

Policies and Strategies for Improving Education Quality

Effective policies and strategies can be developed at all administrative and decision levels for the purposes of maintaining or improving education quality. As illustrated in prior sections, strategies may need to vary by particular social and economic context and by the developmental level of the targeted education institutions. Such conditions do not eliminate the possibility of useful national policies related to quality; they do, however, stress the crucial significance of school- and community-level analysis.

Systemic Changes and Reforms

In prior decades, many efforts in Asian countries to transform schooling and teacher behavior relied on national plans and mandates developed and administered from the center. At times, within a highly controlled administrative environment and homogenous culture, the desired changes did take place. In many cases, however, the incentives were insufficient and the reforming and restructuring processes were too complex. Changes typically were temporary. Current attempts to improve education quality in Asian countries, sometimes in partnership with international agencies, often include policies and strategies at all administrative and decision levels.

Policy 1. Strengthening the Policy and Planning Environment in the Center

As education policy and planning are decentralized in DMCs, new functions and responsibilities are being assumed by all levels of government. Nevertheless, central leadership, expertise, and financial support remain highly important for improving education quality. Moreover, ADB has identified one of its comparative advantages as its potential to provide policy guidance and contribute to the efficacy of the policy environment. More specifically, ADB and other agencies can share information, build individual and institutional capacity, and assist in development of information and communication systems and networks.

Strategies:

- *Mobilizing public concern and political support to make improvement of education quality part of policy dialogue.* Some argue that, in the long run, quality interventions affecting schooling can be self-financing if, by raising quality, the graduation cycle is shortened and the costs per graduate are reduced (ADB 1996). However, education changes

that cannot offer short-term results are rarely favorite investments for governments or international agencies. Moreover, since quality intervention often requires additional resources, those who lose in the transaction may see quality improvement as secondary to what they value. Improving education quality, thus, is as much a political process as a technical one. Initial actions to improve quality may require national campaigns to inform the population, recruit better teachers, and involve communities. Seeking higher school quality can become a popular cause if costs are not excessive.

- *Capacity building of institutions and processes evolving through patterns of decentralization.* The wave of decentralization in Asia may shift problems of financing and quality control downward to individuals less well-equipped to deal with them effectively. Developing the knowledge and skills among teachers, head teachers, and community leaders in how to raise school quality will be a dominant challenge of the next decade. Currently, large-scale training efforts are occurring in countries where devolution of education responsibilities are advanced, such as the PRC, and efforts are beginning in countries in earlier stages of decentralization, such as Indonesia. However, a prior condition to effective education decentralization may be the capacity of local governments. The Panchayati Raj initiative in India provides an example of a national reform viewed as central to continuing social sector reform that is expected to strengthen local participatory governance and revitalize local schools.
- *Restructuring mid-level administration.* Decentralization may impact negatively upon quality by increasing the difficulty for national governments to influence school quality through any concerted central action. The involvement of intermediate levels of administration in upgrading school-level quality may become crucial. This level frequently acts as a gatekeeper in transmitting information about local actions upward and information about national policies downward. New functions at provincial and district levels may include: (i) facilitating communication and exchange networks; (ii) better utilization of supervisors and supervision; and (iii) feedback to schools of analysis of data forwarded from the school level.
- *Providing management training for new roles.* Two assumptions run through much of the discussion of education quality: (i) teacher quality – if defined in terms of subject competence, pedagogic skills, intelligence, empathy, and artistry – potentially has a powerful influence on student learning; and (ii) teacher quality is nurtured by specific school conditions such as (a) administrative encouragement of school improvement, teamwork, and collaboration in planning and problem solving, and (b) risk taking in innovative practices.

If the local community and school become the focal point of much of the planning and action related to education quality, then the role of the head teacher is radically changed. The role traditionally has emphasized maintenance of administrative control, performance of administrative routines, and commitment to rules for problem solving.

