that learners can determine their own level of mastery.
- Use a variety of assessment techniques: tests, quizzes, observation forms, oral questions, peer testing, demonstrations, small group presentations, product analyses, summaries, review questions, integrating questions.
- Match each assessment procedure to the same cognitive level of the learning objective that it is intended to measure.
- Test, if required in the program, at the cognitive level embedded in the case learning program.
- Explain your grading criteria for the assessment.

Step 4: Providing Feedback for Those Who Need to Know

- After activities and exercises, let learners know how they did as soon as possible.
- Use nongraded self-assessments whenever possible to give students immediate feedback.
- Use peer-teaching, review, and critiquing for feedback.
- Develop your own system to critique your course: Provide formative feedback while the course is in progress and summary feedback when the course is completed.
- Tell learners what skills are needed to solve a particular problem or perform a particular assignment successfully.
- Discuss problem-solving techniques for assignments and new activities.
Steps 5–7: How will technology help achieve the learning outcomes you desire?

Step 5: Selecting Appropriate Teaching Strategies
- Review all appropriate instructional strategies.
- Base chosen strategies on learning objectives and appropriate cognitive and intellectual levels.
- Where possible, link all learning objectives to prior learning and experiences.
- Construct handouts and brief lecture material to help learners contextualize readings and activities. Use checklists where possible.
- Maximize learner involvement through collaborative as well as individual activities.
- Develop questions in advance and match them to the cognitive level of learning objectives for which they are intended to provide practice.
- Ask learners to develop questions for discussion.
- When you use small group projects, consider peer-review criteria for each learner's contribution to the group in addition to a group grade alone.
- Change your teaching strategies from task to task to keep students interested in the interactions.

Step 6: Constructing and/or Selecting Learner Involvement Activities
- Create or select exercises and activities that enable the learner’s practice for specific learning performance objectives.
- Guide practice for each new skill through exercises, personal comments, and peer reviewing.
- Respect the diversity of talents and learning styles of the learners
- Stress co-operation, mutual respect, and mutual support.
- When you use a small group activity, explain why it is used, why it is important, how to work in small groups, and the variety of roles that learners play in the group.

Step 7: Selecting the Appropriate Media for the Learning Activity
- Select the learning objectives and the teaching/learning strategies for your activity.
- Determine the sequence of activities or experiences you wish your students to have or prepare your materials so that learners can choose their own sequence.
- Review the available media to match your teaching strategy and the desired activities.
• Identify the media attributes needed by the instructional objectives or learning activities.
• Identify the learner characteristics that suggest or preclude certain media.
• Identify characteristics of the learning environment that suggest or preclude certain media.
• Select appropriate media for presenting lessons and lectures and for students to participate in the learning activity or experience.
• To determine what technologies might work for your class, decide what kinds of interaction and activity you have in mind for the class to achieve your learning objectives. The following questions should be considered:
  • Is synchronous interaction between instructor and learner required to achieve the task?
  • Is asynchronous interaction between instructor and learner required to achieve the task?
  • Does the instructor need to observe the learner performing an action?
  • Is the course based primarily on print-based materials?
  • Does the material change frequently?
  • Is special equipment or material required to teach the task?
  • Can the task be learned in a way other than direct performance of it?
  • Do learners need extensive interaction with one another?
  • Do learners need to collaborate with one another to produce something to perform the task?
Web Site Design
for Case Based Learning

One of the mistakes in utilising the web, as a context for learning is to assume that loads of content, piled on a web page, satisfies as a learning process. However, as in all aspects of effective learning, planning and design are essential in web-based applications. In this regard, this Handbook offers some tips on the design of web sites, as contexts for case based learning. It is impossible to provide thorough coverage, particularly of the technical aspects of web page design. The purpose of this section is to introduce the reader to some of the key design elements in using the web as a context for case based learning.

Content Inventory

The starting point in designing a web application for case based learning is to first address the organisation of the content that you wish to have accessible on the page. A content item is the most definable category of information that needs to be accessible individually on the page. For example, corporate earnings is not a content category, but the earnings of Exxon Corporation is one. The chart opposite provides a simple framework for the initial listing of types of content to be included on the web page and an initial prioritisation of this content. After reviewing your initial content list, you may want to remove items that, when seen against other items, are of less importance.

Site Architecture

The basis of a site architecture is an organisational scheme—a way of creating groups of content by identifying common characteristics. Organisational schemes are used in everyday life. We visit libraries where books are organised by themes; shopping malls organise stores by types of goods etc. In the context of the web, the main difference between types of organisational schemes is the activities that they support. Browsing for example is a generalised way of looking for information by themes. Searching, on the other hand, is guided by more specific criteria. In browsing, learners are presented with broad themes and they work their way through the material often discovering information along the way.

Classify Content

The first step in creating site architecture is to classify content according to a system that reflects the content itself and the learning processes to be used. In developing categories for the classification of the content, the classification should have a schematic consistency. A
well-designed site allows learners to construct a mental model of the site content and effectively locate information within it. A site’s content can be organised in a variety of ways: by topic, theme, task, points in a sequential process, function, holistically etc.

Labelling is important in the content classification. It is advisable to use labels, which contain a few words at most, and words that will be recognisable to the users. Avoid empty labels such stuff, things ideas etc. Various techniques can be used to classify content.
Site Structure

The site structure is the mental model, which will guide the learner through the site itself. What there is to find and how to find and use it. A good structure allows learners to move through the site and retain a sense of context as they do so: a sense of where they have been on the site and where they are going and why.

There are two general types of site structure that can be used although hybrids are also possible. The first is linear in which content is organised by a time sequence. The second is hierarchical in which content is grouped by main and sub categories. Hierarchies of content on a site have the advantage in that they force designers to think analytically about the content. One of things to avoid, particularly in hierarchically arranged site architectures, is hav-
ing too many levels of content that must be passed through to access the information the learners are seeking. This creates the same frustration that one has often when being forced by a telephone answering service to answer multiple questions and make multiple choices before one can actually speak to a customer service representative.

Once you have determined the site architecture to be used, the next step is to map out that architecture. The diagram opposite provides a schematic to illustrate this process. The final step is to link your content architecture to navigation systems that will be used. In this regard be sparing and clear about the types of navigation links to be used. Site links are the links that appear on each page and allow a learner to access other areas on the site without having to return to the home pages. These are useful devices in site architecture. Page links are also important because they direct users to the information displayed on a specific page. An overall site guide is also important in that it explains to users the architecture of the site, what is there and how to access it. Search functions are also important, but only if the amount of content justifies it. Of particular importance is to have a beginning index or contents page. The diagram opposite shows a sample site map with navigation.
Multi-Functional Organisational Scheme
The Library of Congress

Writing Style

One of the tasks of writing for the web is to use a style, which is congruent with the reader. Horton suggest the following guidelines for effective web writing.82

- Summarize first: Put the main points of your document in the first paragraph so readers who are scanning can grasp your key point immediately
- Be concise: Use lists rather than paragraphs and be parsimonious with words
- Write for scanning: Most web readers scan, they do not read in depth initially. Guide the scanner by highlighting key points in the text.

● Chunk Information: Web readers do not usually read pages in sequence. They skip and look for chunks of information. Your wiring style should accommodate this pattern.

● Limit page length: Do not feel that you must use the entire page in developing content. White spaces are important and give the reader a clearer sense of order in the content than a page, which is fully utilized.

**Design Mock Ups**

The final step in the design of your web page is to incorporate the content and links into a visual design mock up— a model of what your site will look like when on the web.

**“Test Drive” the Web Page**

Prior to finalizing the web page and placing it firmly on the web, it is critical to test-drive it. In this regard, it is useful to use a simulated case and a set of focus groups or individuals who represent the target learners who will be using the site. This test drive inevitably leads to the need to at least tweak the site or in some cases may reveal a major oversight or point of confusion in the design.

**Observe, Listen and Learn**

One of things we know about the web, given its emergent qualities, is that people adopt an experimental, searching and playful posture when using it. This orientation will most certainly apply to the attitudes they bring to a web application in cased-based learning. Knowing this one can adopt one of two attitudes as a case designer or instructor: focus learners in order that they proceed through the case in accordance with the design or allow learners to experiment with the design and adapt and extend it. Traditional classroom instruction tends to follow the first of these options. However, in this Handbook it is recommended that the second option be considered and in that process learners should be seen as potential “redesigners” of the initial case based web design. This is a process somewhat similar to what in business is called customer-led innovation. Learners in a web environment are a source of imaginative ideas for enlarging and reconfiguring the initial design and the designer and instructor should pay close attention to their innovations in learning practice.
Toward Adaptive Learning Systems

The process of capacity building, as much of this Handbook suggests, involves multi-level learning spanning individuals, groups, organizations and systems. Its primary motivating force is to link knowledge and skills to action for improvement. It is stimulated by and a stimulator of change. Capacity building can also increasingly involve multi-channel learning providing different ways in which learners can access knowledge and skills and different ways in which these can be converted into actionable improvement. In this regard, it is possible to see capacity building as involving the design of learning systems that link people to knowledge and ways of knowing across time and space. Capacity building, as other dimensions of human endeavor today, is on the cusp of a transformation in its key design elements and principles. It is to this transformation that we now turn.

Central to capacity building, from an actionable learning perceptive, is the design of learning systems. Learning systems are networks that link people to knowledge and ways of knowing across time and space. Unlike institutional models of learning in which the key dynamic involves transactions between the institution and clients, in learning systems the key dynamic is interactions among the component parts of the system. From a design perspective, there are at least four key attributes of learning systems that serve as specification variables: people, content, time and space. The ways in which these variables are configured affects the nature and functions of the learning system.

The design template opposite utilizes the four variables of people, time, content and space as a basis from which to generate four alternative learning systems models. Each model exemplifies a stage in the development of learning systems and, reflects, an equal stage in the development of capacity building as a learning system. In quadrant one the learning system promotes fixed learning. The variability possible in time, space, content and people is limited and constrained.

Fixed learning systems involve the same people, learning the same content, at the same place and the same time. This is, of course, the classic model of learning within most formal educational systems and, until recently, has also been the dominant mode of delivering training through capacity building. In formal education, a homogeneous group of students go to a fixed place, a school or university, at a fixed time and while there they experience a common curriculum. In traditional modes of capacity building, a homogeneous group of people who work in a given organization or sector, gather at a fixed place at a fixed time, a venue for a workshop, and while there, they receive training in a common set of skills or receive a common body of knowledge.
In the fixed learning model, standardization is often seen as a guarantor of quality and relevance. The cost drivers of this model of learning are essentially the following: number of learners, number of instructors, infrastructure/rental costs, materials costs, travel costs and opportunity costs. The fixed learning expands learning opportunity on a unit cost basis with there usually being minimum and maximum thresholds.

The sequential learning model involves different people receiving the same content at the same place and at different times. This is a modification of fixed learning in that different people are accommodated through different times. The typical semester structure in academic programs is an example of sequential learning. Modular based training curriculum in which there are different group intakes at different times also exemplify sequential learning.

Distributed learning alters the spatial and content constraints of the earlier models. In distributed learning the same people access different content at different places simultaneously. Modified distributed learning involves the same people accessing the same content at the same time but at different places. The use of technologies such as video and teleconferencing
are exemplars of distributed learning systems. So too, in distance learning with fixed tutorial sessions the model is distributed. Distributed learning models allow customization of content and adaptation to spatial location.

Learning systems, today, are evolving toward what can be described as adaptive learning systems. In adaptive learning systems the constraints of people, time, space and content are removed or lessened substantially. Hence different people can access different content at different times and places. The embedding of modern computer and Internet technologies allows this to occur. In adaptive learning models the cost structure is completely different from that of the fixed learning model. Initial capital investment in the access tools and electronic highway may be needed, as well as, curriculum development, but the marginal costs of expanding access are substantially less. The cost advantages of a learning network are predominant in the adaptive learning systems model.

Capacity building activities can be accomplished through any one of the four models. However the design elements of each model, particularly how they are configured differ substantially. In this regard, for the designers of capacity building learning systems the critical question concerns the attributes of the learning system that are to be part of the design and why these attributes are selected. Selecting these attributes is a function of the challenges or outcomes, sought in the capacity building program and the linkages between that system and other systems. Developing the attributes, or specification of the capacity building learning system, involves answering the following questions as a central element in the design process:

- What are the purposes of the learning system?
- What are the functions to be performed by the learning system?
- What are the parts of the learning system and how are they to be aligned?
- What key processes will link the parts of the learning system?
- What are the cost drivers of the learning system?
- What are the links between the learning system and other systems?
- How will the performance of the learning system be monitored?
- How will the learning system learn?

Answers to these questions provide the specifications for the learning system: its architecture in other words. The answers must create synergies between the key questions. If for example one were to say that one of the purposes of the capacity building learning systems is to increase flexibility in access to content, and yet one intends to pursue this goal through a fixed learning system model, then the synergies would not be present and the learning systems model would not be able to meet the specifications. Far too often in capacity building goals are set for the learning system which are not in fact a central part of the resultant learning
systems design. If one wants flexibility in access to content, in other words, then one has to design for this. It does not happen by accident. In fact, learning systems models can actually function as blocks to the achievement of capacity building purposes.

As mentioned earlier the type of learning system model designed depends upon the purposes and functions of the system and how it will fit with other systems. To a degree this depends upon what challenges ones sees in the larger systems to which the learning system will be linked: the economic system, the organizational system of work, the social system, the technological system, etc.

It is not possible in this Handbook to provide a detailed overview of the development of learning systems design to fit all possible perceptions of the external world. However, as a personal note the author outlines below a capacity building learning system to fit the challenges and demands of the emerging digital and knowledge age. In brief these challenges are the challenges of increasing complexity, interdependency, and ambiguity within a globalizing world in which the development and sharing of knowledge is becoming increasingly important. Capacity building must develop the knowledge and skill base for people and organiza-
tions to understand and cope with this world and to do so in a way in which the time frames of response are increasingly shortened and the framework for anticipating change are expanded. What learning system design would best underpin capacity building in such an environment?

Outlined in the chart is a set of specifications for such a learning system. As one can see the adaptive learning system model described earlier comes closest to the design principles enunciated.

The key difference between the adaptive learning systems model and other learning models is rooted in the capacity of the former to sense and respond to the environment in an ongoing adaptive manner. Adaptive learning systems have built within them mechanisms that encourage and allow the learning system to change in response to a changing environment. They are open learning systems. The meta effect on learners who participate in such adaptive learning systems is that they acquire, as an integral part of the learning process, the same sense and respond capabilities as are built into the learning system itself. In other words, the learning system teaches. The chart below provides one brief glimpse of what such a fully designed adaptive learning system might look like.

Adaptive Learning System
The Virtual Case Community

The Internet provides the opportunity for asynchronous, as well as synchronous, communication, with a reach and range that is global. The Internet also offers the potential for geographically disconnected people to become connected in a virtual community of shared interests. If one puts alongside these capabilities the fact that a major component of the case based learning process is communication, then the potential to extend, deepen, and enrich one of the core processes of case based learning is before us. Virtual cases, cases nested within the Internet, can potentially involve five types of people: individual learners, individual instructors, groups of learners, groups of instructors, and outsiders. When placed in a matrix, at least twenty-five different patterns of interaction are possible. Add to this the fact that the interaction can be either synchronous or asynchronous, and the patterns of interaction leap to fifty. Contrast this situation to the typical classroom based case delivery method, which allows for substantially less types of interaction, and the communicative potential and collaborative learning possible through Internet nested cases becomes obvious.

The Internet is in its early stages of development. With newer technologies, that allow for even greater interaction and multi-media representation, the potential of the Internet for online case based learning is vast. The Internet, moreover, can actually be seen as a virtual repository of living cases on all facets of human existence. Capturing these experiences and providing learners with frameworks through which to collaboratively engage in analysis, decision making, discussion and dialogue, on a global basis, is the next step in the ongoing development of case based learning.

Part 12

Dynamic Assessment in Case Based Learning

All learning processes entail assessment in some form. Individuals assess their own understanding and performance when learning. They also seek out the views and feedback of others. In other instances, assessment is required by an organisation, in order to determine the level of knowledge, competency and skill of an individual or group. Using case based learning in capacity building, also requires an assessment process, since the purpose of capacity building is to develop new competencies and there is a need to know if these capabilities have taken hold. In this regard, the critical issue is the approach to evaluation that is taken. Unlike classroom-based learning in formal educational settings, such as schools, where certification and grading dominate, in capacity building settings, typically, one is dealing with adults who may obtain some certification or another, but are predominantly driven by the need, or requirement, to know. In these settings, assessment is important, both for the person and the organisation from which they come, but the focus and type of assessment is different from the type which occurs in typical instructional settings.

Evaluation that is designed to teach and improve, not just measure, is the essence of what has been termed authentic assessment. In this regard, two elements are fundamental: authentic tasks and performer-friendly feedback. Assessment needs to be anchored in authentic tasks,
because these supply valid direction, intellectual coherence and motivation for skill development. These tasks are rarely mastered first time out and usually require effective self-assessment and self-adjustment. Assessment is authentic when it is anchored, as much as possible, in the real work that people do in their lives. Conventional testing, through formal written questions, for the most part, does not replicate the kind of work people encounter in the workplace, in civic affairs or in their personal lives. This form of assessment is actually suitable only in the formal learning contexts of academic classrooms. Moreover, such formal tests tend to provide only indirect ways of assessing performance.

The assumption in the “testing” approach is that, once a person demonstrates mastery of knowledge and skills in a formal testing situation, then transfer of these skills, to other contexts, is smooth, if not automatic. Research, as well as common sense experience, however, demonstrates that “knowing about” something, and being able to recall that knowledge from memory for replication in a testing situation, is not the same as being able to use and deploy that knowledge in settings which, by their very nature, call for negotiation and “tweaking” of knowledge. “Know-how” is not the same as “knowing about”, for the former is accomplished with and through people and influenced by all of the perceptions, biases and structures which permeate the context of their activities. Assessment in case based learning for capacity building purposes, therefore, must strive to develop and utilize techniques and frameworks that take transfer and context seriously. This is what is meant by authentic approaches to assessment.

Grant Wiggins has proposed the following as standards for authentic assessment:84

An assessment task, problem or project is authentic if it:

- Is Realistic: The task or tasks replicate the ways in which a person’s knowledge and abilities are “tested” in the real world.

- Requires Judgement and Innovation: The learner has to use knowledge and skills wisely and effectively to solve unstructured problems, such as when a plan must be designed and the solution involves more than merely following a series of pre-set rules.

- Asks the learner to “do the subject”. Instead of reciting, restating or replicating through demonstration what he/she was taught or what is already known, the learner has to carry out exploration.

- Replicates or simulates the contexts in which people are “tested” in work, civic life and in personal life.

Assesses the learner’s ability to efficiently and effectively use a repertoire of knowledge and skill to negotiate a complex task. The assessment is task focussed.

Allows appropriate opportunities to rehearse, practice, consult resources and get feedback and refine performance. It is not a one time snapshot of capability at that time.

The difference between typical tests, and authentic tasks, are described in the following chart.

<table>
<thead>
<tr>
<th>TYPICAL TESTS</th>
<th>AUTHENTIC TASKS</th>
<th>AUTHENTICITY INDICATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Require correct responses only</td>
<td>Require quality product and/or performance and justification</td>
<td>Assess whether learner can explain, apply, self-adjust or justify answers not just correctness of answers</td>
</tr>
<tr>
<td>Must be unknown in advance to ensure validity</td>
<td>Are known in advance and involve excelling at predictable and demanding core tasks</td>
<td>Tasks and standards are clear and public</td>
</tr>
<tr>
<td>Are disconnected from realistic context and realistic constraints</td>
<td>Require real-world use of knowledge</td>
<td>The task is a challenge and a set of constraints that are authentic; that is, likely to be encountered in the real world</td>
</tr>
<tr>
<td>Contain isolated items requiring use or recognition of known answers or skills</td>
<td>Are integrated challenges in which knowledge and judgement must be innovatively used</td>
<td>The task is multi-faceted and non-routine even if there is a right answer</td>
</tr>
<tr>
<td>Are one shot</td>
<td>Are iterative, containing recurring essential tasks</td>
<td>Seek to assess deep mastery over time</td>
</tr>
</tbody>
</table>

Feedback

Designing authentic tasks, and cases with authenticity, is one of the key elements of educative assessment in case based learning. Another feature of assessment in case based learning is to build in frequent feedback opportunities and to use that feedback to enhance performance. Ongoing discussion of a case is, in many ways, a process of giving and receiving feedback. In this regard, feedback performs a signaling function, giving direction to the flow of interaction and providing the energy for both positive and negative motivation. While feedback processes are frequently assumed to be a part of case discussion and learning, they often form the substantive channel for what is actually learned from the experience. For this reason alone, feedback must be approached reflectively and with due regard to the impact it can have on the entire learning process.
# The Nature of Feedback

<table>
<thead>
<tr>
<th>Effective Feedback</th>
<th>Ineffective Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides confirming (or disconfirming) useful evidence of effect relative to intent, for example, a map and road signs; compares work to anchor papers and rubrics.</td>
<td>Provides non-specific advice, praise/blame, or exhortations, for example, “Try harder,” “Your writing is awful,” or “Good job!”; a mere score on the paper.</td>
</tr>
<tr>
<td>Compares current performance and trend to successful result (standard), for example, the taste and appearance of the food, not the recipe, guarantee the meal will come out as described; student work is compared against exemplars and criteria.</td>
<td>Naively assumes that process (instructions, hard work, and advice) is sufficient to reach goal, for example, planting seeds and diligently watering according to package directions does not ensure a successful garden; students given only directions on how to complete assignment, not guidance on specific standards of final products.</td>
</tr>
<tr>
<td>Timely: immediate or performer-friendly in its immediacy, such as feedback from audience and conductor during a recital.</td>
<td>Not timely: too long a delay in usability, or too late to use; feedback on a standardised test provided weeks later, in the summer.</td>
</tr>
<tr>
<td>Frequent and ongoing.</td>
<td>Infrequent, given once.</td>
</tr>
<tr>
<td>Descriptive language predominates in assessing aspects of performance, for example, you made a left turn onto Main St. instead of a right turn; rubrics describe qualities of performance using concrete indicators and traits unique to each level.</td>
<td>Evaluative or comparative language predominates in assessing performance, for example, you made many correct turns and one incorrect turn, or your navigating is greatly improved and better than that of most of your peers; rubrics basically amount to “excellent;” “good,” “fair,” and “poor,” with no insight into the characteristics that lead to such value judgements.</td>
</tr>
<tr>
<td>Performer perceives a specific, tangible effect, later symbolized by a score that the performer sees is an apt reflection of the effect, such as the score given by a band judge in competition, based on specific criteria; the grade or score confirms what was apparent to the performer about the quality of the performance after it happened.</td>
<td>No tangible effect or useful result is visible to the performer other than a score, such as a grade at the top of a paper handed back; the evaluation process remains mysterious or arbitrary to the performer, no matter how valid and reliable the test and score are to the expert.</td>
</tr>
<tr>
<td>The result sought is derived from a simplistic goal statement, for example, the feedback to first grade readers relates only to checklists: the reading rubric is limited to age-grade skills; there is too much feedback in terms of learning to read, not enough in terms of reading to learn.</td>
<td>The result sought is derived from true models (exemplars), for example, a first grade evaluation of reading is linked to the capacities of a successful adult reader: the reading rubric is longitudinal and anchored by expert reading behaviours; feedback is given in terms of the goal, such as the specific accomplishments of those who effectively read to learn.</td>
</tr>
<tr>
<td>Enables performers to improve through self-assessment and self-adjustment.</td>
<td>Keeps the performers constantly dependent on the judge to know how they did.</td>
</tr>
</tbody>
</table>
Feedback is information about how a person did, in light of what he/she attempted: that is, it captures intent versus effect, or ideal versus actual performance. What is at issue in feedback is not the value of the performance, but its relation to the intent of the performance. The best feedback is highly specific, directly revealing or highly descriptive of what actually resulted, clear to the performer and offered in relation to specific goals and targets. Feedback is not praise, nor is it blame. Moreover, in healthy assessment, feedback is timely, continual and user friendly. In a case discussion, for example, when a person makes a comment that indicates he is developing a better grasp an aspect of the case, feedback would be “now you are beginning to grasp the point, where can you take it from here?”

The chart opposite provides a brief set of descriptors which can serve as a practice guide as to what feedback is and what it is not. Feedback is also authentic because it is deployed in the context of a real discussion or set of performances.

**Assessing Understanding**

A central goal of case based learning is to stimulate genuine understanding, rather than produce rote behavior, or test-based capacities to answer questions. What do we mean by assessing for understanding in case based learning? If we understand an idea, we grasp its significance, and its connections with other important ideas. In other words we “know its meaning”. When we understand something, we are also able to adapt that knowledge to novel situations, because we comprehend causal connections and patterns. Howard Gardner defines understanding as “a sufficient grasp of concepts, principles, or skills so that one can acquire new skills or knowledge.”

Understanding is multidimensional and exhibits various shades of meaning. Grant Wiggins offers a concept of understanding based upon five dimensions, each of which need to be integrated in assessment regimes in case based learning:

- **Sophisticated Explanation and Interpretation**
  The ability to develop, communicate and support accurate and coherent theories and stories of what one has learned or encountered is a central component in understanding. This aspect of understanding involves clarity and insight about:
  - how things work
  - what they mean

---

❑ where they connect
❑ why they matter
The deeper the understanding the more facts and layers of story and theory are made coherent and insightful.

❑ **Contextual Performance Know-How and Sensitivity or Savvy**
This dimension refers to understanding how to use and apply knowledge effectively in diverse and unique situations. To show that we understand something, we demonstrate our ability to:
❑ use it
❑ adapt it
❑ customize it
Moreover, we understand within this dimension when we can use it, adapt it or customize it in different contexts with different incentives, structures and constraints.

❑ **Perspective**
This dimension of understanding is obtained through critical thinking and the exploration of different points of view. To understand in this dimension is to see things from multiple perspectives including from the perspective of what is tacit or assumed in a situation or point of view. Understanding emerges when we:
❑ Take the role of the other
❑ Make the tacit explicit
❑ Expose questionable or unexamined assumptions
❑ Cast old experience in a new light
Perspective helps us grasp the significance of what we know.

❑ **Empathy**
This is the capacity to get inside the other person’s feelings and worldview and to experience the world as the other person experiences it. Empathy is not sympathy. It is a disciplined form of walking in another person’s shoes.

❑ **Self-Knowledge**
This is the ability to know our own intellectual prejudices and ways of knowing and to grasp how they influence and determine what and how we understand. Through self-knowledge we also come to understand what it is that we do not understand.

One of the underlying principles in the five dimensions of understanding is that they require rethinking, reflecting upon, reconsidering and often changing the meaning of what we have learned and come to count as knowledge. An education for understanding involves constantly
returning to our accumulated stores of knowledge to test that knowledge in the light of new knowledge and new learning experiences.

How can one attain evidence of understanding? How can we distinguish between surface and deep levels of understanding? What learner behaviour is most indicative of understanding? The following framework provides criteria against which to approach these assessment issues.

Here are some characteristics of a learner who really understands:

1. **Meaningful**
   **Demonstrates sophisticated explanatory and interpretative power and insight by:**
   - Providing complex, insightful and credible theories, stories, analogies, metaphors or models to explain or illuminate an event, fact, text, or idea
   - Making fine and subtle distinctions and qualifying opinions; seeing and arguing for what is central—the big ideas and pivotal moments.
   - Avoiding or overcoming common misunderstandings and superficial or simplistic views
   - Effectively and sensitively interpreting texts, language and situations; reading between the lines and offering plausible accounts of purposes and meanings in text and discussions
   - Substantiating or justifying views on the basis of sound evidence and argument

2. **Effective**
   **Demonstrates that he/she can apply knowledge in context and has know-how by:**
   - Employing knowledge in diverse, realistic and “noisy” contexts
   - Being sensitive and responsive to feedback and self-adjusting as one performs
   - Extending or applying what one knows in novel and effective ways

3. **In Perspective**
   **Demonstrates the ability to take perspectives by:**
   - Critiquing and justifying something as a point of view
   - Knowing the history of an idea
   - Knowing the assumptions upon which the idea is based
   - Knowing the power as well as the limits of the idea
   - Seeing through argument or language that is merely persuasive, partisan or ideological
   - Seeing the worth of an idea
4. Empathic

**Demonstrates empathy by:**
- Projecting oneself into feeling and appreciating another’s situation, feeling or point of view
- Operating on the assumption that even a seemingly odd or obscure comment or text may contain meaning
- Recognizing when incomplete views may be plausible or lead to insight
- Seeing or understanding how an idea or theory can be misconstrued by others
- Listening actively to what people have to say

5. Reflective

**Reveals self-knowledge by:**
- Recognizing his own prejudices and style of thinking and how they color his own understanding and the understanding of others of that understanding
- Questioning his own convictions, separating strong belief from warranted knowledge
- Accurately self assessing
- Defending views without defensiveness

These suggested avenues for assessing understanding do not exhibit perfect coherence. They often conflict or exist in a frictional state. One can have a powerful theory, and yet lack application ability. One can have great empathy for others, but lack the capability to step back and analyze the situation in order to help another person.

No one facet of understanding is greater in importance than others. No single element is prior. The facets are in fact the styles of understanding people adopt. The goal is to broaden through case based learning the range of styles that a person can use in the quest for ever broadening understanding.

Using the five facets of understanding, the following framework is offered as a guide for the design of authentic assessment in case based learning:

- **Design interactive assessments**
  Providing answers or products, even in response to demanding questions and problems, does not necessarily provide indications of understanding or a basis for further enrichment of understanding. We also want to know why learners have done what they have done. We need to see and hear them or see them justify their answers. For advanced postgraduate students, it should not be surprising that they are required not only to write a dissertation, but also to defend it orally. Hence the term “oral” to describe the last step in the process. Assessment tasks, in case based learning, should be designed in such a way that defense and argument form an integral part of the activity. Thus, not only
should learners write a case analysis, they should be called upon to explain and defend that analysis in the context of questions and counter argument.

❑ **Use reiterative core performance tasks**
In order to assess increasing sophistication in the development of understanding, it is useful to employ recurring tasks, which gauge the growth of understanding over time. In this regard, it is important in case based learning that the core ideas and skills be identified at the outset and that these be regularly assessed throughout the activities.

❑ **Assess for misunderstanding**
The opposite side of the understanding coin is, of course, misunderstanding. In order to assess for this feature, distracters should be developed as part of case questions or embedded directly in cases and the exercise that is wrapped around them. The point is to see whether the learner can recognize and overcome these misconceptions.

❑ **Use assessment tasks that regularly ask whether or not the learner sees the big picture**
One of the challenges in case based learning is to determine whether learners see the connections between events in a case or between cases, which are reflective of particular ideas and themes. One approach to this is called the one-minute paper. At the end of a case discussion ask learners to answer two questions: What is the big point you learned in the session today? What is the main unanswered question that you have as you leave today? Another variant is to have learners summarize orally or in writing the conversation that occurred in the case discussion.

❑ **Use rubrics that measure degree of sufficiency and power of answers, not simply their correctness**
The point of authentic assessment is that one is looking to chart growth in understanding over time. In this regard, when constructing assessment rubrics use process dimensions such as explaining, exemplifying, applying, justifying, comparing, contrasting, contextualizing and generalizing.

**Assessment Rubrics**

One of the basic tools in performance assessment is the rubric. It tells potential performers and judges just what elements of performance matter most and how the work to be judged will be distinguished in terms of relative quality.
The word rubric derives from ruber, the Latin word for red. In medieval times a rubric was a set of instructions, or a commentary attached to a law or liturgical service and typically it was written in red. Rubric came to mean something that authoritatively instructs a person. In the world of assessment a rubric is a set of scoring guidelines for evaluating a learner’s work.

Rubrics provide answers to the following questions:
- By what criteria should performance be judged?
- Where should we look and what should we look for in judging success?
- What does the range in the quality of performance look like?
- How should the different levels of quality be described and distinguished from one another?

Usually, a rubric contains a scale of possible points to be assigned in scoring, on a continuum of quality. A rubric provides descriptors for each level of performance. Sometimes, indicators are used for each rubric to give even more precision to the assessment. The criteria contained within rubric descriptions provide the conditions to be met to be successful, or for meeting the task requirements.

The best rubrics depend upon a clear and uncontroversial definition of exemplary performance and we work down the scale from there. The best rubrics are those that:
- Are sufficiently generic to relate to general goals beyond an individual performance task
- Discriminate among performances, validity by assessing the essential features of a performance
- Do not combine independent criteria in one rubric
- Are based on the analysis of many work samples and performances
- Rely on descriptive language
- Continuous and change in quality from score point to score point
- Are parallel in that each descriptor parallels all of the others in terms of the criteria used
- Are coherent in that the same criteria are used throughout the scale
- Are aptly weighted

Opposite is a rubric chart developed by Grant Wiggins to describe levels of understanding. This chart can be used as a framework to develop rubrics for case based learning programs in capacity building. The specific rubrics are developed to match the content and learning processes of a particular case learning program.
## Levels of Understanding

<table>
<thead>
<tr>
<th>Meaningful</th>
<th>Effective</th>
<th>In-Perspective</th>
<th>Empathic</th>
<th>Reflective</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOPHISTICATED</td>
<td>MASTERFUL</td>
<td>INSIGHTFUL AND COHERENT</td>
<td>MATURE</td>
<td>WISE</td>
</tr>
<tr>
<td>An unusually penetrating, illuminating or novel account (story, theory, connection, meaning, causal links)</td>
<td>Fluent, flexible and efficient; able to use and adjust understandings to diverse difficult contexts</td>
<td>A fully justified and qualified viewpoint encompassing other plausible viewpoints</td>
<td>Disciplined and able to see what others see and feel and unusually open to others’ perspectives</td>
<td>Deeply aware of the boundaries of one’s own and others’ understanding</td>
</tr>
<tr>
<td>IN-DEPTH</td>
<td>SKILLED</td>
<td>THOROUGH</td>
<td>SENSITIVE</td>
<td>CIRCUMSPECT</td>
</tr>
<tr>
<td>An atypical and revealing account, going well beyond what is obvious or explicitly taught; inventive and subtle thinking</td>
<td>Competent in using and adapting understandings in a variety of appropriate and demanding contexts</td>
<td>Fully developed and coordinated critical view with logically sound support</td>
<td>Disposed to see and feel what others do and open to the different and unfamiliar</td>
<td>Aware of one’s ignorance and that of others and also aware of one’s own prejudices</td>
</tr>
<tr>
<td>KNOWLEDGEABLE</td>
<td>ABLE</td>
<td>CONSIDERED</td>
<td>AWARE</td>
<td>THOUGHTFUL</td>
</tr>
<tr>
<td>Account reflects some in-depth and personalized ideas; going beyond the information given</td>
<td>Limited but growing ability to be adaptive and innovative in the use of knowledge and skill</td>
<td>A reasonably critical and well developed point of view with adequate support</td>
<td>Knows and feels that others perceive the world differently and is somewhat able to empathize with their viewpoints</td>
<td>Generally aware of what he/she does and does not understand</td>
</tr>
<tr>
<td>VIABLE</td>
<td>APPRENTICE</td>
<td>SKETCHY</td>
<td>MATURING</td>
<td>UNREFLECTIVE</td>
</tr>
<tr>
<td>An adequate and apt account, extending and deepening somewhat what was learned; account is fairly black and white</td>
<td>Relies on a limited repertoire of routines, able to perform well in only a few selective contexts</td>
<td>Aware of different points of view and able to develop a view but weaknesses in supporting the view or considering other perspectives</td>
<td>Has some capacity to walk in others’ shoes but is limited in judging them by his own standards</td>
<td>Generally unaware of one’s own ignorance or lack of knowledge or of the role of personal prejudices</td>
</tr>
<tr>
<td>NAIVE</td>
<td>NOVICE</td>
<td>NARROWLY CONCEIVED</td>
<td>EGOCENTRIC</td>
<td>INNOCENT</td>
</tr>
<tr>
<td>A superficial, literal or crude account; more descriptive than analytical, a restatement of what was read, taught or said</td>
<td>Can perform only with coaching and relies on highly scripted, plug in types of approaches</td>
<td>Unaware of different points of view plus a fragmentary or limited point of view with little justification</td>
<td>Little or no empathy beyond intellectual awareness of others and sees things only through his own lens</td>
<td>Completely unaware of the bounds of one knowledge, understanding or experience</td>
</tr>
</tbody>
</table>
Dynamic Assessment

In case based learning, assessment should be dynamic and aim to capture learning in the moment. Conventional approaches to assessment tend to be passive, since the evaluator is in the position of reviewing the performance of the learner, who is viewed as a static object. Learners are not involved actively or even asked to assess themselves.