The emerging role may include multiple goals, a focus on facilitating change, mobilizing community education efforts, utilization of evaluation and professional sources of information, and supervising instruction.

The focus of a training program in the Philippines provides a useful example. It prepares school managers for decentralization, and is indicative of the potential new demands placed on principals by decentralization. The training program, which stands in marked contrast with training devoted to routine administrative tasks, includes such areas as: management of change; instructional leadership; communication management; crisis management; problem solving, resourcing, and decision making; decentralization; performance accountability; values development; physical facilities management; and administrative discipline (Philippines 1996).

- *Delivering quality education in peripheral areas.* In several countries, populations of significant size remain without access to basic education in any acceptable form. The problem of unequal access to schooling involves not only girls but also the rural and urban poor, linguistic and ethnic minorities, and populations in remote areas. This situation is particularly acute in Bhutan, PRC, India, Indonesia, Nepal, and Pakistan, and in certain island populations in Indonesia and the Philippines. Provision of increased education opportunities to this population will be relatively costly and will test the seriousness of commitment of both governments and international agencies to quality education for all.

Table 12 identifies teacher-related policies addressing their potential needs and concerns when working in peripheral areas. These policies have general relevance for teacher development throughout South and Southeast Asia but take on special significance in rural and remote areas. Feasibility and acceptability of any given recommendation found in Table 12 vary significantly across communities.

Policy 2. Developing and Implementing a Well-Designed Curriculum

Perhaps one of the simplest and least expensive actions that could be taken over the next decade to improve education quality in DMCs is to ensure that all teachers have and know how to use a well-designed curriculum and correlative textbooks for the grades they teach. One approach to the implementation and coordination of new curricula and related changes is through a national instructional strategy prepared by national or provincial authorities with input from local administrators and teachers. Included would be a set of guidelines and action plans related to the use of instructional time, development of instructional materials, and instructional support roles of head teachers and others.

Table 12: Policies Addressing Teachers' Needs and Concerns in Relation to Work in Peripheral Areas

<i>Teacher needs/ Policy area</i>	<i>Economic considerations</i>	<i>Organizational support</i>	<i>Professional development</i>	<i>Social considerations</i>
Teacher recruitment	<ul style="list-style-type: none"> Put basic teacher salaries in periphery at parity with urban areas. Provide salary differentials and/or hardship pay for teaching in difficult areas. Provide incentives to high-ability local youth to become teachers in their own communities. 	<ul style="list-style-type: none"> Development of community-school councils for local recruitment of teacher candidates. 	<ul style="list-style-type: none"> Provide subsidized preservice teacher education for local teacher-education recruits (scholarships, special tutoring, etc). Develop programs for school-based education/certification of locally recruited teachers. 	<ul style="list-style-type: none"> Develop programs to increase teachers' social status and recognition. Recruit local students who are already familiar with language and culture.
Teacher education	<ul style="list-style-type: none"> Subsidize preservice teacher education for recruits from peripheral areas. Subsidize teacher enrollment in courses for earning/upgrading credentials. Associate teacher education with credentials, pay raises, promotion, and job security. Subsidize costs of in-service teacher education. 	<ul style="list-style-type: none"> Empower and train school principals as instructional leaders/supervisors. Enroll teachers as a group in distance-education programs so they can support one another. 	<ul style="list-style-type: none"> Make sure that preservice teacher education covers problems of teaching in peripheral areas; relevant language instruction; lessons on school-community relations. Hold some student-teaching activities in peripheral schools or in conditions simulating those in schools in the periphery. 	<ul style="list-style-type: none"> Use distance/extension education programs so that teachers can upgrade credentials without too much disruption to family life.
Teacher deployment	<ul style="list-style-type: none"> Offer extra credit toward promotion for teaching in peripheral areas. 	<ul style="list-style-type: none"> Use school-community councils to select teacher candidates; could also have monitoring, follow-up, and orienting roles for new teachers. Create organizational mechanisms to ensure that teachers recruited and trained for work in the periphery are indeed placed there. 	<ul style="list-style-type: none"> Provide special preparation for teaching in the periphery prior to teachers taking up assignments (including training in multigrade teaching and working under difficult conditions). 	<ul style="list-style-type: none"> Develop means of overcoming the image of social isolation. Develop strategies to support deployment of husband/wife teams. Offer subsidized housing as part of teaching contract. Cover moving costs to remote locations.
Teacher retention	<ul style="list-style-type: none"> Payment of overtime for extra work/preparation. Improved management of automatic promotion systems (eliminate paperwork bottlenecks). Community contributions toward teacher welfare/earnings. 	<ul style="list-style-type: none"> Organize school clusters and/or working groups for peer support and group problem solving. Empower teachers as co-developers of school curriculum and in-service education programs. Solicit community for teacher aids and guest instructors. Promote special recognition of teachers by community. Use decentralized systems of resource (e.g., textbooks) provision and distribution. 	<ul style="list-style-type: none"> Provide access to teacher education/teacher upgrading courses (through distance or extension education). Make in-service teacher education relevant to teacher needs in the periphery. Involve teachers/teacher groups in the planning and implementation of their own in-service education. 	<ul style="list-style-type: none"> Maintain housing subsidies. Cover costs of occasional "home visits" for those not originating in school vicinity. Provide assistance for health care and education of family members.