Organisations, today, are encouraging continuous learning in order to cope with rapid, unpredictable and complex change. Yet most conventional approaches to assessment are one-time, predetermined in terms of criteria and methods. In case based learning, the learning process unfolds continuously and, in some cases, unpredictably. If we want to understand the learning occurring in such a flowing stream, then we must devise ways of assessing learning as it flows. This is the task of dynamic assessment. The chart below highlights some of the key differences between dynamic and other forms of assessment.

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Dynamic Assessment</th>
<th>Static Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>View of the learning process and knowledge</td>
<td>Dynamic, unpredictable</td>
<td>Predetermined and linear</td>
</tr>
<tr>
<td>Assumptions about the learner</td>
<td>Active – invents new knowledge</td>
<td>Passive – acquires existing knowledge</td>
</tr>
<tr>
<td>Assumptions about the evaluator</td>
<td>Partial and limited – needs learner’s perspective</td>
<td>Neutral and objective – unchallenged authority</td>
</tr>
<tr>
<td>Focus</td>
<td>Whole learner situated in a particular context</td>
<td>Isolated competencies</td>
</tr>
<tr>
<td>Origin of standards</td>
<td>Evolves with the knowledge invented in the process</td>
<td>Externally determined and applied to the learner</td>
</tr>
<tr>
<td>Role of evaluation</td>
<td>Ongoing – part of the learning process itself</td>
<td>End point of learning</td>
</tr>
<tr>
<td>Interpretation</td>
<td>What people learn, what they say they learn and how they learn it</td>
<td>What learners can produce</td>
</tr>
<tr>
<td>Purpose</td>
<td>Recording, interpreting and reinterpreting process</td>
<td>Measuring and judging according to existing norms</td>
</tr>
</tbody>
</table>

Dynamic and Static Assessment

Dynamic assessment is underpinned by four ideas:

- Dynamic assessment understands that learning constantly unfolds even during the assessment and evaluation process. Dynamic assessment situates itself as integral to the ongoing learning process and avoids treating learning as an end product.
Dynamic assessment focuses not only on what the learner knows or can do, but also on how the learner is developing knowledge and skills. This involves assessment of the processes of learning with feedback to the participants.

Dynamic assessment recognizes that learners are individuals and that context affects learning.

Dynamic assessment looks carefully at the community dynamics in which the learning occurs. This is systems thinking and considers how the parts when interacting affect the whole of the performance of the learner.

There is no generally agreed upon framework for dynamic assessment but in the context of case based learning the following guidelines suggested by Fenwick and Parsons are apt:

- **Establish a Vision for the Learning**
  This involves explaining to the learners what exactly it is hoped they will learn in the process and seeking a confirmation from them that this learning is indeed of value.

- **List Some Specific Indicator and Expectations**
  State the expectation of both the instructor and the learners at the outset of the process. Have participants write down exactly what they would like to learn in terms of behavioural changes and what expectations they have of the learning process.

- **Track What Happens Over the Course of the Learning**
  Tracking requires discipline. Establish a regular routine of noting observable indicators of change in the learners and the group. Watch for little indicators of change, not just sweeping new insights. Use a third person to confirm your observations. Have individual learners track their own learning throughout and develop ways in which they can represent and communicate that learning.

- **Interpret What Is Observed**
  Compare your observations to the original expectations you had and the expectations established at the outset by the learners. Be prepared to change the criteria for evaluation in light of what emerges in the tracking process. Do not be wedded to the original criteria regardless of what actually occurred.

- **Talk About the Learning Process**
  Have members ready and available to discuss on an ongoing basis what they believe is happening in the group.
Share the Results of the Assessment
Do not keep the findings of the assessment secret. Find ways to share it individually and collectively with the group.

There are a number of strategies, which can be employed, within the above framework, for dynamic assessment in case based learning:

- **Use Learner Narratives**
  Story telling has a rich tradition in learning. You can encourage people to tell stories about the content of the learning that matters most to them in writing or orally and analyse the key insights in the stories.

- **Learning Log**
  Participants can be encouraged to keep a learning log throughout the process. This entails about 10 minutes or so regularly for “free writing” of what they think they are learning, what they want to know and how they believe they can learn more. Key questions can be: What changed today? What questions are you wondering about? What incident, person or task contributed to your learning?

- **Analyse the Thinking Process**
  Stephen Brookfield suggests that there are three dimensions of critical thinking which can and should be assessed in adult learning:
  - identifying and challenging assumptions
  - challenging the importance of context and balancing ones own views with those of others
  - exploring and imagining alternatives and reflecting with skepticism
  Peer feedback, as well as instructor feedback, is a critical tool for the assessment of such learning processes. Moreover, there do exist tests, which can provide a pre and post-test snapshot of these thinking processes and their evolution.

- **Write a Parallel Case**
  One of the best ways to assess learning in case settings is by using parallel cases. After the case at hand has been analysed and assessed, have learners write another case that illustrates the key concepts and ideas in the first case

- **Role Reversal**
  This process entails having the learner take the role of the instructor and manage the case discussion, with the instructor and peers providing feedback on the degree to which the learner understood the elements of the case and the key learning which flowed from it.
Active Role Plays
Cases, even when in written form, can be broken down into the key roles in the case. One way to assess learning is to have different learners play the role of key actors in a case and assess the degree to which they performed the role as the actor in the case does.

Unfolding the Case
This technique begins with a short drama or vignette as the basis of a case. Following discussion of each stage of the case, each group in sequence adds new elements to the case, which are put forward deliberately to test the thinking and learning of other members in the case as it unfolds.

Confronting Reality
This technique involves reading and assessing a case and then confronting an individual who was actually directly involved in the case. Following this the case is rewritten to account for that person’s perceptions and experiences.

Below are a number of techniques which can be used in dynamic assessment of thinking processes in case based learning.

<table>
<thead>
<tr>
<th>Discerning an Issue: The Five Why’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learners each write a sentence which states the key problem in the case as they perceive it.</td>
</tr>
<tr>
<td>For the next step group members or the instructor probe this problem statement through a succession of why statements</td>
</tr>
<tr>
<td>Problem Statement: We do not respect each other in this group.</td>
</tr>
<tr>
<td>First Why: Why don’t we have respect in this group? Answer: Because we do not listen to each other.</td>
</tr>
<tr>
<td>Second Why: Why don’t we listen to each other? Answer: Because we don’t take the time.</td>
</tr>
<tr>
<td>Third Why: Why don’t we take the time? Answer: Because we give the discussion low priority – we rush onto other things we think are more important.</td>
</tr>
<tr>
<td>Fourth Why: Why don’t we find this discussion as interesting as other things? Answer: Because we do not feel personally committed to this project.</td>
</tr>
<tr>
<td>Fifth Why: What are we going to do to be committed to this project?</td>
</tr>
</tbody>
</table>
Moments of Awareness
In working with a group, at any point in which there appears to be a high level of frustration, anxiety or anger, stop and do a moment of awareness activity.

This involves focusing personally and collectively on the following questions:

- What is happening right now? What are we doing, thinking and feeling right now?
- What do we want right now? What am I (we) trying to achieve in this conversation?
- What are we doing right now that prevents us from getting what we want?
- Say “I choose to…” take a deep breath and do it

Quick Memo Ideas
Have learners write quick memos during an activity. The quick memo can be addressed to themselves or to someone else in the group or to the instructor.

- A brief review: Here is a list of ideas, information and questions that have occurred to me in the past few minutes or days.
- Here are the steps in the process I used to solve that problem and what worked and what didn’t.
- Here are the three most important ideas I have had in the past few minutes or days.
- Here is a mistake I made and what I learned from it.
- Hear are some other peoples’ perceptions on these issues.
- Here is my opinion on all of this and my reasons for it.

Ladder of Inference
Have learners write a brief paragraph describing the problem.

Take out a page and have learners draw a line down the center of the page.

In the right-hand column write down what was said.

In the left-hand column write down “What I was Thinking,” including the thoughts and feelings you did not say. Focus on the meaning and interpretations of the words that were spoken.

Have everyone do this and then compare the responses and interpretations.
While the bulk of this Handbook has been devoted to the exploration of techniques for learning through cases and instructing with cases, there is another valuable dimension of the case, which also contributes to each of these objectives. This entails the conduct of research using the case study as a method of inquiry. While this Handbook cannot hope to be exhaustive in its treatment of case study research methods, it will provide a brief framework through which to understand this process and how it can contribute to the growth of understanding.

The Nature of Qualitative Research

Qualitative research, of which case study research is an exemplar, aims at understanding social phenomena, with as little disruption to the natural setting as possible. The underlying assumption, in qualitative research, is that reality is constructed by people in interaction with their physical and social contexts. Qualitative research aims to understand the meaning that people assign to the realities they construct, or are in the process of constructing. Lived experience is the heart of the qualitative research enterprise. Unlike quantitative research, which is dedicated to analytically taking apart the dimensions of human experience, qualitative research is synthetic in its orientation, attempting to piece together the parts of experience into larger and meaningful wholes.
There are a number of dimensions that are unique to the qualitative research tradition:

- **Participant Perspective**
  In qualitative research there is a desire to understand phenomena from the perspective of the participants in those phenomena, not just that of the researcher. This has been called an emic, or insider’s perspective, as compared to an etic or outsider’s perspective.

- **Researcher as Data Source**
  In qualitative research, it is the researcher who forms the primary instrument for data collection. Data are mediated through the human instrument, rather than through questionnaires or other forms of data retrieval. Understanding the situation is seen to be a key ingredient in determining what data means in a given context.

- **Fieldwork**
  Qualitative research entails substantial fieldwork in which the researcher actually visits and becomes immersed in a site rather than viewing events at a distance through data sets.

- **Inductive Strategy**
  Qualitative research uses an inductive strategy building towards theory from ground-up observations. The product of qualitative research is rich or thick descriptions of situations and the meanings people assign to events and processes within them.

Case studies, when used as qualitative research methodologies, have three features that form part of their distinctive characteristics.

- **A Case Study Is Particularistic**
  This means that case studies focus on specific situations, events, programs or phenomena. The case is important for what it might reveal about an event, process or program.

- **A Case Study Is Descriptive**
  The end product of a case study is a rich or thick description of the phenomenon under study. Thick description, a term from anthropology, means a literal and complete description of the incident or situation under study. Case studies are grounded in empirical reality.

- **A Case Study Is Heuristic**
  By “heuristic” it is meant that a case study illuminates the reader’s understanding of the phenomenon under study. The case study itself can spark new understanding of a given event or process. In this sense it serves as a heuristic device.
These three characteristics of a case study in research give the method its explanatory power. In research, a case study can:\(^{87}\)

- Illustrate the complexities of a situation – the fact that a multiplicity of factors or dynamics contributed to it.
- Have the advantage of hindsight and yet be relevant to the present. Case studies can be located in time.
- Show the influence of personalities on a given issue or problem.
- Show the influence of the passage of time on an issue.
- Include vivid material, oral reports and artifacts from the actual record of experience.
- Obtain information from more than one source and more than one type of data.
- Spell out differences of opinion and viewpoint on an issue and how these were developed over time.
- Frame the issue from the perspective of different stakeholders.
- Explain why given interventions worked or did not.

Quantitative research tends to press for explanation and control, hoping to isolate, through that process, key causal variables. Qualitative research focuses upon understanding the complex interrelationships among all that exists. It is true that explanation contributes to understanding, but it should be borne in mind that explanation per se is not understanding. Understanding tends to have a psychological feature associated with it encompassing empathy, or the capacity to recreate in one’s mind the thoughts and dispositions of others. It also connotes intentionality through attempts to grasp the purposes of agents, the meaning of symbols and signs, or the significance of rites, rules and rituals.

Quantitative researchers, in their quest for control, attempt to design research in a way that nullifies, or eliminates, the role of context in constructing explanation. To qualitative researchers, context provides the meaning in a given situation and, therefore, is a focal point of inquiry. Quantitative researchers tend to seek generalizations and treat exceptions, as in economics, as “outliers”. For qualitative researchers, the particularisms in a situation are the true source of meaning and understanding. In qualitative research the center of attention is on providing “thick” descriptions of situations, developing experiential understanding and describing multiple realities.

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The starting point in case study research is the development of the key research questions that will guide the study, govern the selection of case situations, and affect the type of data to be collected and how it will be analysed. Research questions, in the case study methodology, are derived, initially, from one of two perspectives: intrinsic or instrumental. Research questions that flow from an intrinsic perspective focus on the case situation itself and the attempt to understand the dynamics of what is occurring. “How does form X actually produce new products?” would be an example of an intrinsic question, as would: “How are children reared in tribe Y?” Or, “what is the effectiveness of program Z?”
Instrumental questions utilize the case situation as a context in which to test theories or propositions: If innovation is a function of the skills of workers, then how does this emerge in firms X, Z, M? In case study research, though, one always must be prepared for new researchable questions to emerge in the context of the study itself. One might have a proposition in mind about how workers define a problem and then find, in the course of the research, that they see the problem entirely differently. This in-case definition of the problem can then be the real problem studied in the research.

Beyond the setting of issue questions to be pursued in the case research, there will also be a set of topical questions needed. These questions call for information needed to construct an accurate description of the case. In this regard, it is helpful to break down the case into a set of topics and sub topics, which will need attention and, in relation to which data and other information will have to be collected.

**Bounding the Case**

Qualitative researchers, when using the case study method, often have to struggle with the question of “what my case is” and “where my case leaves off”. All cases need to be bounded in some way, otherwise one is confronted with a blizzard of events, people and processes. Conceptually, we can define a case as a phenomenon of some sort that is occurring in a bounded context. The case is, in effect, the unit of analysis.

An analogy may be helpful here. Visualise a target used for shooting practice. The target is the larger context and your case is the bullseye you are shooting for. You need to know about the size etc of the target, in order to locate the bullseye, but only in so far as you are clearly directed toward the location of the bulls eye. As in all research, then, you need to be aware of the target, but not take your focus off the bullseye when you aim.

There are many types of cases that can be pursued in research. Sometimes the phenomenon in question is an individual. For example, one can study a patient undergoing the entire process of heart by-pass surgery, or a decision-maker in an organisation. The bullseye, here, is the patient, or the decision-maker. A case can also be defined as a role: the role of President in a country, the role of a political activist, the role of an opposition in parliament, the role of a mother etc. A case can also focus on a small group: a design team building a new computer or a set of advisers to a government are examples. A case can be an organisation: a bureaucracy, a school, a hospital, a firm etc. A case can be a community: a neighbourhood, a city. Finally, a case can be a nation. There are other ways to delineate the types of cases possible for study: as episodes that occur over time, a process that unfolds, a reaction to an event or decision or an event itself.
Sampling

Cases, as noted above, are set within contexts which are bounded. It is not possible to study everything simultaneously. Here sampling assists. Sampling in qualitative research involves two actions that sometimes pull in opposite directions:

- First you need to set boundaries: to define aspects of your case that you can study within the limit of your time and means that connect directly to your research questions.
- At the same time you need to create a frame to help uncover, confirm or disqualify the concepts that underpin your study.

Your sampling can be either theory-based, determined upfront before proceeding and reflecting a particular model of the situation, or grounded, progressively emerging as you become immersed in the actual study.

The chart below lists several sampling strategies that can be employed in conducting case research.

### Case Study Sampling Strategies

<table>
<thead>
<tr>
<th>Type of Sample</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum variation</td>
<td>Documents diverse variations and key patterns</td>
</tr>
<tr>
<td>Homogeneous</td>
<td>Focuses and reduces</td>
</tr>
<tr>
<td>Critical case</td>
<td>Generalization to other cases</td>
</tr>
<tr>
<td>Theory Based</td>
<td>Finding examples of a theoretical construct</td>
</tr>
<tr>
<td>Confirming/disconfirming case</td>
<td>Seeking exceptions</td>
</tr>
<tr>
<td>Snowball or chain</td>
<td>Collecting cases from people who know what is important</td>
</tr>
<tr>
<td>Extreme/deviant case</td>
<td>Looking for a highly unusual instance of a phenomenon</td>
</tr>
<tr>
<td>Typical case</td>
<td>Highlights the normal or average</td>
</tr>
<tr>
<td>Intensity</td>
<td>Intense manifestation of phenomenon</td>
</tr>
<tr>
<td>Politically important case</td>
<td>Attracting attention</td>
</tr>
<tr>
<td>Random purposeful</td>
<td>Adds credibility with large sample</td>
</tr>
<tr>
<td>Stratified purposeful</td>
<td>Illustrates sub groups</td>
</tr>
<tr>
<td>Criterion</td>
<td>All cases that meet a criterion</td>
</tr>
<tr>
<td>Opportunistic</td>
<td>Following new leads</td>
</tr>
<tr>
<td>Combination or mixed</td>
<td>Flexibility</td>
</tr>
<tr>
<td>Convenience</td>
<td>Saves time and money</td>
</tr>
</tbody>
</table>
Categories of Analysis

Once the general type of case to be explored has been determined, the next step is to specify, within that case, the focus of research and analysis. In this regard, it is not possible to concentrate upon everything all at once, although some people do, in fact, argue for a stream of consciousness approach. In most case study research it is helpful, both for analysis and potential coding, to organise your observations and data collection into a set of categories. There are many ways in which you can develop such categories. The schema below provides a set of categories that tend to be generic in most case situations. The categories, at least, ensure that you will not miss a dimension of the case situation:

- **Setting/Context**: General information on surroundings that permits you to put the study in a larger context
- **Definition of the Situation**: How people understand, define, or perceive the setting or the topics on which the study bears
- **Perspectives**: Ways of thinking about the setting shared by informants and key actors
- **Ways of Thinking About People/Objects**: How people understand each other, outsiders or objects in their world
- **Processes**: Sequences of events, flows, transitions, turning points and changes over time
- **Activities**: Regularly occurring kinds of behavior or tasks
- **Events**: Specific activities, especially ones occurring infrequently
- **Strategies**: Ways of accomplishing things, dealing with conflict, people’s tactics, methods and techniques for meeting their needs
- **Relationships and Social Structure**: Unofficially defined patterns such as cliques, coalitions, romances, friendships, networks
- **Knowledge Stores**: Sources of accumulated knowledge in the setting and ways in which this is codified, transmitted or assessed

Effective Interviewing

In most case study research interviewing is one of the basic modes of data collection. Interviews can be defined as a “conversation with a purpose”. In other words, an interview is not just “talk”. In the conduct of an interview, one is seeking to discover what is in the mind of another person or group of people. Interviews are used to find out things that we cannot directly observe. Interviews also help us to understand past events which cannot be replicated but which make impacts on current reality. Finally, interviewing, in some circumstances, is often the only way to get data, particularly when the formal record is blurred, obscured or non-existent.
There are various types of interviews and their variation reflects the amount of structure designed into the interview process. The diagram below highlights these variations in interviews by the degree of structure they contain.

## Interview Structure Continuum

<table>
<thead>
<tr>
<th>Highly Structured</th>
<th>Semi-Structured</th>
<th>Unstructured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wording of questions predetermined</td>
<td>Mix of types of questions</td>
<td>Open ended questions</td>
</tr>
<tr>
<td>Order of questions predetermined</td>
<td></td>
<td>Flexible &amp; exploratory</td>
</tr>
<tr>
<td>Oral form of survey</td>
<td></td>
<td>Conversational</td>
</tr>
</tbody>
</table>

The key to effective interviewing is the asking of good questions matched to the right degree of structure. The chart below highlights four types of questions that can be deployed in interviewing situations.

### TYPE OF QUESTION

- **Hypothetical Question**  
  Asks the respondent to speculate as to what something might be like in the future or what he might do in a particular situation. Begins with “what if” or “suppose” or “consider for a moment”.

- **Devil’s Advocate Question**  
  Challenges the respondent to consider an opposing view. Begins with “Some people would say.”

- **Ideal Position Question**  
  Asks the respondent to describe an ideal situation

- **Interpretative Question**  
  Advances a tentative interpretation of what the respondent has been saying or the structure of an argument that has been made

### EXAMPLE

- “Suppose you were a CEO, what would you do in this situation?”

- “Some people would say that having a strategy in a business blinds you to change. What would you say to these people?”

- “What do you think an ideal budget for the country would look like?”

- “When your market share drops but your profits rise, is that a good thing?”
In the conduct of interviews, it is desirable, prior to the actual event, to ruthlessly weed out, and winnow down, the questions you will be posing. In this regard, it is always a good practice to test your questions on two types of people: people with a background, or role, similar to those you will be interviewing and people who have little in common with your target person or group.

Interviews flow on the basis of the interaction between the interviewer and the respondent and the situation can be viewed from both of these perspectives. Skilled interviewers can do much to enhance this relationship, and this will be the basis for yielding rich information. Being non-judgmental, respectful and non-threatening are essential to good interviewing and are skills that are difficult to learn.

Looking at the interview from the perspective of the respondent begs the question as to what makes a “good respondent”? Social scientists describe a good respondent as an “informant”—someone who understands the culture in a situation, but who is also able to reflect upon it and articulate for the interviewer what is going on. Key informants are able to adopt the role of co-inquirer with the interviewer and provide a sense of perspective.

In every interview situation, there are three variables that can determine the outcome: (1) the personality and skill of the interviewer; (2) the attitudes and orientation of the respondent; and (3) the definition by both of the situation. Perfect congruence is never obtainable in real interview situations, but it is important to notice when one or other variable is potentially blocking the communication essential to the generation of information.

One of the most important things to remember in interviewing is to check the record as soon after the interview as possible. So too, offering initial interpretations as soon as possible after the interview helps in later analysis.

**Observation in Case Study Research**

Observation is another major method for acquiring data in case study research. Unlike interviews, observations occur in the actual setting of the action, providing first-hand, rather than second-hand, understanding of the phenomena under study. Observation is a research tool when it is formulated for a research purpose, is planned, is recorded systematically and the researcher exercises controls on reliability and validity.

It is impossible to observe everything in a given setting, and therefore it is important to bring to bear a degree of structure to guide observations. Merriam suggests that the follow-
ing elements serve as key organizing principles for most observations, as data collection activities.\footnote{S. Merriam, \textit{Qualitative Research and Case Study Applications in Education} (San Francisco: Jossey Bass, 2000), pp.94-98}

- **The Physical Setting**
  What is the physical environment like? What is its context? What kind of behaviour is the setting designed for? What constraints on types of behaviour are exercised by the physical design? What artifacts etc. are present in the setting?

- **The Participants**
  View the setting as a stage in a play. Who is in the scene and what roles do they play? What brings the people together? Who is included and excluded and why? What are the relevant and defining characteristics of the participants?

- **Activities and Interactions**
  What is going on? Is there a definable sequence of activities and what is the basis of the sequence? What patterns of interaction are noticeable in the setting? What are the norms and rules that govern the interactions? What are typical or recurring activities and what are divergences from these patterns?

- **Conversation**
  What are the content and form of conversations in the setting? Who speaks to whom and about what do they speak? Who listens?

- **Subtle Factors**
  What informal and unplanned activities occur in the setting? Are there symbolic meanings attached to different phrases or words? What non-verbal cues are discernable in the behaviour of people? What do the non-verbal cues convey? Are there noticeable power and influence variables operating in the setting?

In observational research in case studies, it is helpful to develop a skeletal framework for observation, prior to entering the setting. In cases where frequencies of interaction are part of the research process, one can also utilize various techniques for more formal coded interaction analysis.

In conducting data collection through observation, the researcher can do so from a number of different orientations, each of which will affect the focus and style of observation:
Complete Participant
In this situation, the researcher is a member of the group under observation, and conceals the observational activity from the group.

Participant As Observer
In this case the researcher is a member of the group and his/her observational role is known to the group. In this regard, guarantees of degrees of confidentiality are usually part of the research undertaking.

Observer As Participant
In this regard, the group controls the level and depth of the observations that are permitted.

Complete Observer
In this context, the researcher is either hidden from the group, as in two-way mirror observation, or in a completely public setting, such as a football game in a stadium.

The key element in the above typology is the degree to which the observation is covert or overt. One of the problematic aspects of observation research is the degree to which the observation and observer actually change the situation under study. In this regard, besides recording actual observations, it is desirable for a researcher to maintain a fieldwork journal, which records the impressions and experience of the researcher while undertaking the observations.

Data Analysis Techniques

While collection and analysis of data often occur simultaneously in case study research, they are presented separately in this Handbook. Case study research, although it is an emergent form of analysis, also benefits from the researcher stepping back and reexamining the data after a passage of time and in the light of concepts and theoretical constructions brought to bear on the information.

There are a number of data analysis strategies available in case study research. Some of the key strategies are briefly highlighted below:

Ethnographic Analysis
Ethnography strives to produce rich and thick descriptions. Elaborate coding schemes can be applied to data generated through ethnographic methods, providing various levels

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at which the data can be mined. Diagrams and other charting methods are also used in this form of analysis. Examples of these techniques are discussed later in the Handbook.

- **Narrative Analysis**
  The focal point of narrative analysis is the “ways human beings experience the world”. In research, narrative analysis is conducted through the examination and collection of stories and the language used to tell the stories. Recent work in cognitive science suggests that the human mind stores and codes information in narrative form and this technique is used to unlock the meanings people assign to the settings they function in and the activities they engage in or are affected by.⁹⁰ A range of narrative analysis techniques can be applied, drawn from socio-linguistics, cognitive science and anthropology as well as literary criticism.

- **Phenomenological Analysis**
  This form of analysis is dedicated to uncovering the essence or structure of a phenomenon. Techniques such as bracketing, imaginative variation and the search for first and second order knowledge in the setting are used. In all of the techniques the suspension of judgement is a critical factor for the researcher. The goal is to see and experience the phenomenon first hand and record impressions and meanings.

- **Constant Comparison**
  Developed by Glaser and Strauss as part of their efforts to evolve a grounded theory in social science, constant comparison, as its name implies, entails comparing findings from one setting or action to other settings and actions and deriving concepts and understanding from the comparisons. Multiple case comparisons, thus, form the basis of the research method.⁹¹

- **Content Analysis**
  Content analysis utilizes category systems drawn from various conceptual frameworks to systematically record frequencies and variation in the utterance of people. This is particularly useful when applied to documented material.

As noted above, one of the strengths of case study research is that it allows analysis to be undertaken while the research is being conducted. One does not have to wait until a complete quantitative data set has been developed and cleansed before sensing the meaning in what one is encountering. In this regard, the following guidelines can assist in conducting what can be described as “analysis on the fly”:

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Levels of Analysis

As noted in other sections, one of the forms of analysis in case study research is the development of accurate and rich descriptions of the phenomena under study. Description, of course, allows the reader to interpret the meaning in the data. It is often desirable, though, to move beyond description in analysis, particularly when patterns are recognisable in the data and when key concepts and theories can be used to explain and interpret phenomena. This form of analysis requires the development of categories, or themes, that capture recurring patterns that cut across the data. Categories are often used in the constant comparative mode of data analysis and in content analysis. Categories are abstractions derived from the data, not the data themselves. The data provides instances of the category. Categories can come from the researcher, the participants or sources outside the study.

Researchers can develop categories to interpret data. If for example one is studying views of schooling and what makes a school effective, one may notice that the view varies with the income level of the respondents. In this case, one might want to introduce the categories of social class to illustrate these patterns and link them to similar studies. Categories can also come from the participants themselves. Again, in educational research into such issues as dropouts from schools, perhaps one might find that teachers consistently use two words to describe these people: chronics and borderlines. In the analysis, the researcher would use these categories, and the meanings attached by participants to them, to illustrate patterns in the data. Finally, one can derive categories from theory or models. If one is studying, for example, the decision-making processes of managers in a business, then a researcher may
want to use a formal model of decision making and overlay it on the data to determine the degree to which the model is congruent with the data and where there may be discrepancies. In this case, the model serves to bring to light dimensions of decision making that may not be initially evident in the data.

In the development of categories for analytic purposes in case study research, the following guidelines are useful to insure validity and reliability: 92

- Categories should reflect the purposes of the research; that is, they should contribute to answering the research question that underpins the research.
- Categories should be exhaustive. It should be possible to place all of the data in a major or sub category

92 S. Merriam, Ibid. pp.181–190
• Categories should be mutually exclusive. A particular unit of data should fit into only one category.
• Categories should be sensitizing. The naming of the category should relate to what is in the data.
• Categories should be conceptually congruent. The same level of abstraction should characterize all categories

Organizing and Displaying Data

Data, in case study research, can be collected from a variety of sources: from documents inherent in the case itself, to research information that bears on the case and direct observation and interviewing. The choice of data collection method and type is a function of the focus of the research itself. In general, data in case study research is collected and analysed in one of two forms: direct narrative account through detailed observations and interviews, or coding schemes which reflect theoretical or other analytic framework, or a combination of both.

Each approach to data collection, though, is facilitated by the development of a clear plan for data collection. Below is an outline of a generic data plan framework developed by Robert Stake: 93

1. Anticipation
   - Review or discover at the outset what is expected by the case study
   - Consider the questions and hypotheses that are already raised in the context
   - Read some literature, particularly in the substantive domain to be studied and key methodological issues
   - Look for other studies that might serve as a model
   - Define the boundaries of the case
   - Consider possible audiences for the report of the findings
   - Form an initial plan of action, defining various roles within the plan

2. First Visit
   - Arrange preliminary access if needed and obtain necessary permissions
   - Write a formal agreement if required indicating the obligations of the observer and host
   - Discuss real or possible costs to hosts
   - Make preliminary observations
   - Identify key informants and the type of data to be collected

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- Develop a record and data collection system
- Rework priorities in light of initial observations

3. Further Conceptualization
- Learn what the audience members know
- Identify possible multiple realities the setting
- Allocate attention to different viewpoints and probe these in depth

4. Gather Data and Validate Data
- Make observations, conduct interviews, debrief informants
- Select vignettes, special testimonies, illustrations
- Classify raw data
- Begin interpretations
- Redefine issues, case boundaries
- Gather data, replicate data and triangulate

5. Analyze Data
- Review raw data under alternative possible interpretations
- Search for patterns in the data
- Seek linkages
- Draw tentative conclusions
- Gather new data if need arises

6. Communicate and Report
- Describe extensively the setting in which the actions and activities occurred
- Consider the report as a story
- Draft reports and check their meaning from the perspective of different audiences
- Test the reports on different groups
- Revise and disseminate the report

Triangulation

One of the central themes in case study research is that reality is constructed in the minds of those who participate in actions within different settings. The meanings assigned to behavior are a function of the role, position and perceptions of those who exemplify it and are also a function of the vantage point of the observer. To accommodate such multiple realities, and indeed to draw them out and make them explicit, case study research employs a method in data collection and observation called triangulation. Essentially triangulation involves observing events and behavior from a variety of perspectives prior to assigning any global mean-
ing to them. The diagram below illustrates this triangulation principle.

Triangulation allows the researcher to validate and confirm his/her observations by cross checking these with the perceptions of different people active in or affected by the events and actions in a given setting. In this regard there are a number of protocols for triangulation:

- **Data Source Triangulation**
  In this instance we look to see if the phenomenon or case remains the same at other, times, in other spaces or as persons interact differently.

- **Investigator Triangulation**
  In this method, the researcher has other researchers take a look at the same events and examine the different interpretations offered.

- **Theory Triangulation**
  In this approach the researcher builds a team which deliberately has on it researchers from diverse disciplines or who represent different theoretical perspectives.

- **Member Triangulation**
  This procedure involves asking participants in the setting to give their views of emerging researcher created perspectives or interpretations before they are finalized.

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Once the data has been collected, the next issue revolves around how that data will be treated. In this regard, in case study research there are two options and combinations of them. The first is direct reporting and description of the case through a detailed narrative – letting the reader have maximum interpretability. The goal here is to achieve naturalistic generalisations. Naturalistic generalisations are conclusions arrived at through a personal engagement in life’s affairs, or by vicarious experience so well constructed that the reader feels it happened or could have happened to him.

The starting point is to make the case understandable and Stake provides the following guidelines to assist in the natural generalising process:

- Include accounts of matters the readers are already familiar with so they can gauge the accuracy, completeness and bias of reports and other matters
- Provide adequate raw data prior to interpretation so that the readers can consider their own alternative explanations
- Describe the method of case research used in simple language
- Make available directly and indirectly biographical information about the researcher and other sources of input
- Tell a story with vivid and thick descriptions including ample quotations directly from the case

The second method of using data is to develop various displays, which illustrate trends, themes, interrelationships and causal patterns. These displays can be based upon formal coding systems or key analytic categories. Most often data displays take the form of matrices or networks. These display techniques, while deployed in research, are also of value in representing key elements in a case under discussion or analysis. In that sense, they have a dual function in case based learning. Below are illustrated a number of different techniques for case display:

- Effects Matrix
  An effects matrix displays data on one or more outcomes in as differentiated a form as required by the study. The label “effect” is used to remind readers that outcomes are always outcomes of something.
<table>
<thead>
<tr>
<th>Program Objectives</th>
<th>Effects on Pupils</th>
<th>Effects on Staff</th>
<th>Effects on Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects on Pupils</td>
<td>Plan and conduct env'l tasks</td>
<td>Hands-on tasks</td>
<td>Investment in env'l ed. activities</td>
</tr>
<tr>
<td></td>
<td>Awareness of env'l problems</td>
<td>Work with community</td>
<td></td>
</tr>
<tr>
<td>Effects on Staff</td>
<td>Hands-on tasks</td>
<td>Interdisciplinary skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Work with community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects on Community</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects on Community</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seen by Users</th>
<th>Effects on Pupils</th>
<th>Effects on Staff</th>
<th>Effects on Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects on Pupils</td>
<td>Env'l awareness</td>
<td>As adults, will make good env'l decisions in community</td>
<td>Improved values</td>
</tr>
<tr>
<td></td>
<td>Hands-on work</td>
<td></td>
<td>Kept dropouts in + self images</td>
</tr>
<tr>
<td>Effects on Staff</td>
<td>Hands-on approach</td>
<td>Completes env'l program here</td>
<td>Acquired more off-campus sites</td>
</tr>
<tr>
<td></td>
<td>Looser style</td>
<td>Outside workshops</td>
<td>“Expert” in community</td>
</tr>
<tr>
<td>Effects on Community</td>
<td></td>
<td>Off-campus program is dumping ground</td>
<td>Kept user in ed.</td>
</tr>
<tr>
<td>Effects on Community</td>
<td>Env'l awareness</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Knowledge of school programs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seen by Admin'rs</th>
<th>Effects on Pupils</th>
<th>Effects on Staff</th>
<th>Effects on Org’n</th>
<th>Effects on Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects on Pupils</td>
<td>Hands-on work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>off-campus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects on Staff</td>
<td></td>
<td>Utilises their creativity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects on Org’n</td>
<td>No more discipline problems</td>
<td></td>
<td>Not cost-effective to transport 14 kids to site</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rounds out program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects on Community</td>
<td></td>
<td></td>
<td>Orientation to community</td>
<td></td>
</tr>
</tbody>
</table>

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*= Claim made strongly by one person, or by more than one respondent

*= Inference made by researcher
Causal Network

A causal network is a display of the most important independent and dependent variables in a field of study and the relationships among them. The plot of the relationships is directional rather than correlational.

Smoothed Causal Network:
The Variables and Relationships Linking Administrator’s Actions and Teacher Development Activities
(Leithwood, Jantzi & Dart 1991)
Event Flow Network
This chart links events to the processes which produce them over a time period

**Event Flow Network: A Student’s Learning and Work Experience**

- **University Studies**
- **Production line work in a factory**
  - **Interruption**
  - **Travel**
  - **Work in a recreation center**
  - Entered teacher’s college

- **Need for “breathing room”**
  - Hard reality of factory work
  - Lack of a link to own practical interests
  - Met “marginal” alienated youth
  - Wish to do something
Event-State Network

This chart displays events and their resultant outcomes or states in a network arrangement.

Excerpt from an Event-State Network:
Perry-Parkdale School

- 1. Funding for program ends
- 2. New principals unfamiliar with program, skeptical
- 3. Principals opposed to using own budgets for program
- 4. Declining enrollments, tight funding
- 4. Staffing cutbacks projected
- 5. Job insecurity, uncertainty
- 6. Jesseman (central office) advocates weakly for program
- 7. Siegrister, Colby take other local project jobs
- 7. Jesseman begins work provisionally on another local project
- 8. Forward institutionalisation is uncertain

Events and states not shown in figure
Boxes are events; Bubbles are states
Decision Modelling

The chart models the steps or flow patterns in reaching a decision on a problem or issue.

- **Enter**: Buying Spices
  - **Decision**: Need cumin and coriander?
    - **Yes**: Buy in Indian store
    - **No**: Need spices?
      - **Yes**: Buy in supermarket
      - **No**: Do you have blender?
        - **Yes**: Buy and grind yourself
        - **No**: Buy and use spice as is
          - **Decision**: Need cumin and coriander?
            - **Yes**: Do not buy
            - **No**: Do you have coffee grinder?
              - **Yes**: Grind in coffee grinder
              - **No**: Do you have rolling pin?
                - **Yes**: Roast slightly, grind with rolling pin between waxed paper
                - **No**: Use mortar and pestle

The test of any matrix is the degree to which it increases understanding. In assessing the matrices, below are some rules of thumb, which can assist you in the quest for understanding:

- It is always a good idea to start with a quick scan or as people say a “squint analysis” to see what jumps out initially.

- As will be discussed later, any matrix needs to be subjected to different forms of analysis. Be open and experimental in the multiplicity of ways that you use to look again at the matrix.

- As conclusions begin to take shape in your mind always write a text explaining them or a diagram to illustrate the meaning. This process inevitably leads to reformulation of your understanding. In fact writing itself is a form of analysis.

- First conclusions need to be checked against field notes. Matrices themselves can lead to unwarranted conclusions. The test is the empirical reality and the degree to which it fits.

- Always apply rival explanations to the matrices.

- Always check your conclusions with the governing conceptual framework of the study.

- Check your perceptions of the matrix with others who have not participated in the research project.

**Generating Meaning**

The displays discussed above serve as tools for analysis, which should contribute to the assignment of meaning. Meaning flows from analysis, but it is not the same as analysis. Analysis may indicate the relative strength of key variables and their relationship, but the meaning which one gives to these patterns does not flow from the patterns themselves. Meaning derives from the frame of reference one brings to the data and the patterns they contain and frames of reference are very much socially and culturally constructed.

In the following section, we outline a number of strategies for the generation of meaning from the rich data, stored and represented in different forms, that case studies reveal.
Noting Patterns and Themes
The human mind is in some ways a pattern-making machine. In the analysis of data in matrix displays and textual notes, it is a good idea to look for patterns across variables and in processes, which cut across variables.

Seeing Plausibility
Plausibility functions as a pointer, which draws the analyst’s attention to a conclusion, which can then be verified and checked against the data.

Clustering
We often in our daily lives group things together. This reduces the press of information overload. In analysis of case data this process of looking for natural clusters in the data can be helpful in coming to conclusions. Clustering can be facilitated by focusing on key actors, processes, roles or settings. Clustering also allows one to move to higher levels of generalization by subsuming subcategories into larger conceptual wholes.

Making Metaphors
Metaphors entail attempts to understand one thing in terms of its relative likeness to something else. Metaphors infuse our language and are central to our understanding of the world. Most models and theories in social science are in fact elaborated metaphors. In case analysis, the point is not to create metaphors but to be aware of the metaphors that underpin our approaches to the data in question. Deliberately generating new metaphors about the case and testing them against the data, however, does enlarge the range of possible meanings one can see in the data.

Making Contrasts and Comparisons
Deliberate seeking for comparability (for example one variable operating in different contexts) and contrasts provides one way of illuminating patterns in data.

Partitioning Variables
Essentially this involves breaking variables down into their sub components and conducting a more fine-grained analysis.

Intervening Variables
It often happens that two variables, which ought to move together according to a conceptual framework, do not. In other cases, two variables actually move together and the reason for this is not apparent. In each instance, one should search for intervening variables through which the relationship actually works.
Triangulation is a term that comes from nautical guidance procedures. Essentially it entails looking at an object or point from at least three different locations or points of view. The basic notion is that this three-point perception will be more accurate than only looking at an object from one point. It is somewhat akin to the theory of relativity in that the location, or in case research the meaning, of a variable, activity or process is affected by the position and perception of the observer. Rotating one’s perception of key variables and viewing them from different vantage points often generates new understanding and meaning.

Writing the Report

The purpose of the write-up of case study research is to enhance the understanding of the reader and this can be done in many ways. One thing to keep in mind, however, is that the case study write-up is like telling a story. In this regard, Van Mannen has suggested that most case study write-ups exhibit one of three types of tales. The first is the realist tale, which provides a direct matter-of-fact portrait of the case and leaves it open to the reader to do the bulk of interpretation. The second is what is called the “confessional tale,” which focuses more on the experience of the fieldworker developing the case and the learning that accrued as a result. The third is the impressionist tale, in which key aspects of the case are described but highlighted in terms of their overall meaning and significance in some larger framework. It is not that one chooses a tale style. But the fact is that there will be a tale style in the write up and one should be aware of it.

On a more practical note, Stake suggests the following as a rough guide to the write-up of case research findings:

- **Entry Vignette**
  Provide a brief vignette which is part of the case and which will draw and energize the reader’s attention.

- **Issue Identification**
  In this section introduce the reader to how the case study research was conducted, the methods used and the issues which form its focus.

- **Narrative Description**
  In this section provide a fine-grained narrative, which describes the key actors and dynamics in the case.
Verification
In this section indicate what was done to verify the descriptive elements of the case and interpretations.

Assertions
In this section quickly summarize the case and outline the key generalizations, which flow from it linking these to the issues identified earlier in the write-up.

Closing Vignette
It is sometimes desirable to close with a vignette, which captures both the dynamics of the case, and the meaning you assign to it.

Broadening Learning

Case study research provides a context for case based learning. While the research itself will lead to new learning about the topics, people and issues at hand, the learning does not stop there. Case study research is conducted for many purposes and case study researchers play many roles. Inherent in the roles that the researcher plays are ample opportunities for new learning:

The Case Researcher as Teacher
The conduct of the case research is ultimately to inform or teach a reader. The entire process puts the researcher in the role of teacher and through this process the researcher learns about himself, his audience and indeed about the case.

Case Researcher as Advocate
Often case research is conducted as part of advocacy campaigns and public policy processes. In this regard the researcher learns not only about the case but how case evidence fits with the adoption of points of view and persuasion.

Case Researcher as Evaluator
All evaluation studies are case studies in one form or another. In such cases research programs are judged by sets of criteria and applied through case research. In this role the researcher learns about the program under review but also about the complexities entailed in judgement.

Case Researcher as Interpreter
The case research process involves a meaning making process in which interpretations are provided to complex situations, actions and processes. In essence it is a process of finding new connections and making these intelligible to readers. In this sense the researcher is part of a craft process and learns by doing and through imagination.
Modern organizations demand knowledge, skill sets and capabilities in people that transcend factual and theoretical understanding, important as those understandings continue to be. Increasingly, the focus of modern organizations is on active knowing, sharing, relating and doing. These new competencies, at their core, are valued because they function as bridging capabilities that link knowledge to action across different contexts. The chart opposite displays an example of such competencies prescribed within the context of a public sector setting.

The competencies outlined in the chart are increasingly representative of the types of capabilities that are seen to be essential for organizational effectiveness and management. What is striking about the competencies is the degree to which they are embedded in the ability of a person to use knowledge and skills in the context of working with others. Knowledge and skills that are accumulated by individuals, but not linked to organizational and work processes and relationships are, in other words, inert resources. They are valuable to the person concerned and may have some spillovers to the organization. Active knowledge and skills, on the other hand, are both embedded in practice and dynamic in nature, being continuously refined as they are practiced. The development of dynamic and active knowledge and skills is one of the guiding principles of an actionable learning approach to case based learning and capacity building. Hence, the title of this part of the Handbook: Case Meets Context.

95 The competencies in the chart have been developed by the Management Development Center, Government of Saskatchewan, Canada.
The Learning Organization

If organizations can be viewed as adaptive, problem solving, organic structures, then judgements about their effectiveness have to be determined, not solely from static measures of output, but also on the basis of the processes through which the organization approaches problems and seeks opportunities. In Warren Bennis’s view, in this regard, the measure of the health of an organization is to be found in its flexibility and adaptiveness, each of which is captured, most cogently, in its capacity to learn in the face of changing circumstances. For this reason, developing learning organizations has emerged as one of the key strategies for organizational adaptiveness and effectiveness. Developing learning organizations is also one of the core strategies of capacity building, since such organizations potentially provide an enabling and receptive context for the continuous transfer of knowledge and skills.

96 W. Bennis, Why Leaders Can’t Lead (San Francisco: Jossey Bass, 1990)
The phrase “learning organization” is rather easy to say, but far more difficult to define precisely. Organizational learning does not merely encompass the cumulative effects of individual learning within organizations. Rather, organizational learning has a collective dimension, in which the contextual knowledge produced belongs to the organization, rather than to any individual or group in the organization. Organizational learning enables and is built upon the formation, in other words, of what can be described as “holistic intelligence”: a capacity to perceive and think the whole, rather than parts, and to understand the dynamic interrelationships and interactions among parts. Arthur Koestler has described this orientation as involving an awareness and appreciation of the fact that everything is a whole part of a whole.  

As a nurturing ground for the development of holistic intelligence, a learning organization serves as a contextual stimulant to the development of the following orientations among people who work in and for the organization:

**An Appreciation of the Systemic Properties of Organizations**

The development of a holistic intelligence involves the capacity, among other things, to perceive and think at the level of the system, in addition to the parts and components of it, and to recognize that systems impact upon each other in complex ways, with multiple feedback loops, operating between components and sub systems. To think holistically about systems is to understand that, at root, a system is a whole that cannot be divided into independent parts without the loss of its essential properties or functions. The reason for this is that the properties of a system derive from the *interactions* of its parts, rather than the actions taken separately. For this reason, when the performance of the parts of a system are improved, the performance of the whole may not be improved.

Russell Ackoff provides the following vignette to illustrate this point.  

“Suppose we were to bring together one each of every automobile currently available and for each essential part determine which automobile had the best one. We might find that the Rolls Royce had the best motor, the Mercedes the best transmission, the Buick the best brakes, and so on. Then suppose we removed all of these parts from the automobiles of which they were a part and tried to assemble them into an automobile that would consist of all the best available parts. We would not even get an automobile, let alone the best one because the parts don’t fit together.”

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The performance of the system, as Ackoff so cogently illustrates in the vignette, depends on how its parts interact, not on how they act separately. No part of a system should be changed, in this regard, without first determining the effect of the change or intervention on the whole and whether this effect will be beneficial.

One of the fundamental tasks of management within organizations, it follows, is to be aware of and develop the skills to manage: (1) the interactions of those units and individuals for whom they are responsible; (2) the interactions of their units with other units within the organization; and (3) the interactions of their units with other organizations or units in each one's environment. A learning organization provides the tools, incentives and structures that focus on and facilitate the management of such levels and types of interaction.

Holistic intelligence also demands new modes of thinking. Analysis, the predisposition to take systems apart, needs to be balanced by synthesis, or the predisposition to think in wholes. Again Ackoff, in crisp fashion, explains the differences and complementarities between these two modes of thought:

“In analysis, something that we want to understand is first taken apart. In synthesis, that which we want to understand is first identified as a part of one or more larger systems. In the second step of analysis, an effort is made to understand the behavior of each part of a system taken separately. In the second step of synthesis, an effort is made to understand the function of the larger system of which the whole is a part. In the third step in analysis the understanding of the parts of the system to be understood is then aggregated in an effort to explain the behavior or properties of the whole. In synthesis, the understanding of the larger containing system is then disaggregated to identify the role or function of the system to be understood.”

Respect for Multiple Perspectives on Issues

This attribute of a learning organization stresses the importance of recognizing and, indeed expecting, that there will be differing perspectives on problems, issues and opportunities facing an organization. Developing designs that legitimate and accommodate the existence of a diversity of perspectives is one of the challenges of the learning organization. As diversity is one of the central forces at work in the evolution of natural systems, so too, in human systems diversity increases the learning scope and adaptive capacity of organizations.99

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An Ability to Detect Key Assumptions and Taken For Granted Views

This trait of the learning organization speaks to the capacity and legitimacy of surfacing assumptions within organizations and assessing them in the light of continued relevance and alternative perceptual frames. All too frequently perceptual prisms prevent people from seeing old problems in a new light or emergent problems with a fresh vision. Effectiveness of both people and organizations deteriorate when they are incapable or unwilling to reframe. When people do not know what to do, they often revert to doing more of what they know. This is the “effort confirmation” trap: a belief that by working even harder on known strategies and ways of doing things, the sheer application of energy will prove one right.

Much of the research on and practical experience with organizational learning converges around the basic idea that our ability to make sense out of a complicated and ambiguous world depends on the frames, or mental models, that we bring to the task, problem or opportunity. Even what we assume to be “hard facts” often turn out to be socially constructed interpretations based upon a collective expectancy.

Learning organizations foster what Bolman and Deal call multi-frame thinking: the capacity to examine the same organization, and problems within it, as being simultaneously different things depending on the frame, or point of view, one adopts. The purpose of multiframe thinking is illumination: to better understand the completeness of a problem by examining its manifestation from different angles. The paradox of multiframe thinking is that neither the organization, nor a problem, can ever be completely understood since there is always another frame to bring to bear. We shape our model, in the words of Michael Schrage, and then our models shape us.

Playful Seriousness

This attribute of learning organizations, a seeming paradox, means that ideas should be taken seriously, and at the same time played with in different configurations to search out new meanings. As Michael Shrage has observed, innovation requires improvisation. Playful seriousness thrives on the challenge of uncertainties, particularly the challenge of converting uncertainties into manageable risks. One of the ways in which playful seriousness unfolds “seriously” within organizations is through the use of models, simulations and prototypes. Models, prototypes and simulations are of the same genre: they all refer to the process of representing one aspect of reality while ignoring others. They are metaphors at their base; that is, they are imagi-

100 L. Bolman and T. Deal, Reframing Organizations (NY: Jossey Bass, 2000)
natively descriptive of reality and equally imaginatively ignorant of reality. In learning organizations, models, prototypes and simulations increasingly provide the hub around which the innovation process revolves. They literally invite what Michael Schrage has called “serious play”.

Schrage uses the following situation, itself ironically a form of simulation and modeling, to illustrate the principle of serious play. It entails the development of a fantastic new technology called “mirrorware”:

Consider a mirror. This mirror is full-length, and you see yourself in it everytime you step out of the shower. It can also instantly modify your mirror image in response to voice commands. You can see how you’d look if you lost ten pounds or gained fifteen. If you stopped exercising for two weeks. If you lifted weights three times a week for five weeks. You could see what you’d look like with a deep tan, with a different hairstyle, a different hair or eye color. How you’d look after liposuction. You might enlarge or shrink particular body parts or ask the mirror to age you by three years or ten years.

The mirror can even show you how you’d look in that suit, that tie, that dress, those shoes. What you will look like in that outfit after an hour in the rain. The mirror’s projections aren’t perfect, of course. So you can store its predictions for comparison with future realities. But the mirror’s underlying algorithms can be modified easily to correct for errors or drift.

How much time would you spend in front of the mirror? What questions would you ask it every day? Every week? What would you never ask? What would you ask just for fun? What images would you scrutinize most carefully? How much time would you spend looking at the real you versus images of possible yous? Would the images of possible yous alter how you manage the real you? Would you eat less? Exercise more? Seek surgery? Buy new clothes? In other words, would the mirror significantly change how you behave?

Let’s complicate this hypothetical: You have a significant other who cares deeply about you. Would you show your beloved your ideal images? How about the least attractive versions? Would you encourage him or her to request specific modifications of your image? Suppose he or she stored one or two images as benchmarks? Would you collaborate with your significant other to determine the best version of you? Would doing so influence your willingness to pursue it?

Conversely, would you want to play with the possibilities of your significant other? Or might seeing a best-case or worst-case version create difficult memories for you to manage? Now receptive would your significant other be to your hypothetical image modifications? Would such a mirror make your relationship more intimate? Or would mirror imagery become a constant point of reference and contention?
Mirrorware, to use Schrage’s language, is akin to what organisations do when they develop models, prototypes or simulations to better understand the realities in which they find themselves. The playful process of using mirrorware is also paralleled in the creative processes, by which models are developed and options explored.

David Garvin defines a learning organization as one “skilled at creating, acquiring, interpreting, transferring and retaining knowledge and at purposefully modifying its behavior to reflect new knowledge and insights”.102

Garvin further refines the concept of a learning organization by providing a set of questions that serve as what he calls a “litmus test” for determining the degree to which a work organization can be described as a learning organization:

- Does the organization have a defined learning agenda? Learning organizations tend to have a clear vision of their future knowledge requirements. They know what they need to know and know what they do not know. This knowledge gap is pursued in learning organizations in multiple ways, not just through formal training.

- Is the organization open to discordant information? Is the organization, in other words, open to new ideas and information, some of which may challenge the conventional ways of seeing the world, even if the existing perceptual frames have proved to be the basis of past and current success?

- Does the organization avoid repeating mistakes? Learning organizations reflect continuously on their experience and place that experience into different categories of meaning. Learning organizations also commit to the concept of productive failure, as a way of teasing out the complexities in the world around them.

- Does the organization lose critical knowledge and information when people leave? Is knowledge within the organization always kept at the tacit level, or are there ways to encourage collective sharing and codification of ideas and experience?

- Does the organization act on what it knows? Learning organizations are not merely receptacles for the capture and storage of information and knowledge. They constantly strive to test and apply knowledge through innovation and experimentation. Learning organizations strive, as the title of this Handbook suggests, to act on learning.

For those wishing for a more detailed profile of the learning organization, the following assessment tool, developed by Silberman, provides a framework for analysis and reflection.

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Learning Organization Profile

Below is a list of various statements about your organization. Read each statement carefully and decide the extent to which it actually applies to your organization. Use the following scale:

4 = applies totally
3 = applies to a great extent
2 = applies to a moderate extent
1 = applies to little or no extent

I. Learning Dynamics: Individual, Group/Team, and Organisation

In this organization ...

_____ 1. We are encouraged and expected to manage our own learning and development.
_____ 2. People avoid distortion of information and blocking of communication channels through skills such as active listening and effective feedback.
_____ 3. Individuals are trained and coached in learning how to learn.
_____ 4. Teams and individuals use the action learning process (that is, learning from careful reflection on the problem or situation, and applying it to future actions).
_____ 5. People are able to think and act with a comprehensive systems approach.

_____ Learning Dynamics Score

II. Organization Transformation: Vision, Culture, Strategy, and Structure

In this organization ...

_____ 1. Top-level management supports the vision of a learning organization.
_____ 2. The climate supports and recognizes the importance of learning.
_____ 3. We learn from failures as well as successes.
_____ 4. Learning opportunities are incorporated into operations and programs.
_____ 5. The organization is streamlined, with few levels of management, to maximize communication and learning across levels.

_____ Organization Transformation Score

III. People Empowerment: Employee, Manager, Customer, Alliances, Partners, and Community

In this organization ...

_____ 1. We strive to develop an empowered workforce that is able to learn and perform.
_____ 2. Authority is decentralized and delegated so as to equal one's responsibility and learning capability.
3. Managers take on the roles of coaching, mentoring, and facilitating learning.

4. We actively share information with our customers, to obtain their ideas and input in order to learn and improve services and products.

5. We participate in joint learning events with suppliers, community groups, professional associations, and academic institutions.

**People Empowerment Score**

IV. **Knowledge Management: Acquisition, Creation, Storage/Retrieval, and Transfer/Utilization**

In this organization ...

1. People monitor trends outside our organization by looking at what others do (e.g., benchmarking best practices, attending conferences, and examining published research).

2. People are trained in the skills of creative thinking and experimentation.

3. We often create demonstration projects whereby new ways of developing a product and/or delivering a service are tested.

4. Systems and structures exist to ensure that important knowledge is coded, stored, and made available to those who need and can use it.

5. We continue to develop new strategies and mechanisms for sharing learning throughout the organization.

**Knowledge Management Score**

V. **Technology Application: Information Systems, Technology-Based Learning, and Electronic Performance Support Systems**

In this organization ...

1. Learning is facilitated by effective and efficient computer-based information systems.

2. People have ready access to the information highway (local area networks, Internet, on-line, etc.)

3. Learning facilities (e.g., training and conference rooms) incorporate electronic multimedia support and a learning environment based on the powerful integration of art, color, music, and visuals.

4. We support just-in-time learning, a system that integrates high-technology learning systems, coaching, and actual work on the job into a single, seamless process.

5. Our electronic support performance systems enable us to learn and to do our work better.

**Technology Application Score**

**GRAND TOTAL TO 5 SUBSYSTEMS ______**

(Maximum score: 100)
Organizations learn through three processes: acquiring information, interpreting information and applying information. In acquiring information, learning organizations pursue the following types of questions: What information should we collect? From where? How should it be obtained? When? By whom?

In interpreting information, learning organizations are immersed in the following types of questions: What does the information mean? What concepts and categories should we apply to the information? What cause, effect and probability relationships are at work in the information? How can we represent the information? How can we share the information?

Lastly, learning organizations apply information, and in the process, ask the following types of questions: What new activities are appropriate? What behaviors must be modified? What new knowledge and skills are necessary to apply the information?

The process of learning, within and by organizations, is not smooth, but also subjected to a set of barriers, which act to block or distort the learning process. Garvin notes the following barriers to organizational learning that potentially occur at each stage of the learning process:

**Acquiring Information**

- **Blind spots:** This occurs when scanning and search activities of the organization are narrow or misdirected, resulting in a situation in which people in the organization will not see a trend, recognize an event or acknowledge a fact. In times of crises, blind spots can be particularly disabling.

- **Filtering:** This occurs when critical data are downplayed or ignored, because they do not fit in with pre-existing perceptual frames or ways of seeing the world. It is for this reason that, when faced with identical evidence, people often derive diametrically different conclusions.

- **Information hoarding:** Often information is captured and contained within one level of an organization and deliberately not shared at other levels. The result is power at one level of the organization and ineffectiveness at the others.

**Interpreting Information**

- **Illusory correlation:** viewing events as related simply because they have appeared together.

- **Illusory causation:** ascribing causality to events that occur in sequence and seem to be linked.
Illusory validity: increasing confidence in one's judgement based on increasing amounts of data even though one's initial judgement has never been questioned.

Framing effects: Placing similar information in different frames or different information in a common frame without questioning the frame itself.

Categorical bias: Using stereotypical categories to classify events and people even though there exists information to the contrary.

Availability bias: Assessing the probability and meaning of events based on the ease with which examples come to mind.

Regression artifacts: Ascribing causality to actions that change a variable from extreme high to low even though the change is due to chance.

Hindsight bias: Systematic biasing of probability estimates toward actual outcomes known in advance.

Applying Information

Passivity: An unwillingness or incapacity to act on new information.

Risk aversion as a norm in the organization.

Misaligned incentives for compliance rather than innovative behavior.

Learning organizations engage learning in numerous ways and through various strategies. They stimulate search processes to scan the external environment for clues as to the future, conduct formal and informal inquiries in relation to their customer's needs, encourage structured observation and reporting on such observations, allow for reflection and review of strategies and actions, create simulated problem solving processes and experiences, probe and learn through experimentation and prototyping and create contexts in which people generally can enhance their capacity to learn how to learn.

Some scholars and practitioners have converted the idea of a learning organization into a need for what has been described as knowledge management: the development of systems to “control” and codify the processes of acquiring, interpreting and acting on knowledge. While there is no doubt value in an organization becoming more aware of what it knows, and how it knows what it knows, this is at best an incomplete conception of the importance of learning in organizational adaptiveness and flexibility.
Alongside this managed control notion of knowledge in organizations, Nonaka, Ichijo and Von Krough stress the human processes that are intimately intertwined with knowledge in organizational settings: creativity, dialogue, conversation, teaching, modeling, listening, observing. From their perspective, the challenge is to facilitate knowledge creation, rather than control and capture the output of the process. They call this process knowledge enabling: orchestrating the overall set of organizational activities that positively affect the creation and sharing of knowledge. Effective knowledge creation requires, in other words, an enabling context.

Case based learning has, as one of its purposes, the creation of knowledge by participants, not merely the reception of preformed knowledge. Case based learning often occurs in groups and organizational contexts. As a knowledge creating process, then, case based learning design can benefit very much from the insights which are emerging regarding the process of organizational knowledge creation and the enablers of that process.

Nonaka, Ichijo and Von Krough suggest that there are at least five strategies, or enablers of knowledge creation, in organizations:

- **Instill a Knowledge Vision**

  This involves a process of thinking through what your organization ought to know about the present and future, not just what it must know. The vision encompasses the types and form of knowledge to be created, providing a clear direction to the organization. The knowledge vision gives members of an organization three mental maps of three domains: the world they live in, the world they ought to live in, and the knowledge they should seek and create. In crafting a knowledge vision that will be inclusive, empowering, understood and with “stickiness” qualities, it is important to use processes that involve as wide a range of people as possible — a 360-degree knowledge visioning process.

  The diagram below illustrates what is called a knowledge vision map. This knowledge vision map can be used in case based learning, as a vehicle for involving learners in setting the direction of their own learning and as a template to guide in the design of the case based learning process.

- **Manage Conversations**

  The process of sharing and creating knowledge is not absent in organizations. Nor are the opposite processes of blocking knowledge creation and hoarding the fruits of that process. These processes are continuously underway through conversations between and among people.

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Knowledge is constructed and the process of construction occurs through interaction with others. Moreover, conversations allow for the operation of distributed cognition: the extension of thinking and thought beyond the person as a function of the group and network of communications. Conversational skills, therefore, become important tools for the enabling and creation of knowledge in organizations. They are also key skills in the actionable learning approach to case based learning.

Not all conversations are highly knowledge enabling. Some can be downright knowledge capping. Using conversation as a knowledge enabler, then, requires facility in the following strategies:

> **Make knowledge-creating conversations available.**

This is a simple enough idea, but difficult to implement. In essence, it involves the development of spaces and occasions, within organizational settings, for conversations about creating and sharing knowledge and clearly establishing the rules of who participates and how. Developing knowledge creating spaces and occasions demands managerial creativity, risk taking and interpersonal openness. This can be accomplished, both formally through the development of micro learning labs, workouts, training sessions and innovation forums, or more informally, through the development of cultural norms within organizations that stress dialogue, discovery learning and experimentation in a non-threatening context. Moreover, effective design of Intranets, as vehicles for knowledge creation, mutual learning and feedback, can also assist in developing virtual spaces for knowledge creation.
➤ **Shape conversational rituals.**

All organizations have different rituals which govern different types of meetings and the conversations which are allowed to occur within them. If open exploration of new ideas is what one wants, then it is imperative to examine the degree to which existing rituals foreclose on that process. If the “boss” chairs all meetings, including ones which have punitive intent, then it will be difficult to engage knowledge seeking conversations in such a context. The ritual of conversations as enabling knowledge is not the same as the ritual governing performance assessment.

➤ **Do not use a language type for closure.**

Far too often, conversation is closed, or bounded by language. Only those who use particular types of words are allowed to speak, or are listened to, regardless of the substance of what they have to say. Consider someone who is not an economist, and participates in a discussion with economists regarding the field of decision making. For the non-economist, it is a truism that some people have more information about some things than other things. For the economist, the term to be used to describe this “commonsense” observation is information asymmetry. Failure to use the term means that the non-economist is not listened to and, in return, does not listen further to the economists. There is no knowledge creation possible in this setting, since language serves as a gatekeeper to discussion and exchange. Openness to language, and the imprecision and contextual nature of vocabulary, is a key ingredient in knowledge-enabling conversations.

Nonaka et al. describe the technique of creating circles of meaning as a way of avoiding the trap of linguistic closure on the process of knowledge creation. The process unfolds in four stages. First the subject at hand is discussed in conventional terms with conventional understanding. Then a second conversation is held in which new words or analogies are injected, broadening understanding or transforming it. Third, the meaning of the new metaphor and its linkage to an understanding of the phenomenon is undertaken. Finally the circle of meaning closes around what the new perspective of the phenomenon is in terms of a new shared meaning created by the group.

- **Mobilize Knowledge Activists**

Organizations involve people acting together to achieve a goal. Far too often we forget the people part of this concept, preferring to focus on systems, structures, data etc. Knowledge creation is conducted by and through people. For this reason, it often important to have in place, either by design, structure or encouragement, knowledge activists who focus on helping to develop the knowledge-enabling potential of the organization. Knowledge activists perform at least three critical roles in the knowledge creation process: catalyst, coordinator, integrator and seer.
Knowledge activist as catalyst
Knowledge activists, as they roam around the organization, can pick up signals about impending change or new insights and convert these into triggers that generate inquiry and examination. Process triggers often flow from the following types of question: Where did that idea come from? Where is there a problem? Why is this happening now? How can it be changed? What would you do instead?

Knowledge activist as coordinator
Knowledge creation is an ongoing process in many organizations, but the fruits and focus remain hidden in the subterrain of the organization's awareness. Knowledge coordination aims at bringing these initiatives to light and examining the synergies which they may have across the organization. In some cases, knowledge coordinators assume a formal role in the organization, but in others, due to their networking capabilities, the role emerges and flows from particular people in the organization.

Knowledge activist as seer
In some organizations, formal processes exist through which to inject new ideas into the ongoing efforts of the organization to glean the unfolding future. In this role, people play the role of seer, peering into the future and examining trends and trajectories for their implication for the organization.
Knowledge activists represent both a new role and a new form of work within an organization. How can one spot a knowledge activist? How can one select a person for that role? The chart below outlines some key competencies that underpin the three dimensions of a knowledge activist role.

In case based learning, cases can be developed so that learners are designated to play one of the three aspects of the knowledge activist role, or the complete role in relation to the class or a group. In this process, they hone the knowledge activist skills discussed above and help the team create knowledge.

● **Create an Enabling Context**

Knowledge is rooted in context and derives its meaning from context. A third enabler of knowledge creation is the development and legitimization of contexts that are receptive and stimulative of knowledge creation. An enabling context is a shared knowledge space that encourages and nurtures participation on several levels. The grid below illustrates this idea by showing the interrelationships between forms of interaction and the medium of interaction. The grid produces four types of interaction that can facilitate knowledge creation.

<table>
<thead>
<tr>
<th>Face To Face Interaction</th>
<th>Individual Interaction</th>
<th>Collective Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual Interaction</td>
<td><strong>Originating</strong></td>
<td><strong>Conversing</strong></td>
</tr>
<tr>
<td></td>
<td>Sharing tacit knowledge between individuals</td>
<td>Having group conversations to shape concepts</td>
</tr>
<tr>
<td></td>
<td><strong>Internalizing</strong></td>
<td><strong>Documenting</strong></td>
</tr>
<tr>
<td></td>
<td>Making explicit knowledge tacit</td>
<td>Converting knowledge into explicit forms</td>
</tr>
</tbody>
</table>

A key in using this grid is to recognize that different organizational forms and structures afford the emergence of different forms of interaction. Organizations in their design of structures, then, need to pay attention to the impact of these structures on the capacity for knowledge creation within the organization. There is no one right structure for knowledge creation, but the same issues that arise in alignment of structure to strategy are present in this area. Aligning structure to knowledge creation is equally important.

● **Globalize Local Knowledge**

Globalizing local knowledge refers to the process of distributing and sharing knowledge across an organization, or even among different organizations. How can one globalize local knowledge within organizations? Nonaka et. al suggest that three strategies, or channels, are important: triggering, packaging and dispatching/re-creating. Triggering provides a channel through
which new knowledge that is generated can be communicated in the organization. Packaging and dispatching new knowledge involves such things as MIS systems and different forms for the storage, retrieval and communication of knowledge within an organization context. Knowledge dispatched from the local level can also be transformed or recreated by having various people and levels in the organization analyze and assess its implications. This is a process of iterative re-creation of knowledge.

Perhaps the organization that has most comprehensively captured the idea of the centrality of knowledge creation and the learning organization is Skandia, through it Intellectual Capital Navigator. The navigator allows the company to craft strategy and assess performance using four foci: financial, process, customer, and renewal and development. Within this framework the Navigator uses several yardsticks to measure and monitor intellectual capital accumulation and application.

![Intellectual Capital Navigator](image-url)
Learning organizations, as the previous sections have outlined, require the development of new mind sets. One of the tools for the development of a new mind set is systems thinking. Systems thinking is paradoxical: it serves as both a means an end. Systems thinking is a tool that helps to unearth the complex dynamics and interdependencies in human and natural systems. Systems thinking is also a worldview, a way of contemplating the holistic nature of life. In the actionable learning framework for capacity building, systems thinking is at the intellectual core. In this section of the Handbook, we explore the key elements of systems thinking and its applicability to case based learning.

One of the paradoxes of policy making is that people, in their attempts to solve problems, often make things worse. The reason is that policy-making interventions frequently generate unanticipated side effects. Attempts to stabilize a system, in other words, can destabilize it. Our actions to alter a system may be countered by actions of those seeking to restore a balance that we have destabilized. Jay Forrester has called this the counter-intuitive dimension of complex social systems. These unexpected dynamics lead to what John Sterman has labeled policy resistance: the tendency for interventions to be delayed, diluted or defeated by the response of the system to the intervention itself. Despite the rapid utilization of labor savings devices in the USA, for example, people have reported that they have less leisure time than prior to the onslaught of such electronic assistants. Many privatization policies in developing countries have actually increased, rather than decreased, monopoly by shifting it to the private sector from the public sector. Antibiotics, moreover, have led to the rise of drug resistant pathogens.

What are the causes of such policy resistance? A systems view helps to unravel this question. One cause appears to be related to the tendency to interpret experience as a series of events. An example of this phenomenon is when people say such things as “inventories are too high” to explain low corporate profits, or that the budget deficit is driven by a decline in revenues in the case of the public sector. The focus in the reasoning is on the event and its causal connections to other outcomes.

The event oriented worldview leads to what Sterman calls an event-oriented approach to problem solving. The figure below shows this event-based approach to problem solving. In this mental set, we assess the state of the situation and compare it to our goals. The gap between the situation we desire, and the situation we perceive, defines our problem. Consider a typical situation. Suppose the sales target for company A was $100 million, but the actual sales are

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reported as 20% less. In considering this problem of the gap between desired and actual states, you decide to cut prices to stimulate demand. You might observe that your sales increase. Problem solved. Or is it? The system reacts to your sales rise. Competitors cut prices and sales begin to fall again. Yesterday’s solution, the price cut, becomes today’s problem. As Sterman says, we are not puppet masters influencing the system “out there”. We are embedded in the system. There is feedback: the results of our actions define the situation we face in the future. Our decisions alter our environment, leading to new problems and the need for new decisions.

Policy resistance often comes about because we do not fully understand the entire range of feedback operating in a given system. In this regard, we often talk of “side effects” as if they were a feature of reality. In reality, there are no side effects. There are just effects. The variable is not in the nature of the effect, but in our perception of it.

Unanticipated side effects occur because too often, we act as if cause and effect were closely linked in time and space. But in complex systems, such as government, cause and effect are often separated in time and space, with various lags in response. In order to avoid policy resistance, and deploy high-leverage policies, there is a need to expand the boundaries of the mental models we bring to understanding situations and crafting decisions to accommodate feedback mechanisms in systems.

Our mental models include our beliefs about the network of causes and effects that describe how a given system operates, the boundaries of the system itself (what is included and excluded) and the time horizon we see as relevant. Our mental models frame the problems we confront. As our mental models change, we change the structure of our systems, creating different decision rules and new strategies. The same information processed and interpreted using a different decision rule will yield a different decision. The information has stayed the same, but our interpretation has changed.

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same, but we have changed. The process that drives this result is called double loop learning and is illustrated in the diagram below.

**Double Loop Learning**

Systems are dynamically complex and for this reason new modes of thinking are required to understand them. The decision of any one agent in a complex system forms but one of many feedback loops that operate in a given system. These loops react to a decision maker’s actions, in both anticipated and unanticipated ways. There may be reinforcing and balancing loops.
It is usual for people to think of complexity as related primarily to the number, or combinations, of variables one must consider in making a decision. But this refers to combinatorial, or detail complexity. Dynamic complexity is not a function of the number of components in a system, but of the patterns of interactions among the components and the ways in which they change over time. A family with four components (members) can, in a given situation, be infinitely more complex, as a system, than a large organization with thousands of components but few patterns of interactions.