Source: Tatto 1997, 161-2.

Strategies:

- *Developing and disseminating effective learning materials including, but not limited to, textbooks.* Textbooks and supporting instructional materials are widely regarded as the single most important input to raising student learning, especially in countries in which large numbers of teachers are unqualified or underqualified. Textbooks identify, sequence, and pace curriculum content. Thus, good textbooks if effectively used in the classroom, can partially offset weak teacher preparation. Problems in many DMCs persist in all stages of the development, dissemination, and utilization of textbooks and instructional materials. A further problem is that textbook production or distribution projects frequently need to include more attention to teacher training, an extra cost that is too often overlooked in the planning and budgeting stage.
- *Developing and implementing a valid, reliable examination system.* A popular claim of education reformers in both developing and industrialized countries is that improving national (or state) testing systems integrated with the national curriculum is an important, perhaps a key, strategy for improving education quality (Capper 1994; Lissitz and Schafer 1993; Mitchell 1992; Murphy, Greaney, Lockheed, and Rojas 1996; Popham 1987, 1993). For example, in Pakistan the World Bank (1991) argues that no other investments designed to raise the quality of schooling (changes in teacher qualifications, curriculum, education materials, teaching methodologies, equipment, physical facilities) are likely to result in lasting improvement until the national examination system is improved. In principle, national examination systems can (i) ensure that investments to raise quality are paying off, and (ii) identify locations where low quality persists in order to target resources and remediation. A common means of doing this is through large-scale objective testing of student achievement. Objective tests are widely regarded as the cornerstone of merit-based education systems. In principle, such examinations level the playing field in the allocation of opportunity by minimizing the direct influence of family connections, wealth, and patronage in measuring student performance. Advocates argue that tests are the fairest means of comparing individuals, in that all the test takers are presented with the same task and scores are assigned without regard to the identity of the test taker. Moreover, they provide a means of comparing large groups of individuals at relatively low cost per person (Chapman and Snyder, in press). Perhaps most importantly, high stakes tests are one of the few elements of an education system that are controlled at the central level of the system, but that have direct impact at the classroom level.

For all the benefits, the examination development procedures of most countries are labor intensive, expensive, and time consuming. Such tests do not assess some important areas of student growth. The content and type of items on national examinations do not change quickly. Moreover, introduction of new materials or teaching practices in schools can throw instruction out of alignment with these tests, to the disadvantage of students and the anger of parents (Fuller

and Holsinger 1993). Any change in testing that changes the distribution of advantage within a society tends to incur the wrath of those who see their advantage slipping. Hence, testing procedures are driven by politics as much as by psychometrics.