Appreciating dynamic complexity is one of the major values of using systems thinking and one of the reasons to develop it through case based learning. Systems thinking allows one to better understand that dynamic complexity arises because systems are:

- Dynamic: Change in systems occurs on many time scales and these scales often interact. Bull markets often last for years, while a market crash can occur in minutes.

- Tightly Coupled: The actors in a system interact strongly with one another. Everything is connected to everything else. In a system, you cannot do just one thing.

- Governed by feedback: Because of tight linkages between components and actors in a system our actions feed back on themselves and dynamics arise from these feedbacks.

- History-Dependent: Taking one course of action often precludes taking others. Many actions are irreversible and get caught in a self-reinforcing cycle of feedback.

- Nonlinear: Effect is not often proportionate to cause and multiple factors affect decision-making.

- Self-Organizing: The dynamics of systems arise spontaneously from their internal structure. Often small perturbations can cause large-scale ripple-like changes in a system.

- Adaptive: The capabilities and decision rules used by agents in a system change over time as the agent learns.

- Counterintuitive: In complex systems cause and effect are separated in time and space. At the same time most people seeks causes in the form of the most proximal event.

Systems thinking probes beneath the surface of awareness to expose patterns, structures and perceptual frames that underpin the events unfolding around us. For this reason, systems thinking has been likened to an iceberg in which three quarters of the meaning of things lie beneath our conscious awareness.
Systems thinking can be captured through what Stephen Haines has described as an ABCD model. 

When applied to problem solving, the model focuses upon results, or outputs, rather than inputs. This explains why some say that systems thinking is “backwards thinking”. It centers on where you want to be and then moves back to the inputs and processes that will get you there.

Each phase in the ABCD model generates a particular question that guides thinking and problem solving. Underlying each question that is posed is an ongoing question: What is changing in the environment that we need to consider? The ABCD model provides yet another cognitive frame that can be applied to case discussion and analysis. Let us examine the phases in closer detail.

**Phase A: Output/Outcome**

There is a primary question in systems thinking when applied to problem solving and strategy making. The question is: “Where do we want to be?” In other words, what are our purposes, or goals, or the purpose and goals of the system in question? There are two sub-elements: output and outcomes. Outputs describe results produced by the system at a future point and outcomes describe the impact of the outputs on a given future condition. Increasing primary school graduates from the education system is an output, which has the impact of increasing the overall level of literacy. The outcome is increasing literacy: a change in the condition of literacy as a result of the impact of the output of graduates.

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Phase B: Feedback Loop

It is at this point in the systems thinking cycle that we begin to think backward in order to determine what must take place for our desired outcome to be achieved. We ask: How will we know we have reached it? How will we know we have achieved our goals and purposes? In this phase we determine how to measure the degree of achievement.

Phase C: Input

In this phase we begin to understand where we are today so that we can create strategies for closing the gap between what is happening right now and what should happen in the future. We ask the question: Where are we right now? Analytic thinkers tend to start at this point and, for that reason, often end up dealing with disconnected problems. Systems thinking places the issues of today in the context of where one wants to be.

Phase D: Throughput

At this stage we look at the system and its interdependencies and ask: How do we get from today to our desired place? How do we close the gap between A to C in a complete and holistic way? With these interdependencies in mind, we focus on the processes, activities and relationships that must be put in place in the system in order that it move toward the desired outcomes.
As the brief explanation of the ABCD model illustrates, in systems thinking there are a number of key differences in mental set from typical analytic thinking processes:

- In systems thinking the whole is primary and the parts/events are secondary. The parts are only important within their relationship to other parts in the system.
- Balance is the key in systems thinking, not dominance.
- Relationships and interactions are the key elements in systems thinking.
- Leverage is key to systems thinking when applied to problem solving. That is, finding the right point to exercise pressure in a way that generates causal chain linkage reactions is important, and often small pressures on systems produce large changes.

**Outcome Sequence Charting**

A useful and dynamic technique for explaining the ABCD model is an outcome-sequencing chart developed by Harry Hatry of the Urban Institute. As illustrated in the diagram below, an outcomes sequencing chart links end and contributing outcomes of an action over time with performance indicators for each outcome. The outcomes sequencing technique builds on this framework and involves groups in a process of creating an outcomes sequence chart of their own. The process is undertaken as follows:

- A program is selected as the basis for the activity.
- Participants are broken into teams.

**Outcomes Sequence Chart: Pollution Reduction Program**
The program is broken down into its key components: inputs, activities, outcomes and performance indicators. The facilitator first maps these.

The facilitator next places each one of these specific elements in the given program onto a separate post-it note and each post-it note is given a number.

The post-it notes are arranged into a pack like a pack of cards, with the numbers random in the pack.

Each group is given a pack of cards on the same program.

The task for each group is to arrange the post-it notes into an outcome sequence chart for the program.

This is done either by using an outcomes sequencing template or a template created by the groups.

The post-it notes are placed on a flip chart to illustrate the sequencing and categorizing

Each group then reports on its outcomes sequence chart.

The facilitator and the group discuss the differences and similarities between the charts, moving toward a consensus chart.

The outcomes sequence chart is a prime example of testing learning and transfer through the active construction of knowledge.

**Systemic Problem Solving**

Problems are situations regarded by someone as undesirable, which need to be changed and can be changed. Systems can create problems. But so too, problems create systems of their own. Systemic problem solving entails an approach that captures both of these dynamics. Outlined below is a simplified version of the systemic problem-solving methodology developed by Paul Watzalwick.

**Defining the Problem**

As a first step in the systemic problem-solving process, the problematic state or “problem system” is identified. How are problems maintained, and who or what contributes to maintaining this problem state? The generative mechanisms in a problem system that maintain the system are generally of two types:

- Actions that take place but should not happen
- Actions that do not take place, but would be desirable if they did occur

At this stage, it is also desirable to explore additional functions that the problem system might have. What are the good and the bad and what would happen to the larger system if the problem system disappeared?
• **Analyze Previous Attempts at Solutions**
  Past solutions are often the key to present problems. It may seem paradoxical, but problems currently being faced in a system are often solutions to other problems at other points in time. In this analysis of past solutions the following things should be explored:

- Difficulties which were ignored or falsely identified as difficulties
- Solutions that were too simple or more of the same
- Solutions that were unrealistic
- Solutions that produced unintended consequences or paradoxical results
- Solutions that produced more than one effect over time

The diagram below highlights how solutions can produce both corrections and unintended consequences.

![Diagram showing problem correction and unintended consequences](image)

• **Defining Solutions**
  Like problems, solutions need to be crafted as a solution system. In many cases this means that mechanisms in the problem system need to be interrupted or new mechanisms need to be created. Solution systems however are not problem systems. In crafting a solution system, one is looking for the smallest unit needed to bring forth a solution and for the application of leverage (the crucial factors that can bring about change in the problem system).

**Working with Complex Systems**

Systems thinking is particularly useful in understanding complex systems. Intervention in complex systems involves exerting external influence upon the system, with the aim of inducing change in the parts of the system and particularly in the modes of interaction among the
parts. There is a paradox in such interventions and it is that systems can only change themselves. An external intervention can be applied to the system, but the intervention must be incorporated into the dynamics of the system itself in order for change to occur. In the end, each system does what it does in terms of its own logic. For that reason, the logic of the system must change in order for there to be change in the behavior of the system.

Because of these preconditions, interventions in systems cannot be of a linear nature. Consider, for example, the question of evaluating the impact of an intervention. The unit of observation, in a systems approach, is the program and its context plus the dynamic interrelationships between those factors that affect each. Essentially, an intervention is seen as the injection of one complex system, the program, into another complex system, the context. The impact of the intervention, and the associated learning processes, are determined, not only by assessing impacts, but by tracing the linkages of the impacts to other dimensions of the system. In other words, did the new system transform the existing system making it more effective overall?

**Systemic Maps**

Using systemic maps is another tool in systems thinking. These maps can be created manually, as in the diagram below, or using computer assisted approaches. In such maps, the elements are linked by two types of feedback mechanisms.

- **(–)** Negative feedback (balancing) where the interaction works as a limiting factor and closes the gap between the desired and actual state
- **(+)** Positive feedback (reinforcing) where the initial state conditions are reinforced, leading to an increasing dominance of that state.
Circular Interviewing

In a system, every behavior contains a message for someone else. This principle applies to interviewing techniques. Rather than employing a linear process of interviewing for data collection and meaning making, in systems approaches the method is circular. The basic setting for the conduct of a circular interview is the triad. First the interviewer asks C about the interaction of A and B. Then B is asked about A and C. Finally A is asked about B and C. In this way the interaction pattern and the meanings attached to it by A, B and C are explored in a complete circular manner.

The circular interviewing process can also be expanded to include circular dialogues as exhibited in the diagram below.
Systemic Group Settings

Variations in group settings can also stimulate a systemic perspective. The diagrams below illustrate a variety of grouping techniques that can be employed to generate such a systems awareness among people. Their applicability to case based learning is also quite compelling.

**Roundabout:**
Groups of participants progress in a set order from station to station. Or pairs continue from pair to pair. Or individuals move from person to person.

**Market:**
The various offers (e.g. topics) are presented openly and can be accessed voluntarily. This way also small groups can shift between offers.

**Exchange groups:**
Instead of long reports from working-groups, groups are formed by representatives from previous groups (one in each group). Now personalised exchange is possible.
**Pool:**
In the middle of the group 4-6 representatives of sub-groups or opinions are discussing. There is an empty chair where additional participants can join in spontaneously.

**Changing pairs:**
For a short time participants form pairs, to discuss or do something together. Then the pairs break up again, a new impulse/task is given and new pairs are formed.

**Avalanche:**
Individuals form pairs, in a next step they form a group of 4, then of 8, then 16 (or even more) people. For each group formation a new task should be foreseen.
Action Learning

Case based learning, as noted above, can serve as a vehicle for the stimulation of knowledge creation and the learning potential of organizations. It can draw on many of the insights, techniques and tools that have emerged from research and practice in learning organizations and knowledge based management. One of the techniques that spans all of these fields of inquiry and practice, and that has direct utility for the case based learning process, is action learning.

As noted in this Handbook on several occasions, case based learning can be used to develop substantive knowledge, cognitive and affective capabilities and process skills. One of the opportunities that can be explored in case based learning, in this regard, is to develop real time problem solving, interpersonal and organizational development skills. Action learning provides a framework through which to develop just such skills and it can be fruitfully applied in case based learning for capacity building purposes.

Rothwell describes action learning as a “real-time learning experience that is carried out with two equally important purposes in mind: meeting an organizational need and developing the capabilities of the individual and group”. In a sense, action learning “kills two birds with one stone”: organizational problem solving and human development. Action learning has been applied in public, private and voluntary organizational settings. It is used to confront a myriad of different problems and opportunities: pinpointing the causes of problems, formulating strategies, establishing goals, developing a shared vision, building organizational capabilities.

Action learning has been found to have many benefits both for individuals, teams and the organization. Action learning:

- Develops creativity since it brings together diverse individuals who cut across hierarchical levels and other organizational boundaries. Its deliberate structuring of diverse perspectives within the team creates the potential for creative dissonance.

- Increases ownership, since it brings together key stakeholders in a process of collective problem solving. This participation in defining and solving the problem is a key to generating ownership of the results.

- Increases the possibility of productive risk taking. The action learning team provides a vehicle for pooling and sharing the risks entailed in problem solving and solution finding.

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- Increases the interaction among key elements in the organization. Action learning teams provide one way of overcoming the tendencies within all organizations to protect turf and capture knowledge.

- Improves work morale and job satisfaction by opening up avenues for broad participation in problem solving and solution finding.

- Increases the individual’s awareness of the key elements in an organization and encourages the development of a whole systems view.

- Increases the capability of both the person and the organization to learn in context and to transfer that learning to other activities and functions in which they are engaged.

Workers are selected to participate in an action learning team and process based upon two criteria. The first criterion is a person’s ability to address, through their experience, knowledge or commitment, an important issue confronting an organization. The second is a person's need to develop by experiencing problems, grappling with challenges and working with others who share their concern.

Essentially, action learning involves the creation, within an organization, of a cross functional and cross-perspective team charged with the responsibility to address an issue, explore alternatives and produce a solution, or set of options. Unlike a task force or committee, the members of an action learning team are chosen for their skills and perspective, mandated to solve a problem, and assisted by a facilitator. The action learning team is structured to ensure that all perspectives and knowledge bases are brought to the problem solving process.

There are many models of action learning. The diagram below displays the framework developed by Rothwell, which informs the approach taken in this Handbook.
While the virtue of action learning is that the process is applied in real time, in real organizations, to solve real problems, the method can also be used, on a simulation basis, in case based learning. In this context, a real or fictitious case of an organizational problem can be selected as the focal point of the activity. The instructor, or facilitator, can play the role of the executive championing the need for change and tasking the action learning team. Alternatively, a participant, or group of participants, can be selected to play this role. The role of facilitator can be played by the instructor, or again by one or a group of participants. The members of the action learning team (or teams) can be played by the participants. The case is addressed using the action learning process. The goals of applying the process are similar to the goals of action

**Is Action Learning Appropriate?**

<table>
<thead>
<tr>
<th>Question</th>
<th>Outcome</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the issue under the control of the organization or can it be improved if organizational action is taken?</td>
<td>no</td>
<td>Select another process to address the issue</td>
</tr>
<tr>
<td>Is the issue of sufficient importance to warrant devoting time, expertise and money to the effort?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Will the issue gain support from key groups essential to its resolution?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Does expertise on the issue exist within the organization or must it be developed?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Can the action learning team members be given the time and resources necessary to deal with the problem?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Will the process build important and new competencies for the organization that will outlast the specific task?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td>yes</td>
<td>Use Action Learning</td>
</tr>
</tbody>
</table>

Use Action Learning
learning itself: to develop knowledge of a problem and its potential solutions, to build team learning skills and to develop individuals’ awareness of the problem and ongoing learning potential. Let us now turn to the action learning framework.

**Recognizing Action Learning Situations**

Not all situations facing an organization are suitable for an action learning approach. Contrary to the various models developed for organizations to increase their effectiveness, action learning is bounded and focused. It does not pretend to be all things to all people, organizations and problem types. The flowchart following details the conditions under which action learning is appropriate.

In case based learning, it is possible to use a common case that contains three or more problems being faced by an organization. Using this scenario, the first learning process entails participants in groups or as individuals determining whether or not an action learning approach would be useful or appropriate. These arguments can be made before a simulated executive committee of an organization using the briefing sheet described opposite.

**Selecting and Organizing an Action Learning Team**

As in any group approach to problem solving, an action learning team’s effectiveness is, in part, a function of the membership of the team and the knowledge, attitudes and skills they bring to the process. Action learning teams can be selected in the following ways: managers and leaders can select individuals because of the knowledge, skills, perspectives and placement in the organization that they exhibit, volunteers can be sought, or group networks can be used. In each case, there are three criteria to be applied to selection of action learning teams: knowledge of the problem, unique perspective on the issue and learning and development benefit that would accrue through participation.

We return to our simulation. At this point, the executive team should ask for volunteers to serve on the action learning team. Volunteers are provided with an application to the action learning team. As described in the chart, the application contains a component or terms of reference filled out by the executive and a component to be filled out by the potential volunteer. Following this interviews should be held with each volunteer, in this case a case based learning participant.
An Application for an Action Learning Team

Directions: This form will serve as your application to the Action Learning team. Management has provided the information in Part I. Please review this information carefully and then complete Part II. After this application is received, it will be reviewed by a panel of experts. You will be notified by [date] whether you have been selected to serve on the Action Learning team.

Part I
(to be completed by management)

1. What is the issue, problem, goal, or vision that will be the focus of the Action Learning team effort?

2. What knowledge and skill will most likely be needed by an Action Team member?

3. What will be the expected outcomes of participation on the Action Learning team, both in terms of business outcomes and individual developmental outcomes?

4. What are the terms and conditions of the assignment on the Action Learning team?

Part II
(to be completed by applicant)

<table>
<thead>
<tr>
<th>Your Name</th>
<th>Your Job Title</th>
<th>Today’s Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Your Company Address</th>
<th>Your Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. What knowledge and skill do you possess that will contribute to the team achieving desired outcomes? *Clarify your education, training, experience, or other qualifications.*

2. Why do you believe you need to work toward the individual developmental outcomes expected from this Action Learning project? *Clarify why you believe you need this developmental experience in terms of your career goals.*

3. How do you know that you can meet the terms and conditions of the assignment on the Action Learning team?

The next step in the action learning process is the orientation of the team members. This process is undertaken, both in real life and the case simulation, by the change sponsor and team facilitator. The following issues and themes are addressed in the orientation:

- Who are the members of the action learning team and why were they selected?
- What knowledge and skills does each team member possess?
- What are the learning and development needs and expectations of each member?
- What is the facilitator’s role to be in this process?
- What organizational issue prompted the formation of the team?
- What is already known about the problem or issue at hand?
- What is the charter of the team? Who established the team and to whom will it report?
- Who are the stakeholders who have an interest in the work and results of the team effort?
- How will these stakeholders be involved or consulted?
- What specific outcomes are expected of the team and by what date?
- How much freedom does the team have in pursuing the problem or issue?
- What information is needed by the team and who will take responsibility to see that it is acquired?
- How will the group undertake its work?
- What constraints exist on the work of the team and why do these constraints exist?
Unlike task forces and committees, action learning utilizes a facilitator, as a key ingredient in its problem solving process. The role of a facilitator is not that of a chairperson, but that of an enabler of group process. A facilitator helps the team function effectively as a group by undertaking the following types of tasks:

- Ensuring that the team members clearly understand the mandate of the group and assisting them in the task of staying on track
- Helping team members become familiar with each other and with the different knowledge, skills and perspectives that they bring to the work process
- Assisting in the clarification of different points of view and the managing of group conflict
- Employing various techniques to increase the work performance of the team
- Clarifying what the team and members within it are learning as the process unfolds
- Assisting in the acquisition of research and other information
- Serving as a devil's advocate testing propositions and options under discussion by the team

Team facilitators also require certain competencies in order to effectively perform their roles in an action learning process:

- Using effective non-verbal behavior
- Listening actively
- Paraphrasing
- Summarizing
- Observing behavior
- Questioning effectively
- Injecting new ideas and options
- Focusing group attention
- Stimulating insights

In the simulation of action learning, volunteers for the role of facilitator should either demonstrate these competencies or receive training prior to engaging in this role in the action learning process.

**Team Learning**

Action learning teams engage in a deliberate process of team learning. While there can be different time frames and structures used in action learning, they all involve a series of workshops alternating with field experiences. The workshops are designed to provide participants with insight, information and tools. The workshops can involve guest speakers giving technical presentations. Field experiences range from onsite visits to areas in the organization or to other organizations. One of the key features of action learning is that learning and action are compressed and fused together by the glue of a common focus on the problem at hand.
Action learning creates a temporary system. It is a temporary context that reflects the real world, but one which allows for reflection and encourages risk taking. People can try out new behaviors and present and explore ideas without the typical sanctions that pervade such behavior in many organizations. What prevents this system from being just a “learning exercise” is that the team members are accountable for real time results. This is the creative tension generated by learning and action when enclosed in a temporary system. This creative tension can be simulated in a case based learning process.

The Problem Solving Process

Action learning is problem centered in its overall approach, but with a difference. The difference is that the problems are selected for two interlocking reasons: they are real in terms of the needs and issues confronting the organization; and engagement with them will stimulate individual, team and organizational learning.

Selecting a tough problem, and solving it, does not necessarily lead to learning, particularly if the solution is the product of a single individual. Problems can be solved, in other words, without generating a social learning process. The recurrence of this problem, or a variant of it, will require the presence of the original problem solver and, in this sense, the organization will not have built its learning capacity. Of course, the opposite is also true: learning can occur even though a targeted problem is not solved.

In using an action learning process in case based learning, it is, therefore, important to select problems, as the basis of the case, which simulate learning. In this regard, the following types of problems can form the basis for case development for action learning, since they have the tendency to demand learning:

- They are significant issues that matter to people in the organization
- They are complex in that the solution is not obvious
- They are multi-functional in that participants must work across boundaries
- They involve difficult people issues; that is, the problems are organizational, interpersonal and cultural as well as technical
- They are action-oriented, in that the goal is to do something, not just analyze the situation
- They are ill-structured, in that participants must frame and define the problem as well as solve it
- They invoke surprise, in that neither the data nor the results are completely predictable
- They are fuzzy in that the problem involves degrees of causality and actions
As the traits above indicate, the problems that are the focus of action learning processes tend to conform to what Russell Ackoff has called “messes”: situations that consist of complex systems or strongly interacting problems. The problems confronted in action learning, in other words, tend not to be neat and clean. In fact, most real organizational problems are messes. Messes, in Ackoff’s view, can be treated in one of four ways:

- Absolution or ignoring the problem and hoping it will go away
- Resolution or doing something that is good enough but not perfect
- Solution or doing something that optimizes the situation
- Dissolution or reframing the original problem in order that it can be addressed.

Action learning is not wedded to any particular problem-solving or decision-making process. In fact, a range of frameworks and techniques can be applied. Many of these have been discussed in several sections of this Handbook. What is key, however, is that the facilitator works with the group-assisting them in arriving at a problem-solving methodology that they will employ as part of the action learning process and providing training, where needed, at the outset and along the way. For example, should a group want to use computer-assisted problem solving processes, such as project management software, then there may be training that is required. Or, should the team wish to expand their creative range, then training in creative thinking tools may be appropriate.

This Handbook provides guidance on the use of many problem-solving methodologies. One such methodology that has direct and interesting applicability to problem solving in action learning teams has been developed by Kepner and Tregoe. The framework is particularly valuable for unearthing the true causes of problems. It is applied using the following steps:

Define the problem as perceived
Specify the expected performance and the actual performance. The deviation between the two is the problem.

Every problem leaves a distinctive fingerprint
Review the ‘is’ and ‘is not’ happening columns and ask what is unique about each of these two columns.

What changes have occurred?
What changes if any have taken place related to these distinctive qualities?

List the potential causes that could possibly explain the patterns in the chart

Test each potential cause against the data; that is explain the “is” and “is not”

Verify the causal analysis
Kepner Tregoe Problem Solving Model

Step ① Clearly define the problem, by exploring the difference between the ‘Should’ and the ‘Actual’

Should:

Actual:

Steps ② and ③ Gather data about the ‘is’ and the ‘is not’, what’s unique and changes.

<table>
<thead>
<tr>
<th></th>
<th>Is Happening</th>
<th>Is Not Happening</th>
<th>What’s Unique?</th>
<th>Any Changes?</th>
</tr>
</thead>
<tbody>
<tr>
<td>What?</td>
<td>What units or people are having the problem?</td>
<td>What units or people would you expect to have the problem but do not?</td>
<td>Anything distinctive about the units or people who have the problem and those that do not?</td>
<td>What changes might account for what is unique about this problem?</td>
</tr>
<tr>
<td>Where?</td>
<td>Where are the units or people having this problem? What is their place in the organization and geographic location?</td>
<td>Where are the units or people not having this problem?</td>
<td>Same question as above</td>
<td>Same question as above</td>
</tr>
<tr>
<td>When?</td>
<td>When are the units or people having this problem? In terms of time, particular types of occurrences or event point in a cycle or process?</td>
<td>When are the units and people not having this problem?</td>
<td>Same question as above</td>
<td>Same question as above</td>
</tr>
<tr>
<td>How much?</td>
<td>What is the problem’s fingerprint, the degree and unique pattern of the problem?</td>
<td>What could be the degree or pattern of the problem but is not?</td>
<td>What is distinctive about the degree or pattern of the problem?</td>
<td>Same question as above</td>
</tr>
</tbody>
</table>

Step ④ List the potential causes that could explain much of the data above.

Step ⑤ Test each potential cause against the data, trying to rule out those causes that do not satisfactorily explain the data.

Step ⑥ For the most probable cause(s), gather additional data, which could confirm or dis-confirm the cause before taking action.
As the Kepner Tregoe model illustrates, the way that one defines a problem exerts a powerful impact on the nature of causes that are determined, as well as strategies that are crafted to solve it. Action learning teams, in this regard, frequently face what seem to be intractable problems. These are problems that tend to be characterized by diametrically opposed polarities in positions, or potential outcomes. Issues such as whether to centralize or decentralize, use a team approach or hierarchical framework in management, follow or break the rules come to mind. Thinking in either/or terms is often necessary, particularly when stark trade-offs are presented and a definitive no-return action is called for. However, many problems are intractable, due to the way in which they are perceived.

Murray Hiebert and Bruce Klatt have developed a framework for testing the intractability of problems and searching for unrecognized synergies between what may appear at first glance to be starkly opposed solutions. They use a diagram to illustrate the relationships between polarities and ways in which complimentarities might be explored. The example explored in the chart below is whether to use a team or individual approach to management. The team pole can point to its upsides (positive benefits) and can also point to the potential downsides (negative impacts) of an individual approach. The individual pole can do the same by highlighting its upsides and pointing to the downsides of a team approach. This is the typical map of polarities.

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**Reframing Polarities**

**Pole 1:**

**Upsides:**
- Quick action – no need to involve others
- Encourages initiative
- Allows for unique working styles
- Decisiveness

**Downsides:**
- Loss of teamwork
- Ego centered
- Poor knowledge capture for organization
- Assumes implementation
- Restricted field of ideas

**Pole 2:**

**Upsides:**
- Encouragement from others
- Collaborative idea generation
- Links to implementation strong
- Whole greater than sum of parts
- Temporary system

**Downsides:**
- Group think
- Time consuming
- Personality problems
- Potential weak accountability

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There are two strategies that flow from using this tool. The first is to maximize the upsides of a pole and minimize downsides. The second strategy is to flow with the arrows and maximize the pole by supplementing it with upsides from the opposite poles and minimizing the downsides of each. In situations in which cases are used, there is often an unstated preference for the exercise of analysis that forces a choice between polar opposites. The assumption is that there always exists an optimal solution to a problem presented in a case. The polarity sensing framework, described above, provides a tool through which to explore the degree to which choices between opposites may not, indeed, be optimal, in terms of the mode of problem solving.

Action learning teams and processes are typically involved, not only in assessing problems and crafting solutions, but also in the development of approaches to change within organizations. A useful instrument, developed to assist in the process of designing and influencing change, is the “readiness for change technique” created by Bruce Klatt and Murray Hiebart. The tool links key components of the process of change with the state of readiness for change. As in other tools used in action learning, the change readiness instrument is also quite applicable as a technique to be applied in case based learning. The tool provides a systematic way of examining the readiness of an organization to engage in change, or to examine the change implications of a particular proposal or strategy.

It is possible to arrive at a change readiness score by using the formula displayed at the bottom of the chart. Klatt suggests that a score of less than 14 indicates that the proposal or strategy is a “winner” and that the organization should adopt it. If the readiness index is 14-18 then thorough planning is required, including a preparedness to confront difficulties. Scores of over 19 suggest that there will be considerable difficulty and obstacles faced in the change process and it will require substantial time to work at removing barriers and building support.

Action learning occurs in a team-based working context in which complex issues are being addressed, often involving various stakeholders. Managing the team process is often a challenging exercise in and of itself. This is also the case when using live cases and a team-based approach to them. A tool frequently used to assist this process is called RASCI. It provides a way for managing and strategically focusing the work of teams.

The RASCI acronym stands for the following:

- **R** = Responsible. Who is ultimately responsible for this action or result?
- **A** = Approval or authority. Who needs to make the final decision?
- **S** = Support or stakeholder. Whose commitment is needed for success?
- **C** = Consult. Who needs to be consulted for their knowledge, ideas or input? This is different from requiring approval.
- **I** = Inform. Who needs to be informed before the action is taken and after the action is taken?
## Change Readiness

<table>
<thead>
<tr>
<th><strong>Low-hanging fruit</strong></th>
<th><strong>Usual hurdles</strong></th>
<th><strong>Brick walls</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ready for change</td>
<td>Change will require energy and effort</td>
<td>Entrenched against change</td>
</tr>
<tr>
<td><strong>1. Nature of the Problem or Opportunity</strong></td>
<td>❑ Problem is visible and hurting.</td>
<td>❑ Problem causes concern for some, but not others.</td>
</tr>
<tr>
<td><strong>2. Cause of the Problem</strong></td>
<td>❑ Underlying cause(s) can be isolated and fixed.</td>
<td>❑ Multiple underlying causes; current talk is about symptoms.</td>
</tr>
<tr>
<td><strong>4. Support of Primary Sponsors</strong></td>
<td>❑ Strong management sponsor; widespread support.</td>
<td>❑ Support by some stakeholder groups, but not by others.</td>
</tr>
<tr>
<td><strong>5. Support from Other Stakeholders</strong></td>
<td>❑ Stakeholder groups are supportive, and the change does not threaten them.</td>
<td>❑ Some stakeholders benefit from the status quo, while some are threatened.</td>
</tr>
<tr>
<td><strong>6. Systemic Barriers</strong></td>
<td>❑ Interlinking systems would not require additional changes.</td>
<td>❑ Some straightforward changes needed in interlinking systems.</td>
</tr>
<tr>
<td><strong>7. Funding</strong></td>
<td>❑ Funding available.</td>
<td>❑ Need some additional funding.</td>
</tr>
<tr>
<td><strong>9. Speed of Implementation</strong></td>
<td>❑ Can be implemented quickly, with little disruption.</td>
<td>❑ Implementation within a few weeks to a few months, or can be phased in.</td>
</tr>
<tr>
<td><strong>10. Impact on People</strong></td>
<td>❑ Very little skill training or restructuring needed.</td>
<td>❑ Some retraining and/or restructuring needed.</td>
</tr>
<tr>
<td><strong>11. Within your influence</strong></td>
<td>❑ You can personally coach or troubleshoot the change.</td>
<td>❑ You need the leadership of a few others and you can indirectly coach the change.</td>
</tr>
</tbody>
</table>

Add Total Number of Checkmarks:

A.  
B.  
C.  

Your Change Readiness Index = (A x 1) + (B x 2) + (C x 3) =

A RASCI chart provides a vehicle for listing the actions or decisions required and running each through the RASCI dimensions.

**RASCI: A Planning Tool for Workgroups and Teams**

Follow these steps to use the RASCI chart.

1. Get commitment for using the RASCI charting process by showing group members a relevant example.
2. Define or clarify how the RASCI chart will be used.
3. Decide on a format and complete the matrix by:
   - brainstorming the action steps that need clarity.
   - refining, clarifying, and ordering the action steps.
   - start by agreeing who has the ‘R’ (responsibility for the goal).

Goal: Prepare Social Impact Statement for Dam Project

<table>
<thead>
<tr>
<th>Actions</th>
<th>By when</th>
<th>R</th>
<th>A</th>
<th>S</th>
<th>C</th>
<th>I</th>
<th>Specific others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review project for social impact areas</td>
<td>June 30</td>
<td>Pat</td>
<td>Bill</td>
<td>Native Groups</td>
<td>Residents</td>
<td>Director</td>
<td>Steering Group</td>
</tr>
<tr>
<td>Develop Social Impact Metrics</td>
<td>Sept. 3</td>
<td>Jean</td>
<td>Director</td>
<td>Native Groups Research</td>
<td>Residents</td>
<td>Press</td>
<td>Minister Deputy XZY Co.</td>
</tr>
<tr>
<td>Implement research</td>
<td>Oct. 10</td>
<td>Angus Consult Co.</td>
<td>Director</td>
<td>Native Groups Research Minister</td>
<td>Residents</td>
<td>XZY Co.</td>
<td>Minister Deputy Press</td>
</tr>
<tr>
<td>Finalize and Present Report</td>
<td>Dec. 1</td>
<td>Team</td>
<td>Director</td>
<td>Pre briefing</td>
<td>Residents</td>
<td>Press</td>
<td>Legislature Fed Govt</td>
</tr>
</tbody>
</table>
**Scenario Thinking**

Action learning teams are frequently used to explore strategic alternatives for an organization, or explore the roots of an issue or problem confronting an organization. One of the tools often deployed in such situations, and which has applicability to case based learning, is scenario thinking and planning. Unlike traditional forecasting methods, that attempt to predict trends and exert management control over uncertainty, scenario thinking and planning embraces uncertainty and engages in a process of prospective thinking about alternative possibilities. Arie De Geus, former head of planning for Shell, describes scenario planning as creating “memories of the future.” The purpose of scenarios, stories about the future, is not to produce predictions, or even necessarily to enhance planning, but to change the mindset of the people that develop and use them.

De Geus describes the learning process that accompanies the presentation, examination and review of scenarios as unfolding in a cycle.

When a scenario is first presented, or explored, in a meeting, the initial discussion centers on trying to figure out what the scenarios might mean to people in attendance. In this context, people begin to create a mental model of the situations and their implications generally for the organization. This is followed by a process of embedding, in which there is a more focused effort to apply and test the scenarios, in terms of their applicability to the real world and operational concerns of the organization. This is followed by a process of reaching a conclusion or consensus. Following this, action is on the agenda and the operational world of the organization is set in gear. This, of course, is an idealized representation of decision-making and should not be taken as unfolding in a linear sequence.

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Scenarios are received and interpreted through two modes of learning, each of which was developed through extensive research by the Swiss psychologist Jean Piaget. The first process is assimilation, in which the person attempts to incorporate the scenario stories into their pre-existing mental structures. Does the story fit with what is already known by the world? The second learning process, sparked when there is discordant information and ideas that do not fit pre-existing mental models, is accommodation. In this process, the ideas and metaphors in the scenarios push against the skin of the person, or group’s, mental model in such a way as to change that very mental construct. This has also been called breakthrough learning, or in more vernacular terms “thinking outside of the box”. Good scenarios spark both learning processes and this is one of their cardinal virtues.

Scenarios focus less on predicting outcomes and more on understanding the forces that might eventually produce an outcome. Less stress is placed on numbers and more on informed insight. Scenarios attempt to expose discontinuities that surface when alternative futures are created. Scenario thinking and planning can benefit the organization in a number of ways:

- Clarify present actions in light of the future
- Explore multiple and uncertain futures
- Strengthen a global and systemic approach to problems and opportunities
- Take qualitative factors into account in decision making
- Stimulate organization learning and the sharing of knowledge
- Provide a context for collaborative knowledge creation and sharing

What processes and tools can be used to develop alternative scenarios? There are many methodologies, including computer-based and supported systems, but the discussion below highlights a manual-based technique that can be used by action learning teams in real organizational settings or case based learning contexts.

- **Be Clear About the Purpose**

  The starting point in the development of scenarios is to be clear about the purpose of the exercise and process. The purpose is to gain an understanding of events, processes and other forces that could affect the strategic future of an organization or issue. For these forces to be significant, they must be both important and uncertain.

- **Generate Ideas**

  In this stage, each participant in a group should be asked, using post-it notes as the media for response, to think of things (events, processes etc.) that might occur in the future and have an

effect (positive or negative) on the nature and intensity of the issue at hand. One idea per post-
it note is allowed. It is advisable to set some limit on the number of post-it notes per person
(10 is usually a good round figure). Following this all the post-it notes of all participants are
pasted on a wall.

There are a number of techniques that can assist the process of generating ideas at this stage of
the process:

➢ The PEST Framework
   The acronym PEST stands for Politics/People, Economics/Environment, Society
   and Technology. These are used as headings in the development of initial ideas to
   ensure a broad range of themes are confronted.

➢ Flip-Flops
   Flip-flops are events that behave like switches: they will either happen or not hap-
   pen. Each flip-flop can serve as a trigger to two futures: the one where the event
   occurs and the one where it does not. Flip-flops are processes that reach a critical
   mass in which two trajectories are possible. For example, sometimes a recession
   can be a flip-flop at a point in time: either it will happen or it will not. Participants
   using this technique are asked only to generate flip-flops on their post it notes.
   Alternatively once the initial PEST framework has been used a second round of
   idea generation focused on flip-flops can be set in motion.

☐ Matrix Thinking

The next step in the scenario building process involves the assignment of the ideas on the post
it notes to one of four quadrants in a matrix or grid. One axis of the grid describes the degree
of uncertainty of the event, or idea, and the other the importance of the event to the organization or issue at hand. The diagram illustrates the matrix. At this stage there is set in motion an extended discussion by participants on where their ideas fit in the grid. An idea that perhaps has what can be called “fuzzy characteristics”, that is belonging to a degree in more than one quadrant, is placed on the appropriate line. Hence, it is possible to create a parallel grid using fuzzy logic to highlight the grayness of the future.

**Draw Concept Maps for Each Quadrant**

The next step in the process is to focus, without any evaluative emphasis, on the ideas and events placed in each quadrant. In this process, the group should attempt to draw a concept map that shows the linkages (causal or otherwise) between the events listed in the quadrant. Four concept maps should be drawn. In reviewing the concept maps, the group should focus, not only on the interrelationships between ideas, but also on searching for the defining underlying principle, or theme, that underpins the map. For example, in a quadrant there may be a number of things listed: inflation rises, unemployment rises, currency value falls, etc. The underlying principle in this map might be recession or depression.

**Build Storylines**

In this step, using the concept maps as a guide, the process entails building a storyline for each quadrant. This is a highly imaginative process, driven by intuitive insight as much as analysis. Two techniques can assist in this endeavor. The first is to develop the storyline using a bulleted list of the flow of events —that is highlighting the sequence and impacts.

The other technique is to treat the development of a story as similar to the process of writing a play. In this regard, the story building process is guided by addressing the following themes:

- Act: What will happen?
- Scene: When will it happen?
- Agent: Who is going to make it happen?
- Agency: What will make it happen?
- Purpose: Why will it happen?
- Impact: What effects will it have?
- Reaction: What reactions will result from it happening?

**Label the Story**

At this stage, the process involves the development of a label for the story. What is its title? In this process, it is advisable to search for one or two words that capture the theme of the story. For example: The End, New Beginning, Purgatory, and Business as Usual could be used to label four scenarios that describe the economic future of a country.
Tell the Story

Once completed, the stories are “told” to the entire group, with discussion of their implications for the issue at hand or the organization. Further embellishment of the story is possible by engaging the group in a discussion and analysis of the degree to which each story fits the organization at the point in time. Much of the discussion in this phase should be a form of illuminative inquiry, examining how the scenario shed light on the issue or on the strategic future of the organization.

Plan Backward

Formal uses of scenarios often involve a process described as backward planning. This entails a detailed examination of the strategies that would have to be in place to bring about each scenario. This can lead to the development of an actual strategy to bring about the story or to prevent it from occurring.

Scenario thinking is a tool with obvious applicability to the process of case based learning and has benefits in terms of learning that are equal to those practices in live organizational settings.

The Presentation

The end product of the action learning process is a presentation to the Executive on the issue or problem that the team was asked to address. This is a step not to be taken lightly and a good deal of the work of the team should go into the design of the presentation, including practice sessions. In many cases the quality of the presentation determines the reception given to the ideas presented. In the simulation instructors may want to involve outsiders who play the role of board or other corporate members to interrogate the presenters through questions and counter examples.

In an action learning process, the end point presentation is serious business and teams spend a considerable amount of time in designing, developing and practicing the actual presentation. In case based learning scenarios using action learning this concentration and skill building should also be taken seriously. The guide below provides a framework through which to think through the development of presentations in action learning contexts.
# Presentation Guide

<table>
<thead>
<tr>
<th>Goal</th>
<th>What Do You Want To Achieve?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>❑ Decide upon the goal of your presentation</td>
</tr>
<tr>
<td></td>
<td>❑ Write the goal as follows: At the end of my presentation, I want others to know and do the following things........</td>
</tr>
<tr>
<td></td>
<td>❑ Boil the goal down to one thing!</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Audience</th>
<th>Who is your audience?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>❑ Answer these questions about the audience:</td>
</tr>
<tr>
<td></td>
<td>* Who are they? How many are there?</td>
</tr>
<tr>
<td></td>
<td>* What do they already know?</td>
</tr>
<tr>
<td></td>
<td>* How supportive will they be of your goals?</td>
</tr>
<tr>
<td></td>
<td>* Will they expect to participate?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Design</th>
<th>What is your presentation plan?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>❑ Tell them what you are going to tell them</td>
</tr>
<tr>
<td></td>
<td>❑ Tell them</td>
</tr>
<tr>
<td></td>
<td>❑ Tell them what you told them</td>
</tr>
<tr>
<td></td>
<td>❑ Practice and get feedback before giving the presentation</td>
</tr>
<tr>
<td></td>
<td>❑ Debrief</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opening</th>
<th>How will you get attention?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>❑ What will be the attention-getting hook?</td>
</tr>
<tr>
<td></td>
<td>❑ Give an overview before launching</td>
</tr>
<tr>
<td></td>
<td>❑ Tell them the type of participation you want</td>
</tr>
<tr>
<td></td>
<td>❑ Do not apologize for being there</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Content</th>
<th>How will you structure your themes and ideas?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>❑ Have a logical flow</td>
</tr>
<tr>
<td></td>
<td>❑ But be prepared to flow with the interest and questions</td>
</tr>
<tr>
<td></td>
<td>❑ Use visuals as much as possible</td>
</tr>
<tr>
<td></td>
<td>❑ Stop periodically</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Closure</th>
<th>What do you want?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>❑ Summarize your key points</td>
</tr>
<tr>
<td></td>
<td>❑ Perception check</td>
</tr>
<tr>
<td></td>
<td>❑ Ask for action/decision</td>
</tr>
</tbody>
</table>
Evaluation

Since action learning is a methodology applied to solving real problems or making a difference in the organization and the people who work within it, evaluation forms a core element. One evaluation approach that is used in action learning is derived from Kirkpatrick and includes a process that examines effectiveness and impact from four angles:

- **Evaluating Reactions**
  The key question addressed in this component of the evaluation process is: How much did the team members like the process? This assesses the attitudes of the team members to various dimensions of the process and a sample form is provided opposite.

- **Evaluating Learning**
  This focuses on changes in what team members know or can do as a result of participation in the action learning process. The questionnaire opposite illustrates this dimension. It is also possible, and indeed desirable, for team members to keep a journal of the learning experiences and processes throughout the action learning sequence.

- **Evaluating on-the-job behavior change**
  This centers on how much of the learning acquired in the action learning process team members applied to their jobs.

- **Evaluating organizational results**
  This dimension of the evaluation process examines the impact of the action learning process on the role and functioning of the organization itself.

Unlike committees, action learning teams are temporary systems. They are formed to address specific issues and problems and are disbanded following that process. However, the members of an action learning team often serve as organizational resources and mentors for future action learning groups.

Rothwell has developed the following questionnaire to evaluate the impact of action learning.
A Questionnaire to Assess Perceptions of the Value of an Action Learning Experience

Directions: As this Action Learning experience draws to a close, take a few minutes to reflect on what you have gained from it. Please answer each question below in the space provided. When you finish, turn in your completed questionnaire to the team facilitator.

1. In what ways were important organizational needs met as a result of the Action Learning effort?

2. How well were organizational needs met? Were problems solved?

3. In what ways was the team as a whole developed as a result of the Action Learning effort?

4. How well did team members increase their cohesiveness and build new alliances across different jobs or organizational parts?

5. In what ways did the team members build an increased awareness of group process or group dynamics?

6. How well were group process skills, understanding, and dynamics within the organization enhanced as a direct result of the Action Learning team's effort?

7. In what ways were individuals developed as a result of the Action Learning effort?

8. How well were individuals developed as a result of the effort?
A Questionnaire to Measure Team Member Perceptions About the Value of an Action Learning Experience

**Team Name (if applicable)/Date**

*Directions:* This evaluation form is intended to assess how much you liked participating in the Action Learning team experience. Its goal is to improve future team efforts. Reflect on your team experience. Then, in the left column below, please fill in the box with the number which most accurately describes your reactions to the Action Learning experience. Please respond as quickly as possible, because your first impression is likely to be the most honest. *Do not sign your name.*

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Slightly Agree</th>
<th>Slightly Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Purpose, Objectives and Structure**

1. The Action Learning team seemed to be focusing on a problem or issue of importance to the organization.

2. The team members were able to establish clear objectives for the team.

**Team Process**

3. Team members worked together cohesively and effectively to achieve the team objective(s).

**Management Support**

4. The team enjoyed sufficient support from management.

**Organizational Communication**

5. The team was effective in communicating its efforts – and the reason for them – to the organization.
Supportive Environment

6. The team facilitator helped to maintain a psychologically supportive environment during the Action Learning team experience.

Team Organization

7. The team was effective in organizing itself for action.

Team Capability

8. I feel that, collectively, the team possessed the expertise required to solve the problem that it was challenged to solve.

Self Development

9. I feel that during this Action Learning team experience I built important competencies that I will need to succeed in this organization in the future.

Group Development

10. I feel that, collectively, the team built important competencies and that individuals were each developed by the experience.

Comments

11. *What specific areas for improvement*, if any, were apparent to you from this Action Learning team experience? If you could wave a magic wand and make them better, how would you go about it and why?

12. *What specific areas particularly benefited* from this Action Learning team experience? How did you benefit most? How did the team benefit? How did the organization benefit?
Rebirth of the Positive: Appreciative Inquiry in Case Based Learning

There is a tendency today to highlight deficiencies, problems and difficulties. So much so that the word “problemholics” has been coined to describe people who are obsessed with, or enamored by, problems in personal and working life. Problems do exist. On that matter there is no doubt. But the resolution of problems, paradoxically, may not always lie within a problem-solving methodology. In this regard, what has come to be known as appreciative inquiry offers an alternative framework for developing positive change in organizations and other settings.

Appreciation does not mean affirmation, but focusing, within a field of choice, on the positive. The appreciative approach is about choosing (or negotiating) to construct organizations with an initial intentional empathy. It seeks to transform the culture and systems of an organization so that instead of seeing itself in largely negative terms, leading to a locked in negative construction of itself, it comes to see itself as having within it the capacity to enrich and enhance the quality of life of all stakeholders.

The idea that organizations construct their own images of themselves, and then reify that image as a basis upon which action is founded, links very much to the various metaphors which are used to signal and define the nature of particular organizations. Consider two of the most predominant metaphors descriptive of organizations. 112 The organization is often viewed as a machine, in which parts can be segregated and operated upon to improve overall efficiency. This image, of course, fails to grasp the systemic properties of systems described earlier. Replace this machine image with the metaphor of the organization as an organism, and one comes to see things quite differently. For example, it is not possible to strip down an organism into component parts without losing the vitality and source of life.

Other metaphors have arisen in recent years, which add to the perceptual frames through which people see organizations and attempt to plan for and manage them. If one sees organizations as political systems, the focus is upon how power is exercised and mediated within the organization and the role of alliances in decision making. The metaphor of culture asks us to perceive organizations in terms of the ethos and ritualized ways of behaving of people. Talk of organizations as flux and, of course, a whole new set of meanings is introduced.

Metaphorical descriptions of organizations are no accident. The reason is that different people choose to see their organizations in particular ways. Why they choose to see their organizations in particular ways is a core concern of appreciative inquiry. The power of metaphor, as

Charles Elliott so perceptively comments, “to shape the way we understand (at the intellectual level), relate to (at the affective level) and perform in (at the interactive level) our organizations is almost impossible to exaggerate.” Indeed, it is the function of metaphor to both assist in the explanation of complex phenomena, and to reveal, in that process, dimensions of existence which may be hidden by the shield of existing metaphors.

Elliott introduces the metaphors of organization as texts that can be read, as in literary scholarship, in many ways: as narrative, history, memoir, fiction and self-disclosure by the author.

When seeing organizations as text, three tasks confront analysis. We can ask whether there are different ways in which the text can be read. Second, we can inquire into how different people, inside and outside the organization, are reading it. Finally, we can explore what might be the most creative way to read the organization.

Central to appreciative inquiry is the principle that there is no right way to “read” the organization. Many organizations get into trouble because they assume that there exists a common textual reading of the organization. Mission and vision statements and strategies sometimes flounder precisely because this assumption is not taken into account and looked at in a critical fashion. Appreciative inquiry, in this context, searches for the best experiences of all stakeholders—that is, those that the stakeholders themselves read as best—and attempts to move the organization in that direction. In doing this, appreciative inquiry looks at both the syntax of the organizational text, the rules that govern how it operates, and the grammar, or the larger meaning of the image. Here again, some managers are very well versed in the syntax of an organization, but fail to grasp its grammar and the parallel possibility that, even with a common understanding of syntax, there may be alternative grammars at work.

Appreciative inquiry encourages all stakeholders to make explicit their own understandings of the grammar of an organization. It helps them ask and answer the following questions:

- What gives meaning to what I am doing here?
- What gives meaning to our common endeavor?
- What does it all mean?
- When is it most meaningful?

Appreciative inquiry probes individual and group memories and imaginations in arriving at answers to these questions.

One of the central ideas of appreciative inquiry is what has been called the heliotropic principle, which asserts that organizations operate like plants and move toward what gives them

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life and energy. On what is this claim based? The first argument emerges from the idea of metaphorical constructions of organizations. If we read the text of our organizations with a particular set of expectations within an overall image, then the organization will move in the direction of those expectations. Secondly, by injecting a new image, or alternative metaphor, into the life of an organization, one prepares the ground for it to shift toward that image. Change the discourse, in other words, and you change the direction of movement of an organization. Thus, if the images and readings offered in an organization are more positive, then the organization itself will become more positive. Research in education into what has been called the Pygmalion effect has demonstrated the role that changes in expectancy and anticipation within new images have on the actual performance of students.114

Once one sees that we are free to read the text of the organization in new and more life-enriching ways without being overly anxious about what is there, then there is a need for a participative process that will allow such a reconstruction to take place. Bottom-up participatory processes form one of the key elements in appreciative inquiry, since there will exist, in any organization, different readings of its syntax and grammar.

Appreciative inquiry, at its root, involves a cooperative search for the best in people, their organizations and the world around them. It encompasses detailed examination and discovery of what gives a system “life” when it is most effective. It involves the art of asking questions the answers to which help to strengthen the system’s positive potential. Discovery, dreaming and design replace negation, criticism and diagnosis of problems. Underlying appreciative inquiry is an attempt to uncover the “positive change core” in an organization and to link this to the agenda for change and transformation.

Appreciative inquiry utilizes, in its methodology, what is called a 4D Cycle. The 4D cycle uses interviews, and occasionally a summit involving all key stakeholders, to derive key information and themes.

In the discovery phase interviews and group sessions are developed and focus on the following questions:115

1. Reflect on your time with the organization
   • What have been the high points for you?
   • Select one high point, a time when you felt most alive, most happy, a time when you felt you were making a difference, and describe this for me

114 D. Rosenthal, Pygmalion in the Classroom (NY: Prentice Hall, 1985)
115 Charles Elliott, Appreciative Inquiry, Melish and Associates, 2000
2. Cooperative Relationships
   • Identify a scenario, which you feel demonstrates the positive aspects of working together. What was the scenario? Who was involved and why? What were you doing? What were other people doing?

3. Types of Communication
   • What different types of communication occur across the organization?
   • What do you value most about effective communication?
   • When does this happen to you?
   • Who and what are involved in the best types of communication?
   • Why is effective communication good for the organization and good for you?

4. Hopes for the Future
   • What does the new organization have the capacity to become?
   • How could working together make a difference?
   • What do you see as priorities?
   • What part could you play in making these priorities happen?

5. What do you value most about yourself, the people you work with, and the organization?

6. Describe three alternative positive images for the future of the organization.

**Appreciative Inquiry: The Four D Cycle**

- **Discovery**
  What gives life the best of what it is?
  *Appreciating*

- **Destiny**
  How to empower, learn, adjust and improvise?
  *Sustaining*

- **Design**
  What should be the ideal?
  *Co-constructing*

- **Dream**
  What might be?
  *Envisioning Impact*

- **Affirmative Topic Choice**
  *
In the *dream phase* of the cycle the focus is on imagining what might be. Participants are invited to envision results and engage in search for futures. Information from the discovery phase is used to speculate on possible and desired futures for the organization. The key to this process is linking statements of the desired future to the positive energy listed in phase one.

In the *design phase* participants co-construct the structures they think should be based upon the articulation of direction, principles and strategic frameworks. Questions relate to how to operationalize the dream. This process if often facilitated by using the 7 S’s model of organization as a template. The diagram below illustrates an expanded 9 S’s organizational template that can be used in the design stage. The tool is used to examine possible visions and strategies in relation to the 9 key components of an organization.

In the *destiny phase* of the cycle, the focus is on converting the strategic intent of the design phase into operational principles and performance commitments and indicators.

As the diagram opposite illustrates, there is a marked difference between a problem-solving and an appreciative orientation to issues and opportunities facing people and the organizations in which they work.116

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### Strategic Assessment: The 9 S’s Framework

<table>
<thead>
<tr>
<th><strong>Strategy</strong></th>
<th>How will this initiative affect the strategy of the organization, my work group? Will our strategy have to change? In what ways?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structure</strong></td>
<td>How would people be most appropriately organized to achieve this initiative? How appropriate is our structure to meeting the goals of the initiative?</td>
</tr>
<tr>
<td><strong>Sensing</strong></td>
<td>What environmental factors enable or constrain this initiative? How can we better understand and acquire information on these factors? Does the initiative require new ways of scanning the environment?</td>
</tr>
<tr>
<td><strong>Systems</strong></td>
<td>What information processes, communication and measurements will need to be created or adjusted to support this initiative?</td>
</tr>
<tr>
<td><strong>Shared Values</strong></td>
<td>What shared values are implied by this initiative? How do these shared values fit with the current shared values in our organization? Are changes required?</td>
</tr>
<tr>
<td><strong>Style</strong></td>
<td>What leadership style supports/hinders this initiative? Ideally, what leadership style is needed? How can it be fostered?</td>
</tr>
<tr>
<td><strong>Skills</strong></td>
<td>What knowledge and skills in the organization exist or need to be developed to support this initiative? How best can these be developed?</td>
</tr>
<tr>
<td><strong>Sending</strong></td>
<td>What delivery system is best suited to meeting the goals of this initiative? Are changes required in our current delivery system? How can these be made?</td>
</tr>
<tr>
<td><strong>Staff</strong></td>
<td>What kinds of people are needed to support this initiative? Do we have them? How can we get them?</td>
</tr>
</tbody>
</table>

### Problem Solving

1. **Identification of Problem**
2. **Analysis of Causes**
3. **Action Plan-Treatment**
4. **Basic Assumption:** An Organisation Is a Problem To Be Solved

### Appreciative Inquiry

1. **Appreciating and Valuing the Best of What Is**
2. **Envisioning What Might Be**
3. **Dialogue About What Should Be**
4. **Basic Assumption:** An Organisation Is a Mystery To Be Embraced
Learning with the classical case study method has been driven predominantly by a problem-solving and analytic framework. The purpose has typically been to break a case down into its component parts and key driving factors and isolate the critical issues. From this process of breaking things down, strategies for solving problems are evolved. There is no question that problem solving is a key element in case based learning and it deserves to play a major role in the process. However, an excessive focus on problems and analysis can blind one to the potential for change, which flows from adopting a different frame. The appreciative inquiry framework provides one such frame and should be explored as a mode for engaging cases. This is particularly so in addressing live cases in which real people are interviewed and learning teams examine real settings. Naming and appreciating the positive and incorporating that dimension into the reading of organizations can have a powerful impact. The experience of doing so, regardless of the outcome, has a great lesson to teach all of us.
One of the most important and transferable skills acquired through case based learning involves presenting and communicating the results and findings of the case analysis. In the real world, these are critical skills, for they relate to the ability to communicate clearly and persuasively. Many a good idea or analysis has failed to see the light of day because of the inability of a person to be able to communicate to others and convince them of their views and supporting analyses.

In developing their presentations, learners can be assisted if they follow a clear framework. There are two basic forms of presentation of case analyses: written and oral. The type of preparation and skill involved in each differs.

**Written Case Presentation Formats**

Below are a set of alternative written presentation structures which can be used in case reporting:

1. **Summary**
   - Purpose
   - Scope
   - Conclusions
Recommendations
Introduction
Body
Appendices

2. **Problem statement**
Factors causing the problem
The effects of the problem
Examination of possible solutions and their implications
Conclusions
Recommendations
Appendices

3. **Title Page**
Table of contents
List of exhibits
Summary of recommendations
Background material and facts
Statement of the problem
Analysis
Solutions and Implementation
Appendices

4. **Principal message**
Why it was chosen
Why others were not chosen
Evidence in support of the analysis

Regardless of the presentation format which is used, the following are useful hints in the actual writing of the analysis:

- **Write simply:** Complexity of expression does not equal depth
- **Write briefly:** Use the minimum number of words to capture your ideas
- **Avoid wordy phrases**
- **Reduce excessive qualifications:** Be decisive if you can.
- **Add variety:** Create contrast in your writing
- **Think of the audience:** Ask yourself: “Will they be able to understand what I am trying to say?”
- **Use graphics:** A picture is worth a thousand words.
Some Advice from Learners

Fred David is the author one of the most popular texts in Strategic Management.117 As part of the most recent revision of the text, David asked students who used the text, and studied the cases contained therein, to provide some hints to future students on ways to effectively engage in case based learning. The students offered over 50 separate pieces of advice. A sample of these “pieces of advice” is provided below, since they reflect the actual experience of students in case based learning:

- View your case analysis and presentation as a product that must have some competitive factor to differentiate it favorably from the case analyses of other students.
- Prepare your case analysis far enough in advance of the due date to allow sufficient time for reflection and practice.
- Develop a mindset of “why”, continually questioning your own and others’ assumptions and assertions.
- The best ideas are lost if not communicated to the reader or the audience. So as ideas develop, think of how you would communicate them.
- Maintain a positive attitude about the class, working with problems rather than against them.
- Other students will have strength in areas that will compliment yours. Develop a cooperative spirit with the class.
- Have a good sense of humor.
- Capitalize on the strengths of each member of the group and work as a team.
- Become very familiar with the library.
- Set goals for yourself and your team.
- Be prepared to work hard.

117 F. David, Strategic Management (NY: Prentice Hall, 1997)
To uncover flaws in your analysis, have the group run through a trial cross-examination.

Listen carefully to what others say. Understand before you criticize; adaptation and flexibility are key skills.

Do not confuse symptoms with causes and do not develop conclusions prematurely.

A picture speaks a thousand words.

Learn from past experiences and strive constantly to improve.

In case discussions, do not allow personality differences to interfere.

Do not take yourself too seriously.
Conclusion

People the world over have to make decisions, engage in never ending problem solving, work collaboratively with others, negotiate agreements and understandings, interpret and be able to work in increasingly diverse cultural settings and cope effectively with change. The case based approach to learning is one technique for simulating this dynamic working world and preparing people to cope with its challenges, problems and rewards. Cases, though, will always be one step removed from reality and, indeed, that is one of their virtues. They offer the opportunity to step back, pause, reflect and explore ideas and the motivations and aspirations of people. Like a good movie, play or conversation, they stimulate the imagination and energize the emotions.

But the true test of a case, and case based learning, is what happens in the real world after the experience with a case. Building bridges between case based learning and action in the real world is not only a challenge for the case method, but for the whole discipline of capacity building. It is the challenge of how to link knowledge to human improvement and freedom. This is the central focus of the actionable learning approach. While many consider this challenge to be a riddle, or a lofty and unattainable goal, the answer ironically lies in the challenge itself. Knowledge can only lead to human betterment and freedom if it is energized through people. To modify John Lennon’s famous phrase somewhat, “people are the answer and you know what I mean”.

Appendix 1
Creative Problem Solving Techniques

Affinity Diagram

The Affinity Diagram is a technique to gather large amounts of data (ideas, issues, opinions, facts, etc.) and organize them into logical groupings based on the relationship among the data.

Improvement of Employee Training

Needs
- Requirement
- Panel of Experts
- Focus group
- Job changes
- Audience
- Processes
- Task
- New
- Job analysis

Development
- More practice session
- Modules
- Employee training materials
- Simulation
- Content sequence
- Authoring software
- Storyboard
- Statistics

Updating
- Review of literature
- Books
- E-mail
- Benchmarking
- Technology
- Workshop revision
- Library
- Internet
- On-line/Off-line search
- CD-ROM
- Newsletter
- Learning organisation
- Evaluation
- Critiques
- Compensation

Instruction
- ADD videos
- CBT
- Discoveries
- Role play
- On the job
- Validation
- EEOC complaints
- Records
- Discrimination
- Rooms

- Improvement of Employee Training
**Steps:**
1. Form a diverse team of 6-8 participants
2. Write the problem on a flip chart leaving out any detail for the mean time.
3. Participants record their ideas on cards, one idea per card.
4. After 15 minutes, collect the cards and randomly spread it out.
5. Participants sort the cards in silence and place related ideas into a grouping
6. Search a card in each grouping that capture the essence of that group and put it as a header. If a header card could not be found, team creates header card.
7. Repeat steps 3-6 to expand groupings create others, and gain more ideas.
8. Layout groups and creates and affinity diagrams. Place closely related groups together. Draw outlines for each group with a header card.
6-3-5 Method

This method generates and develops ideas by asking 6 participants to write 3 ideas on separate cards within 5 minutes. These cards are then passed along to other participants to refine or adding it with new ideas.

Steps:
1. 6 participants share a problem statement.
2. Each participant generates 3 ideas related to the problem statement and writes it each in a card within minutes.
3. Participants then pass the cards they have written to the person on their left.
4. Participants read all ideas passed to them, develop it or add new ideas, within 5 minutes.
5. Continue steps 3-5 until each participant receive back their written cards from the first round.
6. Cluster all ideas and record it.

Improve Customer Satisfaction  

<table>
<thead>
<tr>
<th>External</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey customers</td>
<td>No spare parts</td>
</tr>
<tr>
<td>Focus groups</td>
<td>Missing parts</td>
</tr>
<tr>
<td>Conduct interviews</td>
<td>Defective products</td>
</tr>
<tr>
<td>Random contact</td>
<td>Missing manual</td>
</tr>
<tr>
<td>Etc.</td>
<td>Etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Internal</th>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complaint file</td>
<td>Make callbacks</td>
</tr>
<tr>
<td>Check “returns” records</td>
<td>Be on time</td>
</tr>
<tr>
<td>Warranty claims</td>
<td>Forms filled out completely</td>
</tr>
<tr>
<td>Ask customer reps</td>
<td>No appointment errors</td>
</tr>
<tr>
<td>Sort correspondence</td>
<td>60 day follow-up</td>
</tr>
<tr>
<td>Reorder process</td>
<td>“Know your product”</td>
</tr>
<tr>
<td>Ask quality assurance</td>
<td>Accurate information</td>
</tr>
<tr>
<td>Shipping problem log</td>
<td>Check Code of Conduct</td>
</tr>
<tr>
<td>Etc.</td>
<td>Etc.</td>
</tr>
</tbody>
</table>
Checkerboard Method

The checkerboard method combines possible concepts, features, and capabilities to produce a new feasible product or service through plotting the interrelationship of these possibilities on a matrix.

**Steps:**
1. Construct a matrix of factors with the horizontal lines being a group of an attributed factor and the vertical lines with another attributed factors group.
2. Match all factors and rate its feasibility by indicating whether it has a high or low application potential. Remember that not every pairing is applicable.
3. Reach consensus for the completed matrix.

| Equipment          | Activity sensor | Smoke alarm | Security loop | Auto dial | Wake up | Door check | Pet check | Pet exit | Remote check | Room monitor | TV interface | Remote switch | Remote scanner | Gas on/off | Ring neighbor | Time lights | Message transfer | Inventory DB | Leave message |
|--------------------|-----------------|-------------|---------------|-----------|---------|------------|-----------|---------|--------------|--------------|--------------|--------------|--------------|-------------|------------|---------------|-------------|----------------|--------------|---------------|
| Phone              | △               | △           | △             | ○         | ○       | ○          | ○         | ○       | ○            | ○            | ○            | ○            | ○            | ○           | ○            | ○             | ○             | ○             | ○             | ○             |
| Video phone        | △               | ○           | ○             | ○         | ○       | △          | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             |
| Speaker phone      | ○               | ○           | ○             | ○         | △       | ○          | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             |
| Fax machine        | △               | △           | ○             | ○         | ○       | ○          | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             |
| Answering machine  | ○               | ○           | ○             | △         | △       | △          | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             |
| Alarm phone        | ○               | △           | △             | ○         | △       | ○          | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             |
| Intercom           | ○               | △           | △             | △         | ○       | △          | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             |
| Recorder           | ○               | △           | △             | △         | △       | ○          | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             |
| Call Distrib       |                 |              |               |           |         |            | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             | △             |
| Timer              | △               | △           | ○             | △         | △       | △          | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             |
| Transfer           | ○               | △           | △             | △         | △       | △          | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             |
| Scanner            | ○               | △           | △             | △         | △       | △          | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             |
| Call waiting       | ○               |           |               |           |         |            | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             | △             |
| Call forward       | ○               |           |               |           |         |            | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             | △             |
| Call block         | △               | △           | △             | △         | △       | △          | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             |
| Call priority      | ○               | △           | △             | △         | △       | △          | △         | △       | △            | △            | △            | △            | △            | △           | △            | △             | △             | △             | △             | △             | △             |

○ = High potential  △ = Low potential
Da Vinci’s Technique

Da Vinci’s Technique is a method of combining different sets of features from several parameters. The tool provides a way to develop many possible combinations of listed features, generating a range of new possibilities.

Steps:
1. Specify the challenge.
2. Make parameters of the challenge by asking question: “Would the challenge still exist without this parameter?”
3. Below each parameter list all its features you can think of.
4. Make random runs to combine these features. Gradually restrict it to combinations that appear to be the most attractive.

New Business Extension for Car Washes

<table>
<thead>
<tr>
<th>Method</th>
<th>Products Washed</th>
<th>Equipment</th>
<th>Product Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Full Cars</td>
<td>Sprays</td>
<td>Related Products</td>
</tr>
<tr>
<td>2</td>
<td>Self Trucks</td>
<td>Conveyors</td>
<td>Novelties</td>
</tr>
<tr>
<td>3</td>
<td>Hand Houses</td>
<td>Stalls</td>
<td>Discount Books</td>
</tr>
<tr>
<td>4</td>
<td>Mobile Clothes</td>
<td>Dryers</td>
<td>Edible Goods</td>
</tr>
<tr>
<td>5</td>
<td>Combination Dogs</td>
<td>Brushes</td>
<td>Cigarettes</td>
</tr>
</tbody>
</table>
Duncker Diagram

A Duncker Diagram helps in obtaining solutions that satisfy the criteria set up by the Present State/Desired State statements; but the difference is that Duncker Diagram points ways to solve the problem by making it alright NOT achieving the desired solutions.

Solutions
A Duncker Diagram classifies solutions as: General, Functional, and Specific. In this technique there are no right or wrong solutions but different ways of representing problems.

Steps:
The steps are similar with the Present/Desired State but differ in that you make two analyses with one that “Achieved Desired State” and the other “Alright Not Achieving Desired State”.
1. Suppose your present state is your current job and your desired state is a new job. In General Solutions make an Achieved Desired State, i.e. steps taken to obtain the new job (e.g. looking for the new place and arranging interviews), and an Alright Not Achieving Desired State, i.e. steps that would make you stay in your present job (e.g. being given greater autonomy).
2. Write down possible paths, or Functional Solutions, to the desired state that do not take into account the possibility of the solutions (e.g. I could handle the situation “only if” I were given greater autonomy).
3. Suggest a feasible Specific Solutions to implement the functional solutions.
Fishbone Diagram

An Ishikawa Diagram, or the fishbone diagram, because of its unique shape, is a way to visually organize and examine all factors that may influence a given situation by identifying all the possible causes that produce an effect.

Steps:
1. Write the problem in the fish’s head.
2. Identify major cause categories of the problems on the ribs.
3. Group minor causes around the ribs of major causes as the bone.
4. For each minor cause, ask “Why did this happen?” Place the response as branches of the appropriate bone.
5. Once all causes are identified and grouped around the appropriate categories, brainstorm for solutions and place the solutions on the right side of the rib.
Present State/Desired Technique

The present state/desired technique helps us identify where we are and where we want to go so that an appropriate path can be found to reach the desired objective. It also helps us to know whether the solution goals (desired state) are consistent with our needs (present state).

Steps:
1. Write the present status explaining where you are now.
2. Write a desired statement. In writing your desired statement, try to be quantitative where possible and avoid using ambiguous words such as “best”, “minimize”, “most efficient”, etc. because these words mean different things to different people.
3. Match your present state and desired state by addressing every concern in the present state and in the desired state.
4. Make sure that the desired state does not contain solutions for problem that are not in the present state.

Hitting ‘Em Where They Aren’t

The Situation: During WWII a number of aircraft were shot down while engaging in bombing missions over Germany. Many of the planes that made it back safely to base were riddled with bullet and projectile holes. The damaged areas were similar on each plane.

The instructions given to solve the perceived problem: “Reinforce these damaged areas with thicker armour plating.”

<table>
<thead>
<tr>
<th>Present State</th>
<th>Desired State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many bullets/projectiles penetrating aircraft.</td>
<td>Fewer planes being shot down.</td>
</tr>
</tbody>
</table>

Discussion: This is not a match because there are planes that are surviving that still have bullet holes. There is not a one-to-one mapping of all the needs of the present state being addressed and resolved in the desired state.

<table>
<thead>
<tr>
<th>Present State</th>
<th>Desired State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many bullets/projectiles penetrating aircraft.</td>
<td>Fewer bullet holes.</td>
</tr>
</tbody>
</table>

Discussion: These states are matched, but the distinction between the present state and the desired state is not clear enough. It may take only a single bullet hitting a critical area to down a plane.

<table>
<thead>
<tr>
<th>Present State</th>
<th>Desired State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many bullets/projectiles penetrating aircraft in critical and non-critical areas.</td>
<td>Fewer bullets/projectiles penetrating critical areas.</td>
</tr>
</tbody>
</table>

Discussion: These two statements now match and the distinction between them is sharp, opening up a variety of solution avenues such as reinforcing critical areas, moving critical components (e.g., steering mechanism) to more protected locations providing redundant critical components, etc.

Note: The original instructions given to solve the perceived problem would have failed. Reinforcing the areas where returning planes had been shot would have been futile. Clearly these were non-critical areas; otherwise these planes would have been casualties as well.
Problem Specification

Problem specification helps in making an orderly first step of collecting specifics and appropriate data for defining a problem statement that clearly indicates the link between an undesirable “as is” situation and the desired “should be” situation.

Steps:
1. Begin by discussing the current situation or “as is” situation. Write down all information that relates with the “as is” situation.
2. Think about the “should be” situation that is a situation desired as opposed to the “as is” state.
3. Write down more specific about the problem occurrence, i.e. when, where, what impact, who’s involved, or any other related information that are attached to the “as is” situation.
4. Think about how to close the gap between the “as is” and the “should be” situations by writing down how to solve each problem.
5. Develop a final problem statement that embodied all critical elements specified before.

<table>
<thead>
<tr>
<th>Quality of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem Specification – Quality of Service</strong></td>
</tr>
<tr>
<td>1. As is situation/condition</td>
</tr>
<tr>
<td>Service cycle time is 12 days. The customer satisfaction index rating is low and recalls average 7 per month.</td>
</tr>
<tr>
<td><strong>When</strong></td>
</tr>
<tr>
<td>3. Problem occurs</td>
</tr>
<tr>
<td>- At the end of the month (lost six months)</td>
</tr>
<tr>
<td>- Missed service calls</td>
</tr>
<tr>
<td>- All service areas</td>
</tr>
<tr>
<td>- Business districts</td>
</tr>
<tr>
<td>- 15% increase in customer complaints</td>
</tr>
<tr>
<td>- Service department technicians</td>
</tr>
<tr>
<td><strong>Impact</strong></td>
</tr>
<tr>
<td><strong>Related Information</strong></td>
</tr>
<tr>
<td>- Pareto analysis and customer satisfying survey results are available</td>
</tr>
</tbody>
</table>

5. Final problem statement
The previous six months’ service calls schedule produced a 15% increase of customer complaints. Causes appear to be lengthy cycle time (delays) and quality of service (recalls).
Process Mapping

Process mapping identifies and maps all cross-functional processes, organizations, metrics, and estimated processing time. It ensures a systematic understanding of the “as is” situation and improvement process.

Steps:
1. Assemble a team of cross-functional representative to develop the process map.
2. Decide the level of detail to be mapped, i.e., overview, most activities, and detailed-specific task.
3. Determine start and stop point.
4. Prepare four flip charts to input data, i.e., to list organizational activities in order of occurrence; to list major functions or activities in order of occurrence; to list review, audits, approval, and other decision making in order of occurrence; to list the measurements of process, results, resources, and customer satisfaction – in order of occurrence.
5. Map the complete process. Facilitator draws the process map as directed and checked by the team. Process sequences of organizations, major functions, review, and measurements are referenced in order of occurrence.
6. Revise the final map.