- *Establishing national guidelines and standards of quality for all.* The issue of monitoring learning achievements in regular and systematic ways must receive more urgent attention. Strategies for continuous assessments and recording of individual children's mastery of basic competencies (essential learning competencies) may need to be supplemented with standardized education audits between and within countries over time (Irvine 1997, 28-9).

National standards are potentially significant for improving teaching and learning. To be effective, such standards must have sufficient supporting resources for accompanying teacher training and be well integrated with curriculum and textbooks. Developing and sustaining such integrated reforms over time will require teacher commitment and managerial initiative. If a consensus can be developed on standards for student achievement and their assessment, and if the standards are applied appropriately in schools all over a country, then the groundwork has been laid for systemic change (Adams 1998, 37). National standards in education are often controversial because of technical difficulties of measurement, disagreement as to dimensions of quality, and punitive application. Such standards do not, of course, eliminate the need for school-level standards.

Policy 3. Strengthening Research, Innovations and Development

Research is ahead of practice. Although much is now known about conditions and factors that build and sustain quality education, education policies and practice are too rarely informed by the insights research can bring. All Country Sector Studies report active research units as part of, or affiliated with, the education bureaucracy. National research centers can provide leadership in mapping and implementing research and development programs to improve education quality. They can also disseminate information on strategic implications of existing research and exemplar practices on education quality, assist in developing school-level instruments to monitor school quality, and participate in development of national and cross-national efforts to improve education indicators.

Strategies:

- *Learning from governance and funding changes.* The range of education governance and funding arrangements in DMCs continues to grow. These reforms and innovations can yield insights to provide directions for the coming decade. The trend toward increased privatization is a case in point.

Potentially, privatization can bring many benefits. Privatization in delivery of education, now widespread in Asia, can increase the total resources available for education. Flexibility of private management

may lead to innovations that result in higher-quality schooling. Cost sharing may contribute to a feeling of partnership in the education enterprise, thereby influencing quality. But privatization can also contribute to higher rates of dropout due to the financial burden on families. It can contribute to greater regional inequities, as parents in poorer areas are not able to contribute as much as parents in other areas. As a new or expanded policy choice, as in the countries from the former Soviet Union and in parts of South Asia, privatization is a reform to be monitored and evaluated over time. Feedback may lead to new public-private partnerships. Privatization need not mean that governments necessarily relinquish their leadership roles in attempting to deliver quality education to all children and youth. One essential question, however, is how governments can influence the quality of instruction in schools they do not support financially. In Bangladesh, for example, where half the primary schools and nearly all the secondary schools are nongovernment and privately financed, the Government has little leverage to induce quality improvement activities. How central governments can encourage local school improvements as the diversity of secondary school financing and management widens is an uncharted area.

- *Encouraging school- and classroom-level experimentation.* Research and experience indicate that much remains to be learned about the behavior of schools and the teaching-learning process. More insight needs to be acquired by examining, at the community and school level, cases of success and failure. This lack of knowledge suggests the importance of continued experimentation with new curricula and new delivery mechanisms. One problem is that the poorest countries and poorest education systems, which arguably need innovations and cost-effective teaching and learning the most, have the least fiscal and human resources to invest for such purposes.

Across developing Asia, there has been experimentation with alternative organizational structures intended to improve quality, reduce costs, or both. For example, the Philippines has made widespread use of multishift classrooms to reduce the demand for new facilities (Miguel and Barsaga 1997). Cambodia, Indonesia, and Thailand have instituted effective cluster school arrangements, linking less well-resourced schools to more centrally located, better-resourced schools (Irvine 1995). Papua New Guinea undertook substantial reorganization of teacher education institutions (Avalos and Koro 1997). Kazakhstan is substantially reducing the size of its central ministry. Each initiative is justified in terms of how it will both save money (or at least contain cost escalation) while improving quality.