• Symbols and scale:

A - Optional level of detail for activities
B - Time scale: Months (M), Weeks (W), Days (D), Hours (H)
C - Four organizations performing activity concurrently

• “Connectors” example:

• A process map can be developed at the macro, mini, or micro level of an organizational process.
SIL

SIL is a German acronym for “successive integration of problem elements”. It generates ideas by progressively integrating previous ideas. This ensures that all ideas get a fair hearing.

Steps:
1. Each group member silently writes his or her ideas.
2. Two among them read one of their ideas out loud.
3. Remaining members try to integrate the ideas into one idea.
4. A third member reads and the group try to integrate it with the one formed in step 3.
5. Continue this reading the integrating process until all ideas have been read and integrated into one final solution.
Working Backward

Working backward is a method of solving a problem by assuming and imagining that your problem is solved then working backward. While conventional thinking urges us to think forward, one step at a time from a beginning point, the working backward method encourages you to move from an imaginary ideal solution and then think backward to the beginning point.

Steps:
1. Try to imagine and fantasize freely of the best possible solution to your problem and when you have reached one solution, write it down.
2. Make brief descriptions what are the advantages of reaching that solution.
3. List all details that you think would lead you to the imaginary solutions, such as situations, events, or people that would make it possible.
4. For each person, situation, or event, list specifically how each contributed to the outcome.
5. Ask yourself how those specifics could solve the problem.
6. Are there any deficiencies in the specifics and how to overcome it?
7. How to complete the gaps to realize the solutions? What do we need? Is there anything else left that we need to know?
8. Keep on asking about how to proceed to the next step. Work back until you arrive to the problem statement.
Brainstorming

Brainstorming is a method to identify a problem and find solution and opportunities for improvement in a team. It is based on the notion that unstructured interactive group process, brainstorming, generates more and better ideas than individuals could produce if they were working independently.

**Steps:**
1. A team of 6-10 people communicates brainstorming guidelines and time limit (15-20 minutes).
2. State session purpose and discuss specific problems or topics.
3. All members should express their ideas freely without having to think the quality of their idea. The key is that members should actively participate in the discussion.
4. Record all generated ideas.
5. When the team runs out of ideas, take some time to review and clarify each idea (but without having discussion).
6. Identify useful ideas.

**Improve Quality**

<table>
<thead>
<tr>
<th>Flip Chart 1</th>
<th>Flip Chart 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session 8/19/xx</strong></td>
<td><strong>Session 8/19/xx</strong></td>
</tr>
<tr>
<td><strong>Topic: Improve Quality</strong></td>
<td><strong>- Lack of proper jobs</strong></td>
</tr>
<tr>
<td>- More training</td>
<td>- Low job satisfaction</td>
</tr>
<tr>
<td>- Short due dates</td>
<td>- Specifications unclear</td>
</tr>
<tr>
<td>- Inexperience</td>
<td>- Lack of instructions</td>
</tr>
<tr>
<td>- No communication</td>
<td>- Low morale, motivation</td>
</tr>
<tr>
<td>- Missing information</td>
<td>- Lack of metrics</td>
</tr>
<tr>
<td>- What is a defect</td>
<td>- Involve customers</td>
</tr>
<tr>
<td>- Constant changes</td>
<td>- Stressful word</td>
</tr>
<tr>
<td>- No inspections</td>
<td>- Equipment problem</td>
</tr>
<tr>
<td>- Too much work</td>
<td>- Lack of data</td>
</tr>
<tr>
<td>- Many interruptions</td>
<td>- Need problem-solving team</td>
</tr>
<tr>
<td>- Group conflict</td>
<td>- No procedures</td>
</tr>
<tr>
<td>- Incorrect testing</td>
<td>END OF IDEAS</td>
</tr>
</tbody>
</table>
Imaginary Brainstorming

**Why use it?**
To allow teams or individuals to break traditional patterns of thinking that can prevent creative solutions.

**What does it do?**
- Allows teams to come up with ideas that are radically different from other brainstorming sessions.
- Helps teams to separate themselves from the practical details of the problem that may be restricting their creative ideas.
- The imaginary aspect allows people to share “wild and crazy” ideas they may normally keep to themselves.
- It can bring energy and fun to even the most mundane issue.

**How do I do it?**

1. **Define the goal or problem.**
   - As in Classic Brainstorming, the problem statement should be clearly understood by all team members.
   - Pay special attention to the structure of the statement. Make sure it contains at least a subject (*who’s acting*), verb (*the action*), and object (*who or what is being acted upon*). These will be the elements used in Step 3.

   **Sample Problem Statement**
   “How can we publish a book in half the time?”

2. **Generate and record ideas using Classic Brainstorming.**

   **Brainstormed ideas for the real problem**
   - Create a partnership with a printer
   - Outsource the cover design
   - Recruit a different author for each chapter
   - Partner with a design and publishing firm
   - Design cover internally
   - Assign someone to obtain copyright permissions throughout the project
Recruit reader panel members early!
- Reward/penalize the team for keeping to the schedule
- Identify the desired components from previous books
- Borrow from other internal publications
- Get customer input up front and throughout the project
- Resolve all design issues up front
- Prevent others from using committed desktop publishing resources
- No non-project-related commitments for authors
- Keep “it” internal
- Train/orient other editors early
- Assign proofreading to non-editors
- Examine alternate ways to produce reader panel versions
- More planning on graphics
- Sketch graphics before finalizing layout
- Create examples up front
- Decide on physical limitations of the book up front
- Develop and write to a template
- Get somebody to provide administrative support for all authors
- Conduct the internal review process earlier

3. **Define the essential elements of the problem or goal statement.**

- The subject, verb, and object of a sentence communicate the essence of any statement. These are the elements that may be changed in the second round of brainstorming.

- Ask the who, what, and where of the problem:
  - Who or what is performing an action?
  - Who or what is the recipient of the action?
  - What is the action being performed?
  - Where is the action being performed?
  - Are there any other elements directly involved in the dynamics of the problem?

  Identify the one element that is most directly tied to a successful solution: feel free to change any other element except for this one.
Sample Problem:

The elements are:
• We (Who is performing the action?)
• Write a book (What is the action being performed?)
• In half the time (This is the desired outcome, don’t change it!)

4. Propose imaginary replacements for one of the elements of the problem statement.

• Make sure the imaginary replacements are radically different from the original element to break the team’s fixed patterns of thinking.
• Have fun in generating imaginary replacements.

Sample Substitutions

<table>
<thead>
<tr>
<th></th>
<th>Effective</th>
<th>Ineffective</th>
</tr>
</thead>
<tbody>
<tr>
<td>We</td>
<td>• Children</td>
<td>• Men/women</td>
</tr>
<tr>
<td></td>
<td>• Koko the gorilla</td>
<td>• Our department</td>
</tr>
<tr>
<td>Write a book</td>
<td>• Get a college degree</td>
<td>• Write a brochure</td>
</tr>
<tr>
<td></td>
<td>• Build a house</td>
<td>• Develop software</td>
</tr>
<tr>
<td></td>
<td>• Pay the bills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Retire</td>
<td></td>
</tr>
<tr>
<td>In half the time</td>
<td>Essential characteristic of the solution, don’t substitute here!</td>
<td></td>
</tr>
</tbody>
</table>

5. Formulate a new problem statement, substituting one of the imaginary elements.

• Change one, and only one, element at a time. This prevents a team from getting so far away from the original context of the problem that it cannot apply the creative ideas back to the real problem.

Sample Imaginary Problem Statement

“How do we build a house in half the time?”
6. **Brainstorm ideas for the imaginary problem.**

**Brainstormed ideas for the imaginary problem**

- Dramatically increase the number of workers, e.g., 400 people at a time
- Use standard components
- Have a plan first
- Build components first
- Get legal/technical issues resolved
- Build on cement slab, not a full foundation
- Cut the size of the house in half
- Reduce the number of internal walls
- Use one color or no paint at all
- Walls that can be used inside and outside
- Modular bathrooms
- Hire subcontractors with specialties
- Have all materials on hand when needed but not in the way
- Have all participants in the process meet early
- Show up with coffee and donuts

**Have modular units contain subsystems (electrical, plumbing, etc.)**

- Get financing up front
- Have 24 hour-a-day construction
- Quick hand-offs and simultaneous work schedules
- Build a house you can afford
- Have a piece of land first
- Have contracts with time clauses
- Get angry when schedules are missed
- Schedule time with no conflicts
- Do a PDPC (contingency plan)

7. **Apply ideas from the imaginary brainstorming back to the real problem statement.**

- In order to reconnect the imaginary brainstorming back to the real problem, it’s helpful to ask:
  - Can one of the imaginary ideas be applied directly to the real problem as it’s stated?
  - Can an imaginary idea be applied with some modification to the real problem?
  - Does the imaginary idea contain an original thought that could be the inspiration for a never-before-tried solution?
Sample Problem Application:

<table>
<thead>
<tr>
<th>Imaginary Ideas</th>
<th>Apply</th>
<th>Application to the Real Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Create modular components</td>
<td>• Design chapter templates with graphics built in (Used with slight modification)</td>
<td></td>
</tr>
<tr>
<td>• Use standard components</td>
<td>• Do a PDPC to anticipate and resolve likely delays (Used as is)</td>
<td></td>
</tr>
<tr>
<td>• Do a PDPC (contingency plan)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Cut the size of the house in half</td>
<td>• Simplify the content to cover only the essentials</td>
<td></td>
</tr>
<tr>
<td>• Have contract with time clauses</td>
<td>• Gain commitment to a firm schedule and stick to it (Used as is)</td>
<td></td>
</tr>
<tr>
<td>• Get angry when schedules are missed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Hire subcontractors with specialties</td>
<td>• Intensive authoring, editing, and layout process in which all of the participants and resources are in the same room at the same time. Off-site writing, editing, conferring, and desktop publishing are done</td>
<td></td>
</tr>
<tr>
<td>• Have all materials on hand when needed but not in the way</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Have all participants in the process meet early</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Reduce the number of internal walls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Have 24 hour-a-day construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Quick hand-offs and simultaneous work schedules</td>
<td></td>
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</tbody>
</table>

If you need more breakthrough ideas, create a second imaginary problem statement and repeat Steps 5 through 7.

8. Analyse all of the brainstormed ideas (real, imaginary, combined) and further explore the more interesting ones.

Consider any of the following tools:
• Do an Affinity Diagram
• Do a Nominal Group
• Do a simple Prioritisation Matrix

Sample Problem Resolution

The overall strategy for the team was to develop a carefully thought out plan of an intensive, cross-functional, development process (writing, editing, layout). The team decided to carry out the intensive group effort off site.
Appendix 2
Group Effectiveness Techniques

Understanding Your Leadership Actions Questionnaire

Each of the following statements describes a leadership action. For each statement mark:

5 = I always behave that way  
4 = I frequently behave that way  
3 = I occasionally behave that way  
2 = I seldom behave that way  
1 = I never behave that way

When Am I a Member of a Group?

_____ 1. I offer facts and give my opinions, ideas, feelings, and information in order to help the group discussion.

_____ 2. I make sure I understand what other group members say by restating it in my own words. I use good communication skills and help facilitate effective communication among group members.

_____ 3. I give director to the group by calling attention to the tasks that need to be done and suggesting procedures for completing them. I organise role responsibilities for group members.

_____ 4. I promote the open discussion of conflicts among group members in order to resolve disagreements and mediate when the members seem unable to resolve the conflicts directly.

_____ 5. I tell jokes and make amusing comments in order to make members laugh and to increase the fun we have working together.
6. I summarize the contributions of group members into one condensed statement and integrate all the diverse actions of members into a unified whole.

7. I express support, acceptance, and liking for other members of the group and give appropriate recognition and praise when another member has taken a constructive action in the past.

8. I ask for facts, information, opinions, ideas, and feelings from the other group members in order to use all the group’s resources to complete the task.

9. I encourage all members of the group to participate. I try to give them the confidence to contribute actively to the group effort. I let them know I value their contributions.

10. I ask others to explain the group’s answers and conclusions to ensure that they comprehend and understand the material being discussed by the group.

11. I give the group energy. I try to get group members excited about achieving our goals.

12. I observe the way the group is working and use my observations to help discuss how group members can work together better.

Scoring the Leadership Questionnaire

In order to obtain a total score for task actions and maintenance actions, write the score for each item in the appropriate column and then total the scores for each column (see Task-maintenance grid).

<table>
<thead>
<tr>
<th>Task Actions</th>
<th>Maintenance Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>_____ 1. Information and opinion giver</td>
<td>_____ 2. Communication facilitator</td>
</tr>
<tr>
<td>_____ 3. Direction and role definer</td>
<td>_____ 4. Interpersonal problem solver</td>
</tr>
<tr>
<td>_____ 6. Summarizer</td>
<td>_____ 5. Tension reliever</td>
</tr>
<tr>
<td>_____ 8. Information and opinion seeker</td>
<td>_____ 7. Supporter and praiser</td>
</tr>
<tr>
<td>_____ Total for Task Actions</td>
<td>_____ Total for Maintenance Actions</td>
</tr>
</tbody>
</table>
### Task Maintenance Patterns

#### (6,6) Only a minimum effort is given to getting the required work done. There is general non-involvement with other group members. The person with this score may well be saying: “To hell with it all!” Or he or she may be so inactive in the group as to have no influence whatsoever on other group members.

#### (6,30) High value is placed on keeping good relationships within the group. Thoughtful attention is given to the needs of other members. The person with the score helps create a comfortable, friendly atmosphere and work tempo. However, he or she may never help the group get any work accomplished.

#### (30,6) Getting the job done is emphasized in a way that shows very little concern with group maintenance. Work is seen as important, and relationships among group members are ignored. The person with this score may take an army-drillmaster approach to leadership.

#### (18,18) The task and maintenance needs of the group are balanced. The person with this score continually makes compromises between task needs and maintenance needs. Though a great compromiser, this person does not look for or find ways to creatively integrate task and maintenance activities for optimal productivity.

#### (30,30) When everyone plans and makes decisions together, all the members become committed to getting the task done as they build relationships of trust and respect.
Matching Exercise 1

To help you learn the task and maintenance actions, match the following terms with their definitions.

**Task Actions**

1. Information and opinion giver
2. Information and opinion seeker
3. Direction and role definer
4. Summarizer
5. Energizer
6. Comprehension checker

**Maintenance actions**

7. Encourager of participation
8. Communication facilitator
9. Tension reliever
10. Process observer
11. Interpersonal problem solver
12. Supporter and praiser

- a. Makes sure all group members understand what each other says.
- b. Pulls together related ideas or suggestions and restates them.
- c. Offers facts, opinions, ideas, feelings and information.
- d. Expresses acceptance and liking for group members.
- e. Uses observations of how the group is working to help discuss how the group can improve.
- f. Lets members know their contributions are valued.
- g. Asks for facts, opinions, ideas, feelings, and information.
- h. Asks others to summarize discussion to make sure they understand.
- i. Encourages group members to work hard to achieve goals.
- j. Calls attention to tasks that need to be done and assigns responsibilities.
- k. Helps resolve and mediate conflicts.
- l. Tells jokes and increases the group fun.
Matching Exercise 2

How Well Do I Understand Functioning (Leadership) Skills?
Match the following statements with goal relationship leadership action they best seem to fill.

**Goal Actions**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Information and opinion giver</td>
</tr>
<tr>
<td>2</td>
<td>Information and opinion seeker</td>
</tr>
<tr>
<td>3</td>
<td>Direction and role definer</td>
</tr>
<tr>
<td>4</td>
<td>Summarizer</td>
</tr>
<tr>
<td>5</td>
<td>Energizer</td>
</tr>
<tr>
<td>6</td>
<td>Comprehension</td>
</tr>
</tbody>
</table>

**Relationship actions**

<p>| | |</p>
<table>
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<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>7</td>
<td>Encourager of participation</td>
</tr>
<tr>
<td>8</td>
<td>Communication facilitator</td>
</tr>
<tr>
<td>9</td>
<td>Tension reliever</td>
</tr>
<tr>
<td>10</td>
<td>Process observer</td>
</tr>
<tr>
<td>11</td>
<td>Interpersonal problem solver</td>
</tr>
<tr>
<td>12</td>
<td>Supporter and praiser</td>
</tr>
</tbody>
</table>

a. “Helen, my understanding is that you are suggesting that we define the problem before we try to solve it.”
b. “How about giving our report on yoga while standing on our heads.”
c. “Three ideas have been suggested. Dale thinks we should play football. Jose thinks we should go to lunch, and Tai believes we should write a story about what we are doing.”
d. “I think we should help resolve the conflict between David and Linda.”
e. “George Washington was the first president of the United States and, in my opinion, the best one.”
f. “Franscene has not said anything for the past five minutes. Is there a problem?”
g. “That is an important insight, Roger. It indicates you have really worked hard on the homework.”
h. “Fire up! We can find a good solution. Let’s put a little more effort into it.”
i. “Frank, explain to us step-by-step how to solve question 12.”
j. “We should first define the problem and second suggest solutions. We can then decide which solution to adopt.”
k. “Roger, do you know who the fourth president of the United States was and what he is famous for?”
l. “Helen, I would like to hear what you think about this; you have good ideas.”
## Decision Making Methods

### Advantages and Disadvantages of Decision-Making Methods

<table>
<thead>
<tr>
<th>Method of Decision Making</th>
<th>Disadvantages</th>
<th>Advantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Decision by authority without discussion.</td>
<td>One person is not a good resource for every decision; advantages of group interaction are lost; no commitment to implementing the decision is developed among other group members; resentment and disagreement may result in sabotage and deterioration of group effectiveness; resources of other members are not used.</td>
<td>Applies more to administrative needs; useful for simple, routing decisions; should be used when very little time is available to make the decision, when group members expect the designated leader to make the decision, and when group members lack the skills and information to make the decision any other way.</td>
</tr>
<tr>
<td>2. Expert member</td>
<td>It is difficult to determine who the expert is; no commitment to implement the decision is built; advantages of group interaction are lost; resentment and disagreement may result in sabotage and deterioration of group effectiveness; resources of other members are not used.</td>
<td>Useful when the expertise of one person is so far superior to that of all other group members that little is to be gained by discussion; should be used when the need for membership action in implementing the decision is slight.</td>
</tr>
<tr>
<td>3. Average of members’ opinions</td>
<td>There is not enough interaction among group members for them to gain from each other’s resources and from the benefits of group discussion; no commitment to implement the decision is built; unresolved conflict and controversy may damage group effectiveness in the future.</td>
<td>Useful when it is difficult to get group members together to talk, when the decision is so urgent that there is no time for group discussion, when member commitment is not necessary for implementing the decision, and when group members lack the skills and information to make the decision any other way; applicable to simple, routine decisions.</td>
</tr>
<tr>
<td>Method of Decision Making</td>
<td>Disadvantages</td>
<td>Advantages</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4. Decision by authority after discussion</td>
<td>Does not develop commitment to implement the decision; does not resolve the controversies and conflicts among group members; tends to create situations in which group members either compete to impress the designated leader of tell the leader what they think he of she wants to hear.</td>
<td>Uses the resources of the group members more that previous methods; gains some of the benefits of group discussion.</td>
</tr>
<tr>
<td>5. Majority control</td>
<td>Usually leaves an alienated minority, which damages future group effectiveness; relevant resources of many group members may be lost; full commitment to implement the decision is absent; full benefit of group interaction is not obtained.</td>
<td>Can be used when sufficient time is lacking for decision by consensus or when the decision is not so important that consensus needs to be used and when complete member commitment is not necessary for implementing the decision; closes discussion on issues that are not highly important for the group.</td>
</tr>
<tr>
<td>6. Minority control</td>
<td>Does not utilize the resources of many group members; does not establish widespread commitment to implement the decision; unresolved conflict and controversy may damage future group effectiveness; not much benefit from group interaction.</td>
<td>Can be used when everyone cannot meet to make a decision, when the group is under such time pressure that it must delegate responsibility to a committee, when only a few members have any relevant resources, and when broad member commitment is not need to implement the decision; useful for simple, routine decisions.</td>
</tr>
<tr>
<td>7. Consensus</td>
<td>Takes a great deal of time and psychological energy and a high level of member skill; time pressure must be minimal, and there must be no emergency in progress.</td>
<td>Produces and innovative, creative, and high-quality decision; elicits commitment by all members to implement the decision; uses the resources of all members; the future decision-making ability of the group is enhanced; useful in making serious, important, and complex decisions to which all members are to be committed.</td>
</tr>
</tbody>
</table>
Understanding Your Conflict Strategies

Different persons learn different ways of managing conflicts. The strategies you use to manage conflicts may be quite different from those used by your friends and acquaintances. This exercise gives you an opportunity to increase your awareness of what conflict strategies you use and how they compare with the strategies used by others. The procedure is as follows:

1. With your fellow participants, form groups of six. Make sure you know the other members of the group. Do not join a group of strangers.

2. Working by yourself, complete the following questionnaire.

3. Working by yourself, read the accompanying discussion of conflict strategies. Then make five slips of paper. Write the names of the other five members of your group on the slips of paper, one name to a slip.

4. On each slip of paper write the conflict strategy that best fits the actions of the person named.

5. After all group members are finished, pass out your slips of paper to the persons whose names are on them. In turn, you should end up with five slips of paper, each containing a description of your conflict style as seen by another group member. Likewise, each member of your group should end up with five slips of paper describing his or her conflict strategy.

6. Score your questionnaire, using the table that follows the discussion of conflict strategies. Rank the five conflict strategies from the one you use the most to the one you use the least. This will give you an indication of how you see your own conflict strategy. The second most frequently used strategy is your backup strategy, the one you use if you first one fails.

7. After drawing names to see who goes first, one member describes the results of his or her questionnaire. This is the member’s view of his or her own conflict strategies. The member then reads each of the five slips of paper on which are written the views of the group members about his or her conflict strategy. Next he or she asks group members to give specific examples of how they have seen him or her act in conflicts. The group members should use the rules for constructive feedback. The person to the left of the first member repeats this procedure, and so on around the group.

8. Each group discussed the strengths and weaknesses of each of the conflict strategies.
How You Act in Conflicts

The proverbs listed below can be thought of as descriptions of some of the different strategies for resolving conflicts. Proverbs state traditional wisdom, and these proverbs reflect traditional wisdom for resolving conflicts. Read each of the proverbs carefully. Using the following scale, indicate how typical each proverb is of your actions in a conflict.

5 = very typical of the way I act in a conflict
4 = frequently typical of the way I act in a conflict
3 = sometimes typical of the way I act in a conflict
2 = seldom typical of the way I act in a conflict
1 = never typical of the way I act in a conflict

______ 1. It is easier to refrain than to retreat from a quarrel.
______ 2. If you cannot make a person think as you do, make him or her do as you think.
______ 4. You scratch my back, I’ll scratch yours.
______ 5. Come now and let us reason together.
______ 6. When two quarrel, the person who keeps silent first is the most praiseworthy.
______ 7. Might overcomes right.
______ 8. Smooth words make smooth ways.
______ 9. Better half a loaf than no bread at all.
______ 10. Truth lies in knowledge, not in majority.
______ 11. He who fights and runs away lives to fight another day.
______ 12. He hath conquered well that hath made his enemies flee.
______ 13. Kill your enemies with kindness.
______ 15. No person has the final answer but every person has a piece to contribute.
______ 16. Stay away from people who disagree with you.
______ 17. Fields are won by those who believe in winning.
______ 18. Kind words are worth much and cost little.
______ 19. Tit for tat is fair play.
20. Only the person who is willing to give up his or her monopoly on truth can ever profit from the truths that others hold.

21. Avoid quarrelsome people as they will only make your life miserable.

22. A person who will not flee will make others flee.

23. Soft words ensure harmony.

24. One gift for another makes good friends.

25. Bring your conflicts into the open and face them directly; only then will the best solution be discovered.

26. The best way of handling conflicts is to avoid them.

27. Put your foot down where you mean to stand.

28. Gentleness will triumph over anger.

29. Getting part of what you want is better than not getting anything at all.

30. Frankness, honestly, and trust will move mountains.

31. There is nothing so important you have to fight for it.

32. There are two kinds of people in the world, the winners and the losers.

33. When one hits you with a stone, hit him or her with a piece of cotton.

34. When both give in halfway, a fair settlement is achieved.

35. By digging and digging, the truth is discovered.

### Scoring

<table>
<thead>
<tr>
<th>Withdrawing</th>
<th>Forcing</th>
<th>Smoothing</th>
<th>Compromising</th>
<th>Problem Solving</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2.</td>
<td>3.</td>
<td>4.</td>
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<td>6.</td>
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<tr>
<td>31.</td>
<td>32.</td>
<td>33.</td>
<td>34.</td>
<td>35.</td>
</tr>
<tr>
<td>Total</td>
<td>Total</td>
<td>Total</td>
<td>Total</td>
<td>Total</td>
</tr>
</tbody>
</table>

The higher the total score for each conflict strategy, the more frequently you tend to use the strategy. The lower the total score for each conflict strategy, the less frequently you tend to use that strategy.
## Group Process Observation Form

Cumulative interaction form

Date ____________  Group _________________
Time____________ to ____________  Observer ___________________

<table>
<thead>
<tr>
<th>BEHAVIOUR</th>
<th></th>
<th></th>
<th></th>
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</table>

**TOTALS**
Constructing an Affinity Diagram for Group Problem Solving

Step 1 – Display the Generated Ideas

Issues in Implementing Continuous Process Improvement

- Data collection process needs
- Pressure for success
- Lack of training at all levels
- Need new data collection system
- Lack of management understanding of need for it
- Everybody needs to change but me
- Want to solve problem before clearly defined
- Lack of follow-up by management
- Too busy to learn
- Need new data collection system
- Don’t know what customer wants
- Some people will never change
- Behavior modifications may take longer than time available
- Short-term planning mentality
- Competition versus cooperation
- Unrealistic allotment of time
- Which comes first, composing the team or stating the problem?
- Not using collected data
- Need to be creative
- Lack of trust in the process
- Too many projects at once
Step 2 – Sort Ideas into Related Groups

**Issues in Implementing Continuous Process Improvement**

- Some people will never change
- Developing product without developing success
- Lack of follow-up by management
- Competition versus cooperation
- Data collection process needs
- Everybody needs to change but me
- Which comes first, composing the team or stating the problem?
- Lack of training at all levels
- Pressure for success
- Need new data collection system
- Need to be creative
- Don’t know what customer wants
- Too busy to learn
- What are the reward for using tools
- Unrealistic allotment of time
- Behavior modifications may take longer than time available
- Want to solve problem before clearly defined
- Short-term planning mentality
- Not using collected data
- Lack of trust in the process
- Lack of management understanding of need for it
- Too many projects at once

Step 3 – Create Header Cards

**Issues in Implementing Continuous Process Improvement**

(Header Cards)

- Breaking through old way — “Dinosaur thinking”
- Lack of planning
- Organisational Issues
- Old management culture
- Lack of TQL knowledge
### Step 4 – Draw the Finished Affinity Diagram

**Issues in Implementing Continuous Process Improvement**

<table>
<thead>
<tr>
<th>Breaking through old way — “Dinosaur thinking”</th>
<th>Lack of planning</th>
<th>Organisational Issues</th>
<th>Old management culture</th>
<th>Lack of TQL knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some people will never change</td>
<td>Developing product without developing success</td>
<td>Lack of follow-up by management</td>
<td>Competition versus cooperation</td>
<td>Data collection process needs</td>
</tr>
<tr>
<td>Everybody needs to change but me</td>
<td>Which comes first, composing the team or stating the problem?</td>
<td>Lack of training at all levels</td>
<td>Pressure for success</td>
<td>Need new data collection system</td>
</tr>
<tr>
<td>Need to be creative</td>
<td>Don’t know what customer wants</td>
<td>Too busy to learn</td>
<td>What are the reward for using tools</td>
<td>Unrealistic allotment of time</td>
</tr>
<tr>
<td>Behavior modifications may take longer than time available</td>
<td>Want to solve problem before clearly defined</td>
<td>Short-term planning mentality</td>
<td>Not using collected data</td>
<td></td>
</tr>
<tr>
<td>Lack of trust in the process</td>
<td></td>
<td></td>
<td></td>
<td>Too many projects at once</td>
</tr>
</tbody>
</table>
Cause and Effect Diagram
Assessing the Level of Acceptance in Your Group

What is the level of acceptance in your group? The purpose of this exercise is to provide a way in which the level of acceptance in your group may be assessed and discussed. The procedure is as follows:

1. With the other members of your group, fill out the questionnaire. Questionnaires should be unsigned so that no one’s responses can be identified.
2. Tabulate the results in the summary table that follows the questionnaires.
3. Discuss the conclusions that can be drawn from the results. Consider these two questions:
   a) What is contributing to the present high or low level of acceptance in the group?
   b) How may the level of acceptance in the group be increased?

Questionnaire: Level of Acceptance

Think about the ways in which the members of your group normally behave toward you. In the parentheses in front of the statements below, place the number corresponding to your perceptions of the group as a whole, using the following scale:

- 5 = they *always* behave this way
- 4 = they *typically* behave this way
- 3 = they *usually* behave this way
- 2 = they *seldom* behave this way
- 1 = they *rarely* behave this way
- 0 = they *never* behave this way

My fellow group members:

1. (____) ....................... are completely honest with me.
2. ......(____) ....................... understand what I am trying to communicate.
3. ................(____) ...... interrupt and ignore my comments.
4. ......................... (___) accept me just the way I am.
5. (____) ......................... tell me when I bother them.
6. ......(____) ............... don’t understand things I say or do.

7. ..................(____) ...... are interested in me.

8. ................... (____) make it easy for me to be myself.

9. (____) ..................... don’t tell me things that would hurt my feelings.

10. ......(____) ............... understand who I really am.

11. ...................(____) ..... include me in what they are doing.

12. ......................... (____) evaluate whether I am acceptable or unacceptable.

13. (____) ...................... are completely open with me.

14. ......(____) ................ immediately know when something is bothering me.

15. ..................(____) ...... value me as a person, apart from skills or status.

16. ......................... (____) accept my differences or peculiarities.

   (____) Authenticity with me  
   (____) Understanding of me  
   (____) Valuing of me  
   (____) Accepting of me

Total the number of points in each column. Statements 3, 6, 9 and 12 are reversed in the scoring – subtract from 5 the rating given to each before placing the remainder in each column.

**Summary Table: Level of Acceptance**

<table>
<thead>
<tr>
<th>Score</th>
<th>Authenticity</th>
<th>Understanding</th>
<th>Valuing</th>
<th>Accepting</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>____________</td>
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<td>_______</td>
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<td>13-16</td>
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<td>17-20</td>
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</table>
## Open and Closed Communication Compared

<table>
<thead>
<tr>
<th>Closed</th>
<th>Open and Closed Relationships</th>
<th>Open</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Content being discussed</strong></td>
<td>The content is of concern to no one (weather talk).</td>
<td>The content consists of technical aspects of work.</td>
</tr>
<tr>
<td><strong>Time reference</strong></td>
<td>No time reference (jokes and generalisations).</td>
<td>Distant past or future being discussed.</td>
</tr>
<tr>
<td><strong>Awareness of your sensing, interpreting, feeling, intending</strong></td>
<td>You never listen to yourself and try to ignore, repress and deny feelings and reactions.</td>
<td>You are constantly aware of what you are sensing, the interpretations you are making, your feelings and your intentions about acting on your feelings.</td>
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<tr>
<td><strong>Openness with own ideas, feelings, reactions</strong></td>
<td>Your statements are generalisations, abstract ideas, intellectualisations; feelings are excluded as irrelevant, inappropriate and non-existent.</td>
<td>Your personal reactions such as attitudes, values, preferences, feelings, experiences and observations of the present are stated and focused upon; feelings are included as helpful information about the present.</td>
</tr>
<tr>
<td><strong>Feedback from other people</strong></td>
<td>Feedback from others is avoided, ignored, not listened to and perceived as being hostile attacks on your personality.</td>
<td>Feedback from others is asked for, sought out, listened to and used to increase your self-awareness; it is perceived as being a helpful attempt to add to your growth and effectiveness.</td>
</tr>
<tr>
<td><strong>Acceptance of yourself</strong></td>
<td>Your believe that once your are known you will be disliked and rejected and, therefore, you hide your real self and try to make the impression you think will be most appreciated by other people.</td>
<td>You express confidence in your abilities and skills; can discuss your positive qualities without bragging and without false modesty; you understand how you have used your strengths in the past to achieve your goals and are confident you will do so again in the future.</td>
</tr>
<tr>
<td><strong>Openness to others’ ideas, feelings reactions</strong></td>
<td>You avoid and disregard others’ reactions, ideas and feelings; you are embarrassed and put off by others’ expressions of feelings; you reject other people and try to one-up and better them; you refuse to hear their feedback on their reactions to your behaviour.</td>
<td>You listen to and solicit others’ reactions; you are interested and receptive to what others are saying and feeling; you express desire to cooperate fully with them; you make it clear that you see their value and strengths even when you disagree with them; you ask others for feedback on their perceptions on your behaviour.</td>
</tr>
<tr>
<td><strong>Acceptance of other people</strong></td>
<td>You evaluate the other person’s actions, communicate that the other is unacceptable, show disregard for the other as a person.</td>
<td>You react without evaluation to other’s actions, communicate that the other is acceptable, and value the other as a person.</td>
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</tbody>
</table>
Assessing Your Communication Behaviour

What is your communication behaviour like in a group? How would you describe your communication actions? Begin a discussion of communication within groups by answering the following questions as honesty as possible:

1. If I as group chairperson were giving a set of instructions and the other group members sat quietly with blank faces I would
   ______ State the instructions clearly and precisely and then move on.
   ______ Encourage members to ask questions until I was sure that everyone understood what he or she was supposed to do.

2. If the group chairperson gave a set of instructions to the group that I did not understand, I would
   ______ Keep silent and later ask another group member what he or she meant.
   ______ Immediately ask the chairperson to repeat the instructions and answer my questions until I was sure I understood what he or she wanted me to do.

3. How often do you let other group members know when you like or approve of something they do?
   Never 1 2 3 4 5 6 7 8 9 Always

4. How often do you let other group members know when you are irritated or impatient with, embarrassed by, or opposed to something they say or do?
   Never 1 2 3 4 5 6 7 8 9 Always

5. How often do you check out what other group members are feeling and how they are reacting rather than assuming that you know?
   Never 1 2 3 4 5 6 7 8 9 Always

6. How often do you encourage other group members to let you know how they are reacting to your behaviour and actions in the group?
   Never 1 2 3 4 5 6 7 8 9 Always

7. How often do you check to make sure you understand what other group members mean before agreeing or disagreeing?
   Never 1 2 3 4 5 6 7 8 9 Always
8. How often do you paraphrase or restate what other members have said before responding?
   Never 1 2 3 4 5 6 7 8 9 Always

9. How often do you keep your thoughts, ideas, feelings and reactions to yourself in group sessions?
   Never 1 2 3 4 5 6 7 8 9 Always

10. How often do you make sure that all information you have about the current topic of discussion is known to the rest of the group?
    Never 1 2 3 4 5 6 7 8 9 Always

The first two questions refer to whether communication is one-way (from the chairperson to the rest of the group members) or two-way. The third and fourth questions focus on your willingness to give feedback to other groups on how you are receiving and reacting to their messages. Questions 5 and 6 refer to your willingness to ask for feedback about how other group members are receiving and reacting to your messages. Questions 7 and 8 focus on receiving skills, and the final two questions relate to your willingness to contribute (send) relevant messages about the group’s work. Review your answers to these questions and summarise your present communication behaviour in a group.
Assessing Your Behaviour in Controversies

The purposes of this exercise are to (a) make you more aware of your typical actions when involved in a controversy and (b) make your group more aware of the pattern of members’ actions when they are involved in a controversy. The procedure is as follows:

1. Working by yourself, complete the following questionnaire.

2. Using the scoring table, determine (a) your scores and (b) the average of all group members’ scores.

3. Engage in a group discussion of (a) the strategies used most frequently during a controversy and (b) how controversies may be managed more constructively.

**Understanding My Controversy Behaviour**

Each of the following questions describes an action taken during a controversy. For each question write a 5 if you have always behave that way, 4 if you frequently behave that way, 3 if you occasionally behave that way, 2 if you seldom behave that way and 1 if you never behave that way.