- *Collecting and processing of data useful for improving the learning process.* Typically, data collected at the school level on teachers or students are for administrative and planning purposes at higher levels of administration. Occasionally there is feedback to schools of data analyzed at district, provincial, or national levels to inform head teachers of the efficiencies of their schools. Useful as such feedback may be in the administration of schools, it does not in any direct way

affect the teaching-learning process. Curiously, the information system – or series of flows of information – that informs classroom teaching may be rather informal. Research by Adams and Boediono (1997, 248) in Indonesia describes a “loosely organized chain of pedagogic and disciplinary expertise extending from the provincial level to the school level, which is composed of supervisors, designated expert teachers in their disciplines, in-service teacher training instructors, and classroom teachers.” Thus, the flow of information most directly linked to the teaching-learning process tends to be qualitative and frequently part of informal communication.

Research centers can assist in defining and subsequently analyzing two basic types of information that are needed for school-level planning for improving education quality:

- (i) *Information on school context.* In addition to the usual school demographics, attempts to improve school practice require information and analysis of those features of the internal and external school environment that impact on school management and classroom dynamics. Education environments vary, not only in terms of resources and other school inputs, but also in school outputs and outcomes. Additionally, communities and schools vary in the sociology and politics of information use. Contextual data can be used to help illuminate blind spots and answer the question: “In what ways can this school practice work?”
- (ii) *Information on instruction and learning.* An information system, if it is to contribute to the improvement of school practice, should at least assist the teachers in deciding what to do and think (Sarason 1971). As concluded by Chapman and Mählck (1993), teachers need information (and teachers are, themselves, sources of information) about what they are expected to achieve with their students, how much instructional material is or will be available, what they are expected to teach, and the most effective pedagogic practices.

Developing More Effective Teachers and Teaching

Special attention in terms of policy and strategies is given to teachers because of their centrality in attaining and maintaining quality education. Some of the issues and responsive strategies are peculiar to given levels of education or types of institution. Others have relevance to the primary, secondary, and tertiary levels of education.

Recruiting well-qualified individuals into teaching, providing them with relevant training, and providing incentives for effective job performance have been the cornerstone of DMCs’ goals for improving education. A common concern across many DMCs is that teaching is considered a low-status career. Moreover, well-qualified teachers may have increasing alternative employment opportunities in other sectors of the economy. Consequently, recruitment of

qualified personnel into teaching has become more difficult, a problem not likely to change in the near future. In some South and Southeast Asian countries where salaries are borderline with the basic costs of living, the only intervention that would have a dramatic impact on the rate and quality of those recruited would be a significant salary increase to make teaching comparable with other job opportunities. Short of this, in these settings there are few dramatic interventions that can make much difference; recruitment will improve only as many smaller adjustments are made to enhance the quality of teachers' work life and conditions of service.

Policy 1. Strengthening Teacher Preparation and Upgrading

Probably the best insights into workable training programs for teachers reside with a few teachers and other education professionals in the particular countries where such training was implemented and evaluated. Unfortunately, regional, or at times even national, dissemination of such experience is not common. Strategies and policies for initiating and sustaining quality improvements will depend on the assumed or explicated meaning of quality. However, the broad-ranging research on school effects and effective schools offers some insight that could become part of in-service, school-based training programs for teachers and head teachers or school cluster-level innovations. All policies to improve the quality of teachers and teaching need to be integrated into any existing instructional policy and strategies for the improvement of schooling.