_____ 1. When I disagree with other group members, I insist that they change their opinions to match mine.

_____ 2. If someone disagrees with my ideas and opinions, I feel hurt and rejected.

_____ 3. I often infer that persons who disagree with me are incompetent and ignorant.

_____ 4. When others disagree with me, I try to view the issue from all points of view.

_____ 5. I try to avoid individuals who argue with me.

_____ 6. When others disagree with me, I view it as an interesting opportunity to learn and to improve the quality of my ideas and reasoning.

_____ 7. When I get involved in an argument with others, I become more and more certain that I am correct and argue more and more strongly for my own point of view.

_____ 8. When others disagree with my ideas, I get hostile and angry with them.

_____ 9. When I disagree with others, I am careful to communicate respect for them as persons while I criticise their ideas.
10. I am careful always to paraphrase thinking and feelings of others when they present ideas and opinions that are different from mine.

11. When others disagree with me, I generally keep my ideas and opinions to myself.

12. When others disagree with me, I encourage them to express their ideas and opinions fully and seek to clarify the differences between their position and perspective and mine.

13. I view my disagreements with others as opportunities to see who wins and who loses.


15. When another person and I disagree, I carefully communicate, “I appreciate you, I am interested in your ideas, but I disagree with your current position.”

16. When others disagree with me, I keep thinking of my ideas and opinions so that I do not forget them or get confused.

17. I am careful not to share my ideas and opinions when I think others may disagree with them.

18. When I disagree with others, I listen carefully to their ideas and opinions and change my mind when doing so is warranted by their information and reasoning.

19. When others and I disagree, I try to overpower them with my facts and reasoning.

20. I tend to dislike those who disagree with my ideas and opinions.

21. When I am disagreeing with and criticising others’ ideas and opinions, I let them know that I like them as individuals.

22. I try to view the situation and issue from my opponent’s shoes when involved in a disagreement about ideas and opinions.

23. I refuse to get into an argument with anyone.

24. When others disagree with me, I try to clarify the differences among our ideas and opinions, clarify the points of agreement and seek a creative integration of all our ideas and information.

25. When others and I disagree, I have to convince them that I am right and they are wrong.

26. When others disagree with my ideas and opinions, it means that they are angry with me and dislike me.

27. While I am disagreeing with others I let them know that I appreciate their ability to present a challenging and thought-provoking position.
28. When I am involved in an argument, I restate and summarise the opposing positions.

29. When others disagree with me, I stay very quiet and try to avoid them in the future.

30. When I am involved in an argument, I never forget that we are trying to make the best decision possible by combining the best of all our facts and reasoning.

### Scoring

Write your answer for each question in the space provided and total your answers for each controversy-managing strategy. The higher the total score for each controversy strategy, the more frequently you tend to use that strategy; the lower the total score for each controversy strategy, the less frequently you tend to use it. Add the scores of all group members for each strategy and divide by the number of members in the group. This will give your group average for each strategy.

<table>
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<tr>
<th>Win-Lose</th>
<th>Rejection</th>
<th>Confirmation</th>
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<tr>
<td>__ 1. __</td>
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<td>__ GROUP AVERAGE __</td>
<td>__ GROUP AVERAGE __</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Perspective-Taking</th>
<th>Avoidance</th>
<th>Problem Solving</th>
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</thead>
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<td>__ 4. __</td>
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<td>__ GROUP AVERAGE __</td>
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* Reverse the scoring on this question by substituting 1 for 5, 2 for 4, and so on.
**Controversy Questionnaire: Interpretation**

Write your scores in the spaces provided below. If your score is above 15, it means that you are likely to engage in this strategy. If your score is less than 15, it means that you are not likely to engage in this strategy. Add the scores of all group members for each strategy and divide by the number of members in the group. This will give you your group average for each strategy.

**Procedure**

1. Compare your scores for the constructive and destructive strategies.
2. Compare your scores with your actual behaviour (as reported by observer) in the controversy exercise.
3. Discuss the strategies that are difficult for you to engage in.
4. On the basis of the group average scores and the actual behaviour of the group members in the controversy exercise, characterise the group’s tendencies towards constructive and destructive controversy.

<table>
<thead>
<tr>
<th>Constructive Strategy</th>
<th>Your Score</th>
<th>Group Average</th>
<th>Destructive Strategy</th>
<th>Your Score</th>
<th>Group Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Solving</td>
<td>_____</td>
<td>_____</td>
<td>Win-Lose</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Confirmation</td>
<td>_____</td>
<td>_____</td>
<td>Rejection</td>
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<tr>
<td>Perspective-taking</td>
<td>_____</td>
<td>_____</td>
<td>Avoidance</td>
<td>_____</td>
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</tbody>
</table>
The Nominal Group Technique

Ranking for consensus

Why use it?
Allows a team to quickly come to a consensus on the relative importance of issues, problems, or solutions by completing individual importance rankings into a team’s final priorities.

What does it do?
- Builds commitment to the team’s choice through equal participation in the process
- Allows every team member to rank issues without being pressured by others
- Puts quiet team members on an equal footing with more dominant members
- Makes a team’s consensus (or lack of it) visible; the major causes of disagreement can be discussed

How do I do it?
1. Generate the list of issues, problems or solutions to be prioritized
   - In a new team with members who are not accustomed to team participation, it may feel safer to do written, silent brainstorming, especially when dealing with sensitive topics.
2. Write statements on a flipchart or board
3. Eliminate duplicates and/or clarify meanings of any of the statements
   - As a leader, always ask for the team’s permission and guidance when changing statements.
4. Record the final list of statements on a flipchart or board
   Example: Why does the department have inconsistent output?
   A  Lack of training
   B  No documented process
   C  Unclear quality standards
   D  Lack of cooperation with other departments
   E  High turnover
   - Use letter rather than numbers to identify each statement so that team members do not get confused by the ranking process that follows.
5. Each team member records the corresponding letters on a piece of paper and rank orders the statements.
Example: Larry’s sheet of paper look like this:

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>A</td>
<td>4</td>
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<tr>
<td>B</td>
<td>5</td>
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<tr>
<td>C</td>
<td>3</td>
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<td>D</td>
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</tr>
<tr>
<td>E</td>
<td>2</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

- This example uses a “5” as the most important ranking and “1” as the least important. Since individual rankings will later be combined, this “reverse order” minimizes the effect of team members leaving some statements blank. Therefore, a blank (value = 0) would not, in effect, increase its importance.

6. Combine the rankings of all team members

<table>
<thead>
<tr>
<th></th>
<th>Larry</th>
<th>Nina</th>
<th>Norm</th>
<th>Paige</th>
<th>Si</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>1</td>
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<td>B</td>
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<td>4</td>
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<td>22</td>
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<tr>
<td>C</td>
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<td>3</td>
<td>4</td>
<td>4</td>
<td>15</td>
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<td>5</td>
<td>2</td>
<td>11</td>
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<tr>
<td>E</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>13</td>
</tr>
</tbody>
</table>

“No documented process”, B, would be the highest priority. The team would work on this first and then move through the rest of the list as needed.

Variations

- One Half Plus One
  When dealing with a large number of choices it may be necessary to limit the number of items ranked. The “one half plus one” approach would rank only a portion of the total. For example, if 20 ideas were generated, then team members would rank only the top 11 choices. If needed, this process could be repeated with the remaining 9 items, ranking the top 5 or 6 items, (half of 9 = 4.5 + 1 = 5.5), until a manageable number are identified.

- Weighted Multivoting
  Each team member rates, not ranks, the relative importance of choices by distribution a value e.g. 1200 points across the options. Each team member can distribute this value among as many or as few choices as desired.

Example:

<table>
<thead>
<tr>
<th></th>
<th>Larry</th>
<th>Nina</th>
<th>Norm</th>
<th>Paige</th>
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<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>20</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>30</td>
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<tr>
<td>B</td>
<td>40</td>
<td>80</td>
<td>50</td>
<td>100</td>
<td>45</td>
<td>315</td>
</tr>
<tr>
<td>C</td>
<td>30</td>
<td>5</td>
<td>10</td>
<td>25</td>
<td></td>
<td>70</td>
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<td>E</td>
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<td>10</td>
<td>20</td>
<td>10</td>
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<td>50</td>
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</table>
Team Guidelines

From “Me” to “We”

Starting Teams

The most critical ask for any new team is to establish its purpose, process, and measures of team progress. Once the team has developed the following guidelines and charters specific to its purpose, they should be recorded on a flipchart and posted at each team meeting for reference.

● Develop a Team Behaviour Charter
  - *Groundrules.* Develop consensus groundrules of acceptable and unacceptable individual and team behaviour.
  - *Decision-making.* Determine whether decisions will be made by consensus, majority rule, or anarchy! Discuss whether there are, or should be, exceptions to when the team should not follow its usual process.
  - *Communication.* Recognize the value of listening and constructive feedback, and make the effort, every day, to communicate constructively!
  - *Roles and participation.* Discuss how the team will choose a leader, and gener-
ally how the team process will be led. The individuals and team must take re-
ponsibility to encourage equal participation.
  - *Values.* Acknowledge and accept the unique insight of each member of the team.

● Develop a Purpose Charter
  - Establish the answer to why the team exists.
  - Bring together the individuals who would work well together as a team. Deter-
mine whether each person has the knowledge, skills, and influence required to
participate effectively on the team.
- The team should discuss who its customers are. If the team has multiple customers, decide which customers have the highest priority or at least how their needs will be balanced.

● **Develop Measures of Team Progress**
- Discuss and agree on the desired signals, which the team can assess both objectively and subjectively, that will indicate the team is making progress.
- Discuss and agree on the types of measures and outcomes that will indicate the team has reached success or failure.
- Estimate the date when the project should be completed.

**Maintaining Momentum**

Many teams enjoy terrific starts and then soon fizzle. The real challenge is to keep a team focused on its purpose and not the histories of its members and their relationships to one another.

● **Agree on the Improvement Model to Use**
- *Standard steps.* Use your organisation’s standard step-by-step improvement process or choose from the many published options. (See the Improvement Storyboard in the Problem Solving / Process Improvement Model section for one such standard process.)
- *Data.* Gather relevant data to analyse the current situation. Define what you know, and what you need to know, but know when to stop. Learn, as a team, to say when your work is good enough to proceed to the next step in the process.
- *Develop a plan.* Use your organisation’s standard improvement model to provide the overall structure of a project plan. Estimate times for each step and for the overall project. Monitor and revise the plans as needed.

● **Use Proven Methods Based on both Data and Knowledge**
- *Databased methods.* Use tools in this booklet, e.g., Run Chart, Pareto Chart, that reveal patterns within data. These tools often take the emotion out of discussions and keep the process moving.
- *Knowledge-based methods.* Many of the methods in this booklet, e.g., affinity Diagram, Interrelationship Digraph, help to generate and analyse ideas to reveal the important information within. They help create consensus, which is the ideal energy source for a team.

● **Manage Team Dynamics**
- *Use facilitators.* A facilitator is someone who monitors and helps team members
to keep their interactions positive and productive. This is the stage when a facilitator can help the team stay focused on its purpose while improving its working relationship.

- **Manage conflict.** As teams grow, so do conflicts. This is a natural process as communication becomes more open. The entire team can learn techniques for conflict resolution and use the facilitator as a resource.

- **Recognize agreement.** Managing agreement is often as much of an effort as managing disagreement. Test for agreement often and write down the point of agreement as they occur.

- **Encourage fair participation.** Each team member must eventually take responsibility for participating consistently in all discussion. Likewise, the entire team should be constantly working to “pull back” the dominant members and draw out the quieter members.

**Ending Teams / Projects**

Most teams and all projects must eventually end. Both often end in unsatisfactory ways or don’t “officially end” at all. Before ending, the team should review the following checklist:

- We checked our results against our original goals and customer needs.
- We identified any remaining tasks to be done.
- We established responsibility for monitoring the change over time.
- We documented and trained people, when necessary, in the new process.
- We communicated the changes to everyone affected by them.
- We reviewed our own team’s accomplishments for areas of improvement.
- We celebrated the efforts of the team with a lunch, newsletter article, special presentation to the company, or other expression of celebration.
- We feel proud of our contribution and accomplishments, our new capabilities, and our newly defined relationships with co-workers.

**Conducting Effective Meetings**
Preparation
- Decide on the purpose of the meeting
- Develop a meeting plan (who, what, where, when, how many)
- Identify the meeting leader
- Prepare and distribute the agenda
- Set up the meeting area

Beginning
- Start on time
- Introduce the meeting leader
- Allow team members to introduce themselves
- Ask for a volunteer timekeeper
- Ask for a volunteer recorder
- Review, change, order the agenda
- Establish time limits
- Review prior meeting action items

Meeting Etiquette
- Raise your hand and be recognised before speaking
- Be brief and to the point
- Make your point calmly
- Keep an open mind
- Listen without bias
- Understand what is said
- Avoid side conversations
- Respect other opinions
- Avoid personnel agendas
- Come prepared to do what’s good for the company
- Have fun

Ending:
- Develop action items (who, what, when, how)
- Summarise the meeting with the group
- Establish the date and time for a follow-up meeting
- Evaluate the meeting
- End on time
- Clean the meeting area

Next Steps:
- Prepare and distribute the meeting activity report
- Follow up on action items
- Go to “Preparation”
Meeting Management

“Oh no, not another meeting!!!”

If you hear this every time a meeting is called, there may be some real meeting design issues that you need to address. As facilitator, it’s your job to help others learn how to work effectively in order to achieve their goals.

Use the following checklist to pinpoint some of the common elements of ineffective meetings:
— meeting goal is unclear for some members
— a vague or nonexistent agenda
— no time limits on discussions
— no process for working on important issues
— no one facilitating discussions
— people haven’t done their homework
— discussions go in circles
— lack of closure to discussions
— people argue rather than debate points of view
— a few people dominating while others sit passively
— meetings that end without detailed action plans for next steps
— absence of any process checking of the meeting as it unfolds, or any evaluation at the end

Meetings That Work
By contrast, here are the ingredients shared by all effective meetings:
— a detailed agenda that spells out what will be discussed, the goal of the discussion, who is bringing that item forward and an estimate of how long each item will take
— clear process notes that describe the tools and techniques that will be used
— assigned roles such as facilitator, chairperson, minute taker, and timekeeper
— a set of group norms created by the members and posted in the meeting room
— clarity about decision-making options and how they will be used
— effective member behaviours
— periodic process checks to make sure progress is being made
— clear conflict management strategies
— a process that creates true closure
— detailed and clear minutes
— specific follow-up plans
— a post-meeting evaluation
There are a number of symptoms of ineffective meetings. Once you learn them, think of them as a set of early warning signals against which to periodically check how healthy your own meetings are.

You can use this questionnaire to assess the overall quality of past meetings.

### Meeting Diagnostic Survey

1. **People tend to resist the idea of another meeting.**
   - 1: Totally disagree
   - 2: Disagree
   - 3: Doesn’t apply/not sure
   - 4: Agree
   - 5: Totally agree

2. **Meetings generally do not start or end on time.**
   - 1: Totally disagree
   - 2: Disagree
   - 3: Doesn’t apply/not sure
   - 4: Agree
   - 5: Totally agree

3. **When a member offers an idea, other members do not ask detailed questions or demonstrate active listening.**
   - 1: Totally disagree
   - 2: Disagree
   - 3: Doesn’t apply/not sure
   - 4: Agree
   - 5: Totally agree

4. **Discussions begin before it’s clear to everyone exactly what is being discussed.**
   - 1: Totally disagree
   - 2: Disagree
   - 3: Doesn’t apply/not sure
   - 4: Agree
   - 5: Totally agree

5. **One or two members dominate the meeting.**
   - 1: Totally disagree
   - 2: Disagree
   - 3: Doesn’t apply/not sure
   - 4: Agree
   - 5: Totally agree

6. **Often the meeting ends before everyone has been heard from.**
   - 1: Totally disagree
   - 2: Disagree
   - 3: Doesn’t apply/not sure
   - 4: Agree
   - 5: Totally agree

7. **People do not address each other directly, but talk about others as if they were not in the room.**
   - 1: Totally disagree
   - 2: Disagree
   - 3: Doesn’t apply/not sure
   - 4: Agree
   - 5: Totally agree
8. If the objective of the meeting hasn’t been reached, a follow-up meeting is scheduled rather than run overtime.

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<tbody>
<tr>
<td>Totally disagree</td>
<td>Disagree</td>
<td>Doesn’t apply/not sure</td>
<td>Agree</td>
<td>Totally agree</td>
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9. Many ideas have to be repeated several times before they get a response.

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<tbody>
<tr>
<td>Totally disagree</td>
<td>Disagree</td>
<td>Doesn’t apply/not sure</td>
<td>Agree</td>
<td>Totally agree</td>
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10. The formal leader or chair seems to have more weight than other members.

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<tbody>
<tr>
<td>Totally disagree</td>
<td>Disagree</td>
<td>Doesn’t apply/not sure</td>
<td>Agree</td>
<td>Totally agree</td>
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</tbody>
</table>

11. People start to disagree before they really understand the full scope of what the other person is trying to say.

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<tbody>
<tr>
<td>Totally disagree</td>
<td>Disagree</td>
<td>Doesn’t apply/not sure</td>
<td>Agree</td>
<td>Totally agree</td>
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12. Following meetings, there are postmortems behind closed doors about what really went on.

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<tbody>
<tr>
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<td>Disagree</td>
<td>Doesn’t apply/not sure</td>
<td>Agree</td>
<td>Totally agree</td>
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13. There’s never any assessment at the end of meetings to see if the group has achieved what it set out to do.

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<tbody>
<tr>
<td>Totally disagree</td>
<td>Disagree</td>
<td>Doesn’t apply/not sure</td>
<td>Agree</td>
<td>Totally agree</td>
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</table>

14. People react to new ideas by making fun, uttering put downs, or ignoring the idea altogether rather than questioning and exploring it further.

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<tbody>
<tr>
<td>Totally disagree</td>
<td>Disagree</td>
<td>Doesn’t apply/not sure</td>
<td>Agree</td>
<td>Totally agree</td>
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</tbody>
</table>

15. Too many people sit in the meetings not really participating.

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</thead>
<tbody>
<tr>
<td>Totally disagree</td>
<td>Disagree</td>
<td>Doesn’t apply/not sure</td>
<td>Agree</td>
<td>Totally agree</td>
</tr>
</tbody>
</table>
16. After the meeting, there’s always some confusion about what was agreed upon and who is responsible for implementation.

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<tbody>
<tr>
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<td>Doesn’t apply/not sure</td>
<td>Agree</td>
<td>Totally agree</td>
</tr>
</tbody>
</table>

17. Few decisions are made by consensus; the group lets individuals make decisions, or it tends to vote on issues without any preceding discussion/analysis.

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<td>Disagree</td>
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<td>Totally agree</td>
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</tbody>
</table>

18. The group cannot make decisions because it doesn’t have the necessary information, or people haven’t done their homework.

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<tbody>
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</tbody>
</table>

19. There’s seldom any checking to see if the group has gone off track, or if the meeting is an effective use of time.

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</table>

20. Too often we agree on a course of action because everyone is tired, or cannot be bothered to delve deeper.

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<td>Doesn’t apply/not sure</td>
<td>Agree</td>
<td>Totally agree</td>
</tr>
</tbody>
</table>

21. People seem to leave the meeting drained of energy.

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<td>Agree</td>
<td>Totally agree</td>
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</table>

22. The members seem to spend a disproportionate amount of time at the start of meetings trying to define the problem they’re supposed to be working on.

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</table>

23. During meetings people arrive late, ask to be excused early, are frequently called out and so on.

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</tbody>
</table>
24. Arguments that have no real bearing on the topic of the meeting often break out.

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25. When a serious conflict occurs between some members, no one in the group attempts to help.

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</table>

Our Meetings Are Terrible!

Below are some of the symptoms of dysfunctional meetings and prescriptions for their cure. These are of course easier to identify than to fix, but if you can help team members become aware of their patterns, they can begin to resolve them.

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Care</th>
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</thead>
<tbody>
<tr>
<td>As each person finishes speaking, the next person starts a new topic.</td>
<td>Have each person acknowledge the comments of the last speaker. Make it a rule to finish a point before moving forward.</td>
</tr>
<tr>
<td>There is no building on ideas, thus no continuity of discussion. This results in a half-dozen topics in the air.</td>
<td></td>
</tr>
<tr>
<td>People argue their side, trying to convince others that they’re right rather than understanding either the issue or anyone else’s input. There is no listening.</td>
<td>Train members to paraphrase what’s said in response to their point. Record all sides of the issue on a flip chart. Once everyone understands these differing views, try for a decision.</td>
</tr>
<tr>
<td>As soon as a problem is mentioned, someone announces that they understand the problem. A solution is very quickly proposed and the discussion moves to another topic.</td>
<td>Use cause and effect diagrams or systematic problem solving to bring structure to meetings. Become thorough in solving problems. Avoid jumping to obvious solutions.</td>
</tr>
<tr>
<td>Whenever someone disagrees with a group decision, the dissenting view is ignored.</td>
<td>Develop an ear for dissenting views and make sure they get heard. Have someone else paraphrase the dissenting opinion.</td>
</tr>
<tr>
<td>Problem</td>
<td>Solution</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>The group uses brainstorming and voting to reach all decisions.</td>
<td>Preplan meeting processes so other tools are on hand, and then use them.</td>
</tr>
<tr>
<td>Conversations often go nowhere for twenty to thirty minutes. In frustration the group goes on to another topic.</td>
<td>Set a time limit on each discussion and halfway through evaluate how it’s going. Use periodic summaries, push for closure.</td>
</tr>
<tr>
<td>People often become emotional. Sometimes they even say things to others that are quite personal.</td>
<td>Have people stop and rephrase their comments so there are no distracting personal innuendoes.</td>
</tr>
<tr>
<td>Group members hold frequent side meetings to discuss what they’re thinking. No one says any of this out loud of course.</td>
<td>Encourage honesty by valuing all input. Draw side chatterers back to the general conversation.</td>
</tr>
<tr>
<td>Group members don’t notice they’ve become sidetracked on an issue until they’ve been off topic for quite awhile.</td>
<td>Call “side-track” or have some other signal to flag it. Decide if you want to digress or park the particular issue.</td>
</tr>
<tr>
<td>Only the real extroverts, or those with “power”, do most of the talking. Some team members say little at most meetings.</td>
<td>Use round robins to get input. Call on members by name. Use idea slips to get written comments from everyone.</td>
</tr>
<tr>
<td>No one pays attention to body language. Some people have tuned out or even seem agitated.</td>
<td>Make perception check and ask people to express their feelings.</td>
</tr>
<tr>
<td>There is no closure to most topics. Little action takes place between meetings.</td>
<td>Stress closure. Reach a clear decision and record it. Have an action planning form handy. Bring actions forward at the next meeting.</td>
</tr>
<tr>
<td>There is little achieved week after week.</td>
<td>Do a meeting evaluation. Discuss results before the next meeting. Post any new rules or improvement ideas.</td>
</tr>
</tbody>
</table>
The Fundamentals of Meeting Management

1. Create and Use a Detailed Agenda

Each meeting must have an agenda that’s been developed ahead of time and ratified by the members of the team. By having the agenda in advance of the meeting, members can do their homework and come prepared to make decisions.

Agendas should include the following items:

- topics for discussion, plus a brief description of what is involved and what needs to be accomplished
- a time guideline for each item
- the name of the person bringing forward the item
- the details of the process to be used for each discussion

If the agenda cannot be designed in advance for whatever reason, then the first order of business at the meeting must be agenda building. In this facilitated discussion, members design the agenda for that day’s session.

2. Develop Step-By-Step Process Notes

Most of the books that have been written on meetings do not mention ‘process notes,’ largely because these books are geared toward meetings that will be chaired rather than facilitated.

When a meeting is facilitated, there must be detailed process notes for each agenda item. These notes specify how the discussion will be facilitated. They specify the tools and techniques to be used, and how participation will be managed.

In the following sample agenda we’ve added process notes to illustrate their important role. While some facilitators keep these design notes to themselves, it’s often a good idea to enhance buy-in to a process by openly sharing the process with the group.
Sample Agenda with Process Notes

Name of group: Customer Fulfillment Team
Members: Jane, Muhammad, Jacques, Elaine, Carl, Fred, Diane, Joe
Meeting details: Monday, June 12, 1999, 11:00 to 1:00 (Brown Bag Lunch), Conference Room C

<table>
<thead>
<tr>
<th>What &amp; Why*</th>
<th>How (process notes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm up (10 min.) - Joe</td>
<td>Members share one recent customer contact story</td>
</tr>
<tr>
<td>- To create focus</td>
<td></td>
</tr>
<tr>
<td>Review agenda and norms (5 min.) - Joe</td>
<td>Ratify the agenda and the norms through general discussions. Add any new items. Make sure there is clarity about the overall goal of the meeting.</td>
</tr>
<tr>
<td>- To set context</td>
<td></td>
</tr>
<tr>
<td>Bring forward action items (25 min.) - All</td>
<td>Brief report by all members on action plans created at the last meeting. Add any new plans.</td>
</tr>
<tr>
<td>- To implement monitoring</td>
<td></td>
</tr>
<tr>
<td>Focus group updates (20 min.) - Jacques &amp; Diane</td>
<td>Report on outcomes of six customer focus groups. Use Forcefield Analysis to distinguish between what you’re doing well and what you aren’t. Establish criteria to evaluate customer concerns.</td>
</tr>
<tr>
<td>- To identify areas for improvement</td>
<td></td>
</tr>
<tr>
<td>Prioritisation of customer issues (20 min.) - Joe</td>
<td>Use criteria matrix to appraise each issue and determine top priorities for action.</td>
</tr>
<tr>
<td>- To set priorities</td>
<td></td>
</tr>
<tr>
<td>Problem solving of priority issues (30 min.) - Entire group</td>
<td>Divide into tow subteams to problem solve the two top priority issues; create detailed action plans for the top issues; meet as a group to share and ratify ideas.</td>
</tr>
<tr>
<td>- To create improvement plans</td>
<td></td>
</tr>
<tr>
<td>Next step planning and agenda building (10 min.) - Joe</td>
<td>Make sure everyone knows what they’re expected to work on; start to form agenda for the next meeting.</td>
</tr>
<tr>
<td>- To ensure closure and design next session</td>
<td></td>
</tr>
<tr>
<td>Exit survey (10 min.) - Joe</td>
<td>Have everyone evaluate the meeting on their way out the door. List items to be brought forward at the next meeting.</td>
</tr>
<tr>
<td>- To check meeting effectiveness</td>
<td></td>
</tr>
</tbody>
</table>

*Note: Times given above are totally speculative and are only included for illustration purposes.
3. Clarify Roles and Responsibilities

Effective meetings require people to play defined roles.

**Facilitator:** designs the methodology for the meeting, manages participation, offers useful tools, helps the group determine its needs, keeps things on track and periodically checks on how things are going. A facilitator doesn’t offer opinions about what is being discussed, but instead focuses on how issues are being discussed. A facilitator is a procedural expert who is there to help and support the group’s effectiveness. Facilitation is focused on asking.

**Chairperson:** runs the meeting according to defined rules, but also offers opinions and engages in the discussion if he or she chooses. The chairperson has traditionally not been neutral. Most often, the chairperson of any meeting is the official leader, who plays an active role as decision-maker and ‘opinion leader.’

**Minute taker:** takes brief, accurate notes of what is discussed and the decisions made. Also responsible for incorporating the notes on flip charts. Most often, minute-taking responsibilities are rotated among the regular members of a work group. However, for special meetings or if money is not a barrier, this role can be played by someone not involved in the discussion.

**Timekeeper:** a rotating role in which someone keeps track of the time and reminds the group periodically if they’re staying within guidelines. Not a license to be autocratic or shut down important discussions if they’re running over. The use of an automatic timer will let the timekeeper participate in the discussion more comfortably.

**Scribe:** a group member who volunteers to write/record comments on a flip chart. Some facilitators are more comfortable asking others to make notes on the flip chart while they facilitate. This has the benefit of freeing the facilitator from the distractions of writing, but adds its own complications. The scribe may start facilitating or may not make the notes the way the facilitator wants. Having a scribe takes a lot of coordination. Since a scribe takes a second person out of the discussion, a general rule is that a facilitator should make his or her own notes if at all possible. If a scribe is used, clarifying questions should be channeled through the facilitator, instead of the scribe interacting directly with the members.

**Balancing the roles of chairperson and facilitator**

Chairing and facilitating are two distinct meeting management styles. Each has its strengths and its place.
Chairing is most useful at the start of a meeting in order to go over minutes, share information and manage a round robin report-back by members. Chairing traditionally relies on the use of “Parliamentary Rules of Order.”

Since chairs are not neutral, their major drawback is that they tend to influence decisions and concentrate power. It’s not uncommon for a strong chairperson to make final decisions on important items.

A consequence of this decision mode is that the chair ‘owns’ the outcome. There is also little emphasis on using process tools when playing the traditional role of the chairperson. Facilitating is designed to foster the full and equal participation of all members when their input is needed to decide issues. Since facilitators are neutral, they empower members. They rely on consensus and collaboration to reach important decisions. This results in decisions for which the whole group feels it has ownership.

Facilitation creates rules from within the group, rather than imposing rules from a book. Facilitation is also associated with a rich array of tools and techniques designed to create synergy and get better ideas.

A very common role arrangement is to have a meeting leader who uses a chairperson approach to start the meeting, deal with the agenda, take care of the housekeeping and information sharing portions of the session and then switch to facilitation in order to get input on the discussion topics within the agenda.

All good facilitators should know when and how to act as an effective chairperson. Conversely, it would be ideal if all chairpersons were also skilled facilitators who could switch styles when they wanted to get participation and ownership.

With some planning beforehand, these roles won’t conflict. The key is to remember that each has its place, and to be clear about which approach is being used.

In summary:

**Chair** when you want to:
- review past minutes and agenda items
- exchange information
- hear members report back
- discuss next steps

**Facilitate** when you want to:
- increase participation
- shift ownership
- get members to make decisions
- get members to create action plans
4. **Set Clear Meeting Norms**

Make sure that the group has clear norms for behaviour and that those norms are created by the group. Help the group tailor their norms to meet the demands of particular meetings by helping them set targeted norms if applicable (refer to Targeted Norms, pg. 45).

5. **Manage Participation**

Make sure that everyone is part of the discussion, structure exists for each item and there is an effective use of decision-making tools to bring closure to all items.

As facilitator, you are responsible for ensuring that members know and exhibit effective discussion skills. If members are not skilled, then you should conduct the training exercises suggested on pg. 53, or use other strategies discussed in that chapter.

6. **Make Periodic Process Checks**

Process checking is a technique that every facilitator should utilize during meetings to keep meetings from going ‘off the rails.’ It involves stopping the discussion and turning the group’s attention to how the meeting is going. The purpose of this shift in focus is to engage members in checking how things are being done and what changes are needed to improve the flow of the meeting.

**There are Four Basic Elements in Process Checking:**

1. **Check for progress:** Ask members if they think the goals are being achieved. Are problems being solved? Are decisions being made?

   *When to check progress:* If things seem to be getting stuck; at points of closure; at least once per session.

2. **Check the pace:** Ask if things are moving too quickly or too slowly. Get any suggestions for improving the pace, and implement these immediately.

   *When to check the pace:* When things seem to be dragging or moving too fast; any time people look frustrated; at least once per session/meeting.
3. **Check the process:** Ask members if the tool or approach being used is working or needs to be changed. Ask for or offer suggestions for another approach.

*When to check the process:* When the tool isn’t yielding the results you hoped for, or it’s evident that the process isn’t being followed as laid out.

4. **Take the pulse:** Ask members how they’re feeling. Are they energized? Tired? Do they feel satisfied, frustrated? Ask for their suggestions on how to perk things up.

*When to take the pulse:* Any time members look distracted, tired or frustrated; at least once during each session.

### How to Do a Process Check

Process checks can be done verbally by asking members directly or in written form by posting the survey below on a flip chart. Members can then anonymously rate how the meeting is going thus far. When members return from the break, ask them to interpret the survey results and brainstorm ideas for improving the remainder of the session. Act on their suggestions immediately.

#### Sample Process Check Survey

Tell us how it’s going so far with...

**Progress:** To what extent are we achieving our goals?

1 2 3 4 5  
Poor Fair Satisfactory Good Excellent

**Pace:** How does the pace feel?

1 2 3 4 5  
Poor Fair Satisfactory Good Excellent

**Process:** Are we using the right methods/tools?

1 2 3 4 5  
Poor Fair Satisfactory Good Excellent

**Pulse:** How are you feeling about the session? Put a check mark beside any that describe you now.

1 2 3 4 5  
Poor Fair Satisfactory Good Excellent
7. **Take Minutes**

Assign someone in the group to take very brief, concise notes. The best minutes are short one-page summaries of what was decided and next steps.

8. **Determine Next Steps**

Never let a group leave a meeting without clear next steps in place. Define what will be done, by whom and when. These action plans need to be brought forward at all subsequent meetings to ensure that the group is following through on commitments.

9. **Evaluate the Meeting**

Always get the group to review and evaluate each meeting. This evaluation should include what can be done to improve the next meeting and some feedback for the facilitator.

**There are three ways to evaluate a meeting:**

**Forcefield Analysis** – Ask the following:
- “What were the strengths of today’s meeting?” (+)
- “What were the weaknesses?” (–)
- “What should we do to correct the weaknesses?” (Rx)

**Exit Survey** – Three to six questions are written on a sheet of flip-chart paper, and posted near an exit. Members fill it out upon leaving the meeting. Results are discussed at the start of the next meeting. On the next page you’ll find a sample Meeting Exit Survey.

**Formal Survey** – Hand the survey out to members to complete. After being tabulated, the results are discussed at a subsequent meeting. This is an appropriate exercise to be done three or four times a year for any ongoing group or team. A sample Meeting Effectiveness Survey is provided on the next page. The Survey Feedback process is described in Chapter 8 of this book.

**Sample Meeting Exit Survey**

Give us your assessment of the items below.

**Output:** How well did we achieve what we needed to?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
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<th>4</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>1</td>
<td>Fair</td>
<td>Satisfactory</td>
<td>Good</td>
<td>Excellent</td>
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</table>


**Use of time:** How well did we use our time?

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<tbody>
<tr>
<td>Poor</td>
<td>Fair</td>
<td>Satisfactory</td>
<td>Good</td>
<td>Excellent</td>
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</table>

**Participation:** How well did we ensure everyone was equally involved?

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<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>Fair</td>
<td>Satisfactory</td>
<td>Good</td>
<td>Excellent</td>
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</tbody>
</table>

**Decision-making:** How well thought out were our decisions?

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<tr>
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<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>Fair</td>
<td>Satisfactory</td>
<td>Good</td>
<td>Excellent</td>
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</tbody>
</table>

**Action Plans:** How clear and doable are our action plans?

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<th>5</th>
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<tbody>
<tr>
<td>Poor</td>
<td>Fair</td>
<td>Satisfactory</td>
<td>Good</td>
<td>Excellent</td>
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</tbody>
</table>

**Organisation:** How well run was the meeting?

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<tr>
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<th>5</th>
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<tbody>
<tr>
<td>Poor</td>
<td>Fair</td>
<td>Satisfactory</td>
<td>Good</td>
<td>Excellent</td>
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</table>

---

**Meeting Effectiveness Survey**

*Instructions:* Please give your candid opinions of the meetings you attended as part of this group. Rate the characteristics of the meetings by circling the appropriate number on each scale to represent your evaluation. Remain anonymous. Return the survey to your group facilitator. Remember that you are rating the meetings of this group.

1. **Meeting Objectives**

   Are objectives clearly set out in advance of the meeting?

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
   ---|---|---|---|---|---|---|
   Objectives are seldom set out in advance | Objectives are always set out in advance

2. **Communication**

   Are agendas circulated to all members in advance of the meeting?