Strategies:

- *Restructuring teacher preparation.* Typical strategies for improving teacher preparation and upgrading include extending the length of preservice general education, increasing the development of teaching skills during preservice education, and maintaining continuous school-based in-service training. However, upgrading teacher training is, worldwide, the single most popular strategy for improving education quality. At the same time, teacher training is one of the most expensive interventions a country can undertake. In the Lao PDR, the unit cost in teacher training institutions is almost seven times higher than in ordinary secondary schools (Mingat 1996). Worldwide, the per-pupil cost of teacher training colleges can be as high as 25 times the per-pupil cost of general secondary schooling. The recurrent costs of training, already high, increase another 50 percent when programs increase from two to three years (Fuller and Holsinger 1993; Lockheed and Verspoor 1991).

Existing preservice teaching arrangements do not appear to be very good investments. In-service training programs as usually delivered also appear to have little impact on teacher performance. There is wide agreement that for teaching at the basic education level teacher preparation should include adequate general education (10 years to full secondary) and that effective training programs include two key elements: (i) alignment of teacher training with the curriculum that graduates will be expected to teach, and (ii) supervised practice teaching. However, less agreement can be found on the processes

and outcomes of training. Advocates of more participatory styles of training suggest that a key objective should be to raise the motivational level and self-reliance of teachers. The reported success of locally focused training programs in South Asia suggests that this model is worthy of further experimentation.

- *Continuous staff development.* Student teachers and practicing teachers need to be given the opportunity to acquire a repertoire of teaching strategies and skills to be effective practitioners. A move in this direction shows the value of greater involvement of teachers in organizing their training and provision of greater flexibility for teachers together with head teachers to organize teaching and learning in the school. Staff development may benefit from devolution of training to individual schools and stronger participation by local government and community organizations. Other innovations could include the use of senior teachers in the professional development of other teachers (as in Indonesia), the use of school cluster resource centers to bring training closer to the classroom (as in several Southeast Asian countries), and linking certification and licensing to specific skills acquisition.

Policy 2. Developing Incentives for Teachers

Among the key issues for the next decade is the need to design better teacher incentive systems. The prospect of identifying low-cost incentives to motivate teachers to perform in new or better ways has a powerful appeal to countries caught in the squeeze of simultaneous declines in education quality and resources (Chapman, Snyder, and Burchfield 1993). Table 13 highlights incentives that have been used across many countries in attempts to encourage better teacher performance (Kemmerer 1990). Among the three types of incentives, remuneration has received the most attention.

The weight of the research suggests that after acceptable salary levels have been reached, the overall quality of work life, rather than any particular reward, is the important factor motivating teachers. The challenge, then, is in identifying and implementing an effective mix of benefits. While this mix varies from country to country, considerable effort can be saved by cross-national sharing of information on what works.

Strategies:

- *Initiating realistic incentives.* As a practical matter, incentive systems are surprisingly difficult to operate, for six reasons. First, to be effective, rewards have to be directly and immediately paired with the desired behaviors. Instructional supervision in many DMCs is the responsibility of supervisors outside the school itself (e.g., district education officer, school inspector) and the pairing is often too loose and too late. Second, the belief that incentives can lead to improved teaching assumes that teachers are capable of better pedagogic practice than they normally exhibit. That assumption remains to be tested in each context. Perhaps teachers are doing the best they can. While they would probably appreciate the rewards, it is not clear how

those rewards would lead to better performance. Third, the incentive value of rewards changes over time. When a reward is widely received, it becomes an expectation and eventually an entitlement. Failure to receive the incentive can, at some point, be viewed as a punishment and hurt the very morale it was intended to bolster. Fourth, incentives can be demoralizing to those who do not receive them. Research suggests that incentives can increase teachers' job satisfaction which, in turn, may improve teacher retention, but they do not necessarily change classroom teaching performance. Fifth, as in all innovations, the impact of the system should be kept in mind. Team