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
   ---|---|---|---|---|---|---|
   Agendas are rarely circulated in advance | Agendas are always circulated in advance
### 3. Start Times
Do meetings start on time?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meetings hardly ever start on time</td>
<td>Meetings always start on time</td>
<td></td>
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</table>

### 4. Time Limits
Are time limits set for each agenda item?

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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>We do not set time limits</td>
<td>Time limits are always set for each</td>
<td></td>
<td></td>
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</tbody>
</table>

### 5. Meeting Review
Are action items from the previous meeting(s) brought forward?

<table>
<thead>
<tr>
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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Items are seldom brought forward from previous meetings</td>
<td>Items are always brought forward from previous meetings</td>
<td></td>
<td></td>
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</tbody>
</table>

### 6. Warm-up
Is there a meeting warm-up to hear from all members?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>We seldom use a meeting warm-up</td>
<td>We often use a meeting warm-up</td>
<td></td>
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</tbody>
</table>

### 7. Role Clarity
Are roles (e.g., timekeeper, scribe, and facilitator) made clear?

<table>
<thead>
<tr>
<th>1</th>
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<th>7</th>
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</thead>
<tbody>
<tr>
<td>Roles are not identified</td>
<td>Roles are always clearly defined</td>
<td></td>
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</tbody>
</table>

### 8. Setting
Is there a quiet place for the meeting, with ample workspace, flip charts and AV support?

<table>
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<tr>
<th>1</th>
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<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>The meeting place is not well suited</td>
<td>The meeting place is very good</td>
<td></td>
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</tr>
</tbody>
</table>
9. **Process**
Is there clarity before each topic as to how that item will be managed?

1  2  3  4  5  6  7
There is rarely any planning on process
There is always clarity on process

10. **Preparation**
Does everyone come prepared and ready to make decisions?

1  2  3  4  5  6  7
We are often unprepared
We are generally prepared

11. **Interruptions**
Are meetings being disrupted due to people leaving, phones ringing, pagers beeping, etc.?

1  2  3  4  5  6  7
There are constant interruptions
We control interruptions

12. **Participation**
Are all members fully exchanging views, taking responsibility for action items and follow-up?

1  2  3  4  5  6  7
People hold back and don't take ownership
Everyone offers ideas and takes action

13. **Leadership**
Does one person make all the decisions, or is there a sharing of authority?

1  2  3  4  5  6  7
The manager holds the chair and makes most decisions
Authority is shared

14. **Pace**
How would you rate the pace of the meetings?

1  2  3  4  5  6  7
Poor
Just right
15. **Tracking**
Do meetings stay on track and follow the agenda?

<table>
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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Meetings usually stray off track</td>
<td>Meetings usually stay on track</td>
<td></td>
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</table>

16. **Record Keeping**
Are quality minutes kept and circulated?

<table>
<thead>
<tr>
<th></th>
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<th>4</th>
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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, they are</td>
<td>No, they are not</td>
<td></td>
<td></td>
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</table>

17. **Listening**
Do members practice active listening?

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<tr>
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<th>4</th>
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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>We don’t listen closely to each other</td>
<td>Members listen actively</td>
<td></td>
<td></td>
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</table>

18. **Conflict Management**
Are differences of opinion suppressed, or is conflict effectively used?

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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict isn’t very effectively used</td>
<td>Conflict is effectively exploited for new ideas</td>
<td></td>
<td></td>
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</table>

19. **Decision Making**
Does the group generally make good decisions at our meetings?

<table>
<thead>
<tr>
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<th>5</th>
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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>We tend to make poor decisions</td>
<td>We tend to make good decisions</td>
<td></td>
<td></td>
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</table>

20. **Closure**
Do we tend to end topics before getting into new ones?

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<th>7</th>
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</thead>
<tbody>
<tr>
<td>We constantly start new topics</td>
<td>We close each topic before moving on</td>
<td></td>
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</table>
21. **Consensus**
Do we work hard to make collaborative decisions that we can all live with?

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<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>We abandon consensus too easily</td>
<td>We work hard to reach consensus</td>
<td></td>
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</table>

22. **Follow-up**
Is there good coherent follow-up to commitments made at meetings?

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<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>We tend not to follow-up</td>
<td>There is consistent follow-up</td>
<td></td>
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</tr>
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</table>
Appendix 4
Process and Matrix Tools

Flowcharting

Why use it?
To allow a team to identify the actual flow or sequence of events in a process that any product or service follows. Flowcharts can be applied to anything from the travels of an invoice or the flow of materials, to the steps in making a sale or servicing a product.

What does it do?
* Shows unexpected complexity, problem areas, redundancy, unnecessary loops, and where simplification and standardisation may be possible.
* Compares and contrasts the actual versus the ideal flow of a process to identify improvement opportunities.
* Allows a team to come to agreement on the steps of the process and to examine which activities may impact the process performance.
* Identifies locations where additional data can be collected and investigated.
* Serves as a training aid to understand the complete process.

How do I do it?

1. Determine the frame or boundaries of the process
   * Clearly define where the process under study starts (input) and ends (final output).
   * Team members should agree to the level of detail they must show on the Flowchart to clearly understand the process and identify problem areas.
   * The Flowchart can be a simple macro-flowchart showing only sufficient information to understand the general process flow or it might be detailed to show every finite action and decision point. The team might start out with a macro-flowchart and then add in detail later or only where it is needed.
2. **Determine the steps in the process**

   * Brainstorm a list of all major activities, inputs, outputs, and decisions on a flipchart sheet from the beginning of the process to the end.

3. **Sequence the steps**

   * Arrange the steps in the order they are carried. Use Post-it™ notes so you can move them around. Don't draw in the arrows yet.

   *Tip* Unless you are flowcharting a new process, sequence what is, not what should be or the ideal. This may be difficult at first but is necessary to see where the probable causes of the problems are in the process.

4. **Draw the Flowchart using the appropriate symbols**

   ![Oval](oval.png)
   An oval is used to show the materials, information or action (inputs) to start the process or to show the results at the end (output) of the process.

   ![Box](box.png)
   A box or rectangle is used to show a task or activity performed in the process. Although multiple arrows may come into each box, usually only one output or arrow leaves each activity box.

   ![Diamond](diamond.png)
   A diamond shows these points in the process where a yes/no question is being asked or a decision is required.

   ![Circle](circle.png)
   A circle with either a letter or a number identifies a break in the Flowchart and is continued elsewhere on the same page or another page.

   ![Arrow](arrow.png)
   Arrows show the direction or flow of the process.

   * Keep the Flowchart simple using the basic symbols listed above. As your experience grows, use other, more graphic symbols to represent the steps. Other symbols sometimes used include:

   - A half or torn sheet of paper for a report completed and/or filed
   - A can or computer tape wheel for data entry into a computer database
   - A large “D” or half circle to identify places in the process where there is a delay or wait for further action
* Be consistent in the level of detail shown.
  - A macro-level flowchart will show key action steps but no decision boxes
  - An intermediate-level flowchart will show action and decision boxes
  - A micro-level flowchart will show minute detail

* Label each process step using words that are understandable to everyone.

* Add arrows to show the direction of the flow of steps in the process. Although not a rule, if you show all “yes” choices branching down and “no” choices branching to the left, it is easier to follow the process. Preferences and space will later dictate direction.

* Don't forget to identify your work. Include the title of your process, the date the diagram was made and the names of the team members.

5. **Test the Flowchart for completeness**

Are the symbols used correctly?
* Are the process steps (inputs, outputs, actions, decisions, waits/delays) identified clearly?
* Make sure every feedback loop is closed i.e. every path takes you either back or to go ahead to another step.
* Check that every continuation point has a corresponding point elsewhere in the Flowchart or on another page on the Flowchart.
* There is usually only one output arrow out of an activity box. If there are more than one arrow, you may need a decision diamond.
* Validate the Flowchart with people who are not on the team and who carry out the process actions. Highlight additions or deletions they recommend. Bring these back to the team to discuss and incorporate into the final Flowchart.

6. **Finalise the Flowchart**

* Is the process being run the way it should be?
* Are people following the process as charted?
* Are there obvious complexities or redundancies that can be reduced or eliminated?
* How different is the current process from an ideal one? Draw an ideal Flowchart. Compare the two (current versus ideal) to identify discrepancies and opportunities for improvements.
Variations

The type of Flowchart just described is sometimes referred to as a “detailed” flowchart because it includes, in detail, the inputs, activities, decision points, and outputs of any process. Four other forms, described below, are also useful.

Macro Flowchart

Refer to the third bulleted item in Step 1 of this section for a description. For a graphic example, see Step 2 of the Improvement Storyboard in the Problem-Solving/Process Improvement Model section.

Top-Down Flowchart

This chart is a picture of the major steps in a work process. It minimises the detail to focus only on those steps essential to the process. It usually does not include inspection, rework, and other steps that result in quality problems. Teams sometimes study the topdown flowchart to look for ways to simplify or reduce the number of steps to make the process more efficient and effective.

Planning a Party
Deployment Flowchart

This chart shows the people or departments responsible and the flow of the process steps or tasks as they are assigned. It is useful to clarify roles and track accountability as well as to indicate dependencies in the sequence of events.

Chris  Karin  Lauren

Plans ad

Writes ad

Is there time to do graphics?

Sends ad out

Draws graphics

Ad completed
Workflow Flowchart

This type of chart is used to show the flow of people, materials, paperwork, etc, within a work setting. When redundancies, duplications, and unnecessary complexities are identified in a path, people can take action to reduce or eliminate these problems.
Force Field Analysis

Why use it?
To identify the forces and factors in place that support or work against the solution of an issue or problem so that the positives can be reinforced and/or the negatives eliminated or reduced.

What does it do?
* Presents the “positives” and “negatives” of a situation so they are easily compared.
* Forces people to think together about all the aspects of making the desired change a permanent one.
* Encourages people to agree about the relative priority of factors on each side of the “balance sheet”.
* Encourages honest reflection on the real underlying roots of a problem and its solution.

How do I do it?
1. Draw a large letter “T” in a flipchart
   a) At the top of the T, write the issue or problem that you plan to analyse.
      * To the far right of the top of the T, write a description of the ideal situation you would like to achieve.
   b) Brainstorm the forces that are driving you towards the ideal situation. These forces may be external or internal. List them on the left side.
   c) Brainstorm the forces that are restraining movement toward the ideal state. List them on the right side.

2. Prioritise the driving forces can be strengthened or identify restraining forces that would allow the most movement toward the ideal state if they were removed.
   * Achieve consensus through discussion or by using ranking methods such as Nominal Group Technique and Multivoting.

Tip When choosing a target for change, remember that simply pushing the positive factors for a change can have the opposite effect. It is often more helpful to remove barriers. This tends to break the “change bottleneck” rather than just pushing on all the good reasons to change.
 Force Field
Fear of Public Speaking

Ideal state: To speak confidently, clearly, and concisely in any situation.

<table>
<thead>
<tr>
<th>+ Driving Forces</th>
<th>Restraining Forces –</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increases self-esteem →</td>
<td>← Threatening when not done right</td>
</tr>
<tr>
<td>Helps career →</td>
<td>← Past embarrassment</td>
</tr>
<tr>
<td>Communicates ideas →</td>
<td>← Afraid to make mistakes</td>
</tr>
<tr>
<td>Contributes to a plan/solution →</td>
<td>← Lack of knowledge on the topic</td>
</tr>
<tr>
<td>Encourages others to speak →</td>
<td>← Afraid people will be indifferent</td>
</tr>
<tr>
<td>Helps others to change →</td>
<td>← Afraid people will laugh</td>
</tr>
<tr>
<td>Increases energy of group →</td>
<td>← May forget what to say</td>
</tr>
<tr>
<td>Helps clarify speaker’s ideas by →</td>
<td>← Too revealing of personal thoughts</td>
</tr>
<tr>
<td>getting feedback from others</td>
<td>← Afraid of offending group</td>
</tr>
<tr>
<td>Hams can be hams →</td>
<td>← Fear that nervousness will show</td>
</tr>
<tr>
<td>(recognition from others)</td>
<td></td>
</tr>
<tr>
<td>Helps others to see new perspective →</td>
<td></td>
</tr>
</tbody>
</table>

Note: The Force Field can help individuals and teams select targets for change. Generally, when you focus on restraining forces, not driving forces, this works best. For example, using index cards for key points may reduce the fear “May forget what to say”.
Interrelationship Diagraph

Why use it?
To allow a team to systematically identify, analyse and classify the cause and effect relationships that exist among all critical issues so that key drivers or outcomes can become the heart of an effective solution.

What does it do?
* Encourages team members to think in multiple directions rather than linearly.
* Explores the cause and effect relationships among all the issues, including the most controversial.
* Allows key issues to merge naturally rather than allowing the issues to be forced by a dominant or powerful team member.
* Systematically surfaces the basic assumptions and reasons for disagreements among team members.
* Allows a team to identify root cause(s) even when credible data doesn’t exist.

How do I do it?

1. Agree on the issue/problem statement

   What are the issues related to reducing litter?

   * If using an original statement, (it didn’t come from a previous tool or discussion), create a complete sentence that is clearly understood and agreed on by team members.
   * If using input from other tools, such as an Affinity Diagram, make sure that the goal under discussion is still the same and clearly understood.

2. Assemble the right team

   * The ID requires more intimate knowledge of the subject under discussion than is needed for the Affinity. This is important if the final cause and effect patterns are to be credible.
   * The ideal team size is generally 4-6 people. However, this number can be increased as long as the issues are still visible and the meeting is well facilitated to encourage participation and maintain focus.
3. Lay out all of the ideas/issue cards that have either been brought from other tools or brainstormed.

* Arrange 5-25 cards or noted in a large circular pattern, leaving as much space as possible for drawing arrows. Use large, bold printing, including a large number or letter on each idea for quick reference later in the process.

4. Look for cause/influence relationships between all of the ideas and draw relationship arrows.

* Choose any of the ideas as a starting point. If all of the ideas are numbered or lettered, work through them in sequence.
* An outgoing arrow from an idea indicates that it is the stronger cause or influence.

Ask of each combination:
1) Is there a cause/influence relationship?
2) If yes, which direction of cause/influence is stronger?

Decision: “B” causes or influences “A”

Decision: No relationship
**Tip** Draw only one-way relationship arrows in the direction of the stronger cause or influence, make a decision on the stronger direction. Do not draw two-headed arrows.

### 5. Review and revise the first round ID

* Get additional input from people who are not on the team to confirm or modify the team’s work. Either bring the paper version to others or reproduce it using available software. Use a different size print or a colour marker to make additions or deletions.

### 6. Tally the number of outgoing and incoming arrows and select key items for further planning

* Record and clearly mark next to each issue the number of arrows going in and out of it.
* Find the item(s) with the highest number of outgoing arrows and the item(s) with the highest number of incoming arrows.
* Outgoing arrows. A high number of outgoing arrows indicates an item that is a root cause or driver. This is generally the issue that the team tackles first.
* Incoming arrows. A high number of incoming arrows indicates an item that is a key outcome. This can become a focus for planning either as a meaningful measure of overall success or as a redefinition of the original issue under discussion.

**Tip** Use common sense when you select the most critical issues to focus on. Issues with very close tallies must be reviewed carefully but in the end, it is a judgement call, not science.

7. **Draw the final ID**

* Identify visually both the key drivers (greatest number of outgoing arrows) and the key outcomes (greatest number of incoming arrows).

Typical methods are double boxes or bold boxes.

---

**Variations**

When it is necessary to create a more orderly display of all the relationships, a matrix format is very effective. The vertical (up) arrow is a driving cause and the horizontal (side) arrow is an effect. The example below has added symbols indicating the strength of the relationships.

The “total” column is the sum of all the “relationship strengths” in each row. This shows that you are working on those items that have the strongest effect on the greatest number of issues.
### ID – Matrix Format

<table>
<thead>
<tr>
<th></th>
<th>Logistic Support</th>
<th>Customer Satisfaction</th>
<th>Education &amp; Training</th>
<th>Personal Incentives</th>
<th>Leadership</th>
<th>Cause/Driver</th>
<th>Result/Rider</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logistic Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Education &amp; Training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Personnel Incentives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>Leadership</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>0</td>
<td>24</td>
</tr>
</tbody>
</table>

**Relationship Strength**

- **●** = 9 Significant
- **○** = 3 Medium
- **△** = 1 Weak
Interrelationship Digraph

Issues Surrounding Implementation of the Business Plan

Means not clearly defined

In = 3  Out = 2

Communications issues within the group

In = 1  Out = 3

Plan not integrated

In = 2  Out = 4

No strong commitment to the group

In = 2  Out = 0

Fast new product introductions stretch resources

In = 1  Out = 2

Planning approach not standardised

In = 0  Out = 5

Capacity may not meet needs

In = 5  Out = 11

External factors impact implementation

In = 0  Out = 3

Lack of time and resources

In = 5  Out = 0

Note: “The drivers” from this ID will be used as the goal in the tree example shown at the end of the Tree Diagram/PDPC section.
This is the driver: if the focus on the citizen as a customer becomes the core of the Town's vision then everything else will be advanced.
Matrix Tools

Why use it?
To allow a team or individual to systematically identify, analyse and rate the presence and strength of relationships between two or more sets of information.

What does it do?
* Makes patterns of responsibilities visible and clear so that there is an even and appropriate distribution of tasks
* Helps a team get consensus on small decisions, enhancing the quality and support for the final decision
* Improves a team's discipline in systematically taking a hard look at a large number of important decision factors

Types of Matrices

Most Common
* L-shaped matrix. Two sets of items directly compared to each other or a single set compared to itself.
* T-shaped matrix. Two sets of items compared to a third set.

### Orienting New Employees

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Impact</th>
<th>Conclusion: The most important purpose of orientation is to reduce anxiety and the most effective tasks focus on the personal issues.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Team Members</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td>Resources</td>
<td>Low</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Communicate organisation spirit</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicate purpose of organisation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolve practical concerns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce anxiety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tasks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Division manager</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associates</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Uncommon
* Y-shaped matrix. Three sets of items compared to each other. It “bends” a T-shaped matrix to allow comparisons between items that are on the vertical axes.

Rarely Used
* X-shaped matrix. Four sets of items compared to each other. It is essentially two T-shaped matrices placed back to back.
* C-shaped matrix. Shows the intersection of three sets of data simultaneously. It is a three dimensional graphic.
* You can find out more complete information in the Y-, X- and C-shaped matrix in The Memory Jogger Plus+®.

How do I do it?

1. Select the key factors affecting successful implementation
   * The most important step is to choose the issues or factors to be compared. The format is secondary. Begin with the right issues and the best format will define itself. The most common use is the distribution of responsibilities within an L-shaped or T-shaped matrix.

2. Assemble the right team
   * Select individuals that have the influence/power to realistically assess the chosen factors.

   Tip When distributing responsibilities, include those people who will likely be involved in the assigned tasks or who can at least be part of a review team to confirm small group results.

3. Select an appropriate matrix format
   * Base your choice of format on the number of sets of items and types of comparisons you need to make.

4. Choose and define relationships symbols
   * The most common symbols in matrix analysis are ●, ○, △.
   * Generally they are used to indicate:
     ● = High = 9
     ○ = Medium = 3
     △ = Low = 1
   * The possible meanings of the symbols are almost endless. The only requirement is that the team comes to a clear understanding and creates an equally clear legend with the matrix.
5. Complete the matrix

* If distributing responsibilities, use only one “primary responsibility” symbol to show ultimate accountability. All other core team members can be given secondary responsibilities.

**Tip** Focus the quality of the decision in each matrix cell. Do not try to “stack the deck” by consciously building a pattern of decisions. Let these patterns emerge naturally.

**Tip** Interpret the matrix using total numerical values only when it adds value. Often the visual pattern is sufficient to interpret the overall results.

**Variations**

The matrix is one of the most versatile tools available. The important skill to master is “matrix thinking”. This approach allows a team to focus its discussion on related factors that are explored thoroughly. The separate conclusions are then brought together to create high-quality decisions. Use your creativity in determining which factors affect each other and in choosing the matrix format that will help focus the discussion toward the ultimate decision.

**Matrix**

**Logistics Annual Plan**

<table>
<thead>
<tr>
<th>LQC Objectives (Matrix)</th>
<th>Measures</th>
<th>Schedules (AND)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce customer cost</td>
<td>% satisfaction via survey</td>
<td>1994 1995 Quarter Quarter</td>
</tr>
<tr>
<td>Continue implementation of total quality</td>
<td>List of customer needs by key processes</td>
<td>1 2 3 4 1 2 3 4</td>
</tr>
<tr>
<td>Continue upgrading tech, proof &amp; managerial skills of employees</td>
<td># of comments of # of complaints</td>
<td></td>
</tr>
<tr>
<td>Promote environmental responsibility in our operations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= 9 Strong influence/relationship
○ = 3 Some influence/relationship
△ = 1 Weak influence/relationship
Blank = No influence/relationship
### Goals (AND) and Co-responsibility (Matrix)

<table>
<thead>
<tr>
<th></th>
<th>1994</th>
<th>1995</th>
<th>LQc</th>
<th>Departments</th>
<th>Boards of management</th>
<th>Logical</th>
<th>Other stakeholders</th>
<th>Resources required ($)</th>
<th>Tangible benefits ($)</th>
<th>Status*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>75% customer satisfaction</td>
<td>80% customer satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field trial</td>
<td>100% customer needs gathered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1% transactions</td>
<td>1.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **= 9 Prime responsibility**
- **= 3 Secondary responsibility**
- **= 1 Kept informed**

### Cost/Benefit Analysis

<table>
<thead>
<tr>
<th></th>
<th>94</th>
<th>95</th>
<th>94</th>
<th>95</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>25k</td>
<td>25k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Status**:
- **Caution**
- **Stopped**
- **On target**
Prioritization Matrix

Weighing your options

Why use it?

To narrow down options through a systematic approach of comparing choices by selecting, weighting, and applying criteria.

What does it do?

* Quickly surfaces basic disagreements so they may be resolved up front
* Forces a team to focus on the best thing(s) to do, and not everything they could do, dramatically increasing the chances for implementation success
* Limits “hidden agendas” by surfacing the criteria as a necessary part of the process
* Increases the chance of follow-through because consensus is sought at each step in the process (from criteria to conclusions)
* Reduces the chances of selecting someone’s “pet project”

How do I do it?

There are three methods for constructing Prioritization Matrices. The outline that follows indicates typical situations for using each method. Only the “Fully Analytical Criteria Method” is discussed here.

Full Analytical Criteria Method

Typically use when:

* Smaller teams are involved (3-8 people)
* Options are few (5-10 choices)
* There are relatively few criteria (3-6 items)
* Complete consensus is needed
* The stakes are high if the plan fails

Consensus Criteria Method

This method follows the same steps as in the Full Analytical Criteria Method Except the Consensus Criteria Method uses a combination of weighted voting, and ranking is used instead of paired comparisons.
Typically use when:
* Larger teams are involved (8 or more people)
* Options are many (10-20 choices)
* There are a significant number of criteria (6-15 items)
* Quick consensus is needed to proceed

**Combination ID/Matrix Method**

This method is different from the other two methods because it is based on cause and effect, rather than criteria.

Typically use when:
* Interrelationships among options are high and finding the option with the greatest impact is critical

**Full Analytical Criteria Method**

1. **Agree on the ultimate goal to be achieved in a clear, concise sentence**
   * If no other tools are used as input, produce a clear goal statement through consensus. This statement strongly affects which criteria are used.

   Choose the most enjoyable vacation for the whole family

2. **Create the list of criteria**
   * Brainstorm the list of criteria or review previous documents for guidelines that are available, e.g., corporate goals, budget-related guidelines.

   • Cost
   • Educational value
   • Diverse activity
   • Escape reality

   * Tip The team must reach consensus on the final criteria and their meanings or the process is likely to fail!

3. **Using a L-shaped matrix, weigh each criterion against each other**

   * Reading across from the vertical axis, compare each criterion to those on the horizontal axis.
* Each time a weight (e.g., 1, 5, 10) is recorded in a row cell, its reciprocal value (e.g., 1/5, 1/10) must be recorded in the corresponding column cell.
* Total each horizontal row and convert to a relative decimal value known as the “criteria weighting”.

### Criterion vs. Criterion

<table>
<thead>
<tr>
<th>Criteria vs. Criteria</th>
<th>Cost</th>
<th>Educ. value</th>
<th>Diverse activity</th>
<th>Escape reality</th>
<th>Row Total</th>
<th>Relative Decimal Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td></td>
<td>1/5</td>
<td>1/10</td>
<td>5</td>
<td>5.3</td>
<td>.15</td>
</tr>
<tr>
<td>Educ. value</td>
<td>5</td>
<td></td>
<td>1/10</td>
<td>5</td>
<td>10.2</td>
<td>.28</td>
</tr>
<tr>
<td>Diverse activity</td>
<td>10</td>
<td>5</td>
<td></td>
<td>5</td>
<td>20</td>
<td>.55</td>
</tr>
<tr>
<td>Escape reality</td>
<td>1/5</td>
<td>1/5</td>
<td>1/5</td>
<td></td>
<td>.60</td>
<td>.02</td>
</tr>
</tbody>
</table>

Grand Total: 36.1

1 = Equally important
5 = More important
10 = Much more important
1/5 = Less important
1/10 = Much less important

### 4. Compare ALL options relative to each weighted criterion

* For each criterion, create an L-shaped matrix with all of the options on both the vertical and horizontal axis and the criteria listed in the left-hand corner of the matrix. There will be as many options matrices as there are criteria to be applied.
* Use the same rating scale (1, 5, 10) as in Step 3, BUT customise the wording for each criterion.
* The relative decimal value is the “option rating”.
Options vs. Each Criterion (Cost Criterion)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Disney World</th>
<th>Gettysburg</th>
<th>New York City</th>
<th>Uncle Henry's</th>
<th>Row Total</th>
<th>Relative Decimal Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disney World</td>
<td>1/5</td>
<td>5</td>
<td>1/10</td>
<td>5.3</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>Gettysburg</td>
<td>5</td>
<td>10</td>
<td>1/5</td>
<td>15.2</td>
<td>.33</td>
<td></td>
</tr>
<tr>
<td>New York City</td>
<td>1/5</td>
<td>1/10</td>
<td>1/10</td>
<td>.40</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Uncle Henry's</td>
<td>10</td>
<td>5</td>
<td>10</td>
<td>25</td>
<td>.54</td>
<td></td>
</tr>
</tbody>
</table>

Grand Total 45.9

1 = Equal cost
5 = Less expensive
10 = Much less expensive
1/5 = More expensive
1/10 = Much more expensive

Continue Step 4 through three more Options / Criterion matrices, like this:

<table>
<thead>
<tr>
<th>Crt</th>
<th>Options</th>
<th>Crt</th>
<th>Options</th>
<th>Crt</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tip The whole number (21, 5, 10) must always represent a desirable rating. In some cases this may mean “less”, e.g., cost, in others this may mean “more”, e.g., tasty.
5. **Using a L-shaped summary matrix, compare each option based on all criteria combined**

* List all criteria on the horizontal axis and all options on the vertical axis.
* In each matrix cell multiply the “criteria weighting” of each criterion (decimal value from Step 4). This creates an “option score”.
* Add each option score across all criteria for a row total. Divide each row total by the grand total and convert to the final decimal value. Compare these decimal values to help you decide which option to pursue.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Cost (.15)</th>
<th>Educational value (.28)</th>
<th>Diverse activity (.55)</th>
<th>Escape reality (.02)</th>
<th>Row Total</th>
<th>Relative Decimal Value (RT+GT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disney World</td>
<td>.12 x .15 (.02)</td>
<td>.24 x .28 (.07)</td>
<td>.40 x .55 (.22)</td>
<td>.65 x .02 (.01)</td>
<td>.32</td>
<td>.32</td>
</tr>
<tr>
<td>Gettysburg</td>
<td>.33 x .15 (.05)</td>
<td>.37 x .28 (.10)</td>
<td>.10 x .55 (.06)</td>
<td>.22 x .02 (0)</td>
<td>.22</td>
<td>.22</td>
</tr>
<tr>
<td>New York City</td>
<td>.01 x .15 (0)</td>
<td>.37 x .28 (.10)</td>
<td>.49 x .55 (.27)</td>
<td>.12 x .02 (0)</td>
<td>.37</td>
<td>.38</td>
</tr>
<tr>
<td>Uncle Henry’s</td>
<td>.54 x .15 (.08)</td>
<td>.01 x .28 (0)</td>
<td>.01 x .55 (.01)</td>
<td>.01 x .02 (0)</td>
<td>.09</td>
<td>.09</td>
</tr>
</tbody>
</table>

6. **Choose the best option(s) across all criteria**

*Tip* While this is more systematic than traditional decision making, it is not a science. Use common sense and judgement when options are rated very closely, but be open to non-traditional conclusions.
Variations

The Full Analytical Criteria Method, illustrated in this book, is recommended because it encourages full discussion and consensus on critical issues. The Full Analytical Criteria Method is a simplified adaptation of an even more rigorous model known as the Analytical Hierarchy Process. It is based on the work of Thomas Saaty, which he describes in his book *Decision Making for Leaders*. In any case, use common sense to know when a situation is important enough to warrant such thorough processes.

Prioritisation

### Choosing a Standard Corporate Spreadsheet Program

Weighting criteria (described in Step 3)

This is a portion of a full matrix with 14 criteria in total

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Best use of hardware</th>
<th>Ease of use</th>
<th>Maximum functionality</th>
<th>Best performance</th>
<th>Total (14 criteria)</th>
<th>Relative Decimal Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best use of hardware</td>
<td>.20</td>
<td></td>
<td>.10</td>
<td>.20</td>
<td>3.7</td>
<td>.01</td>
</tr>
<tr>
<td>Ease of use</td>
<td>5.0</td>
<td></td>
<td>.20</td>
<td>.20</td>
<td>35.4</td>
<td>.08</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum functionality</th>
<th>10</th>
<th>5.0</th>
<th>69.0</th>
<th>.17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best performance</td>
<td>5.0</td>
<td>5.0</td>
<td>45.2</td>
<td>.11</td>
</tr>
</tbody>
</table>

**Grand Total (14 criteria)** 418.1

**Note:** this constructed example, illustrated on three pages, represents only a portion of the prioritisation process and only a portion of Novacor’s spreadsheet evaluation process. Novacor chemicals assembled a 16-person team, comprised mainly of system users and some information systems staff. The team developed and weighted 14 standard criteria and then applied them to choices in word processing, spreadsheet, and presentation graphics programs.
Comparing options (described in step 4)

These are just 2 of 14 matrices

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Program A</th>
<th>Program B</th>
<th>Program C</th>
<th>Total</th>
<th>Relative Decimal Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best integration - internal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program A</td>
<td></td>
<td>1.00</td>
<td>1.00</td>
<td>2.00</td>
<td>.33</td>
</tr>
<tr>
<td>Program B</td>
<td>1.00</td>
<td></td>
<td>1.00</td>
<td>2.00</td>
<td>.33</td>
</tr>
<tr>
<td>Program C</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td>2.00</td>
<td>.33</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td></td>
<td></td>
<td>418.1</td>
<td></td>
</tr>
</tbody>
</table>

| Lowest ongoing cost             |           |           |           |       |                        |
| Program A                       |           | .10       | .20       | .30   | .02                    |
| Program B                       | 1.00      |           | 5.00      | 15.00 | .73                    |
| Program C                       | 5.00      | .20       |           | 5.20  | .25                    |
| Grand Total                     |           |           |           | 20.50 |                        |

Summarize Option Ratings Across All Criteria (described in Step 5)

This is a portion of a full matrix with 14 criteria in total

<table>
<thead>
<tr>
<th>Criteria Options</th>
<th>Easy to use (.08)</th>
<th>Best integration int. (.09)</th>
<th>Lowest ongoing cost (.08)</th>
<th>Total(14 criteria)</th>
<th>Relative Decimal Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program A</td>
<td>.03 (.01)</td>
<td>.33 (.03)</td>
<td>.02 (0)</td>
<td>.16</td>
<td>.18</td>
</tr>
<tr>
<td>Program B</td>
<td>.48 (.04)</td>
<td>.33 (.03)</td>
<td>.73 (.06)</td>
<td>.30</td>
<td>.33</td>
</tr>
<tr>
<td>Program C</td>
<td>.48 (.04)</td>
<td>.33 (.03)</td>
<td>.25 (.02)</td>
<td>.44</td>
<td>.49</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td></td>
<td></td>
<td>.90</td>
<td></td>
</tr>
</tbody>
</table>

Information provided courtesy of Novacor Chemicals

Result: Program C was chosen. Even though 14 out of the 16 team members were not currently using this program, the prioritisation process changed their minds, and prevented them from biasing the final decision.
Radar Chart

Rating Organisation Performance

Why use it?

To visually show in one graphic the size of the gaps among a number of both current organisation performance areas and ideal performance areas.

What does it do?

* Makes concentrations of strengths and weaknesses visible
* Clearly displays the important categories of performance
* If done well, clearly defines full performance in each category
* Captures the different perceptions of all the team members about organisation performance

How do I do it?

1. **Assemble the right team/raters**

   *Tip* It is critical to get varied perspectives to avoid organisation “blind spots.”

2. **Select and define the rating categories**

   * The chart can handle a wide number of categories, with 5-10 categories as an average.
   * Brainstorm or bring headers from an Affinity Diagram to create the categories.
   * Define both non-performance and full performance within each category so ratings are done consistently.

3. **Construct the chart**

   * Draw a large wheel on a flipchart with as many spokes as there are rating categories.
   * Write down each rating category at the end of each spoke around the perimeter of the wheel.
   * Mark each spoke on a zero to “n” scale with “0” at the center equal to “no performance” and the highest number on the scale at the outer ring equal to “full performance.” Performance can be measured either objectively or subjectively.
4. **Rate all performance categories**

   a) Individual: Each person rates in silence, using multicoloured markers or adhesive labels directly on the flipchart.

   b) Team: Through consensus or an average of individual scores, get a team rating. Take into account both clustering and the spread of the individual ratings.

   ![Diagram](image)

   **Tip** Make the team rating highly visible on the chart. Be sure to differentiate the team ratings from individual ratings on the chart by color or type of mark.

5. **Connect the team ratings for each category and highlight as needed**

   ![Diagram](image)

   **Tip** A gap score can be added to each category by subtracting the team rating score from the highest number on the rating scale, e.g., on a scale of “10”, a team rating of “4” produces a gap score of “6” in categories B and E.
6. **Interpret and use the results**

* The overall ratings identify gaps within each category but not the relative importance of the categories themselves. Work on the biggest gap in the most critical category.

* Post the resulting Radar Chart in a prominent place review progress regularly, and update the chart accordingly. It is a great visual “report card.”

**Radar**

**TQC Review Scores**

Company’s goal: to have 80% of all entities (34) achieve an overall score of >3.5.

To compute overall score:

\[
\text{Sum of average scores from each category} \div \text{number of categories} = \frac{12.52}{5} = 2.5 \text{ (maximum is 5)}
\]
Run Chart

Tracking Trends

Why use it?

To allow a team to study observed data (a performance measure of a process) for trends or patterns over a specified period of time.

What does it do?

* Monitors the performance of one or more processes over time to detect trends, shifts, or cycles
* Allows a team to compare a performance measure before and after implementation of a solution to measure its impact
* Focuses attention on truly vital changes in the process
* Tracks useful information for predicting trends

How do I do it?

1. Decide on the process performance measure
2. Gather data
   * Generally, collect 20-25 data points to detect meaningful patterns.
3. Create a graph with a vertical line (y axis), and horizontal line (x axis)
   * On the vertical line (y-axis), draw the scale related to the variable you are measuring.
   * Arrange the y-axis to cover the full range of the measurements and then some, e.g. 1 1/2 times the range of data.
   * On the horizontal line (x-axis), draw the time or sequence scale.
4. Plot the data
   * Look at the data collected. If there are no obvious trends, calculate the average or arithmetic mean. The average is the sum of the measured values divided by the number of data points. The median value can also be used but the mean is the most frequently used measure of the “centering” of the sample. (See Data Points for more information on averages.) Draw a horizontal line at the average value
**Tip** Do not redraw this average line every time new data is added. Only when there has been a significant change in the process or prevailing conditions should the average be recalculated and redrawn, and then only using the data point after the verified change.

5. **Interpret the Chart**

* Note the position of the average line. Is it where it should be relative to a customer need or specification? Is it where you want it relative to your business objective?

**Tip** A danger in using a Run Chart is the tendency to see every variation in data as being important. The Run Chart should be used to focus on truly vital changes in the process. Simple tests can be used to look for meaningful trends and patterns. These tests are found in Control Charts in the “Determining if Your Process is Out of Control” section. Remember that for more sophisticated uses, a Control Chart is invaluable since it is simply a Run Chart with statistically-based limits.
Run

Average Number of Days
for Determining Eligibility for Services

Information provided courtesy of Georgia State Department of
Human Resources, Division of Rehabilitation Services

**Note:** Eligibility requirements changed in May, making it much simpler for the department staff to make determinations. The trend is statistically significant because there are six or more consecutive points declining.
Select Bibliography

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**Active and Collaborative Learning**


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**Creative Problem Solving**