Table 13: Types of Teacher Incentives

<i>Remuneration</i>			
Monetary <ul style="list-style-type: none"> • Salary • Beginning salary • Salary scale • Regularity of payment • Merit pay • Materials allowance • Cost of living allowance • Hardship allowance • Travel allowance 	In-kind supplements <ul style="list-style-type: none"> • Free or subsidized housing • Free or subsidized food • Plots of land • Low interest loans • Scholarships for children • Free books 	Benefits <ul style="list-style-type: none"> • Paid leave • Sick leave • Maternity leave • Health insurance • Medical assistance • Pension • Life insurance • Additional employment • Additional teaching jobs (e.g., adult education) • Examination grading • Textbook writing • Development projects 	Bonuses <ul style="list-style-type: none"> • Bonus for regular attendance • Bonus for student achievement • Grants for classroom project
<i>Instructional support</i>			
Materials <ul style="list-style-type: none"> • Teacher guides <ul style="list-style-type: none"> – on time – in all subject areas – in appropriate language • Student textbooks <ul style="list-style-type: none"> – on time – in all subject areas – in appropriate language • Classroom charts • Science equipment • Copy books • Pencils • Chalkboard • Safe storage for materials 	Supervision <ul style="list-style-type: none"> • Observation • Feedback • Coaching 	Teacher Training <ul style="list-style-type: none"> • Classroom management • Materials use • Lesson preparation • Test administration 	Career opportunities <ul style="list-style-type: none"> • Senior teacher • Principal • Supervisor
<i>Working conditions</i>			
<ul style="list-style-type: none"> • School facilities • Classroom facilities • Number of students • Age range of students • Collegiality 			

Source: Kemmerer 1990.

and school performance rewards may take precedence over individual-based merit systems. Sixth, any scheme of incentives should be developed with the participation of the teaching community.

- *Enhancing salaries and other compensations.* Teacher salaries may account for 90 percent of recurrent budgets for basic education. Under conditions of fiscal crisis or economic downturn, policies of structural adjustment, or policies of reduced public expenditures on education, teachers' compensation and status are likely to be adversely affected. Interpretation of teacher salaries should take into consideration the relative scarcity of teachers in a particular context. However, at the minimum, the salary must be a living wage.

In many countries teachers' salaries are tied to civil service salaries. Can the former be separated from the latter? Many sources suggest this step as a basic strategy to improve salaries. Farrell and Oliviera (1993) offer three reasons why teachers' salaries should be delinked from civil service salaries: (i) if linked, all teacher salary reform would be part of civil service reform; (ii) the motivation and incentives for teaching may not be the same as for the civil service; and (iii) delinking allows for separate career ladders. A second popular recommendation is to delink salaries from advanced (official) qualifications since there is little evidence that advanced qualifications lead to increased productivity. "In Nepal the highest ranked primary-school teacher [two years of university training] earns about 60 percent more than the lowest ranked teacher [who has not gone beyond lower secondary school]." In some countries teachers with the highest certification earn several times more than new teachers.

Developing and Sustaining High-Quality Education Institutions

The goal of every DMC is an articulated education system of adequate quality. The specific objectives and targets related to this goal must be interpreted in terms of the stage of development of the education system, economic conditions, and social priorities. The interdependence of institutional levels of the system suggests the need for an integrated approach to quality improvement.

The education and social functions of primary, secondary, and tertiary education overlap but vary significantly. Many of the issues related to improving quality apply to all levels of the education system, including the need for: training that produces well educated, technically competent instruction; incentives that reward performance; adequate salaries to discourage moonlighting; adequate learning materials; continuing staff development; increased staff productivity; management designed to give instructional support and leadership; and national and institutional monitoring of standards. Moreover, quality improvement at any level is interrelated with and, at least indirectly, dependent on supporting changes at other levels. Improving education quality must address the behavior of the whole education system.

Policy 1. Developing an Integrated System of Quality Preprimary Education through Basic Education for All Children and Youth

Experimenting with organizational change, there are organizational issues and choices with consequences for quality and cost. Of particular relevance to the learning outcomes of children are the differences across countries in number of years of the basic education cycle, school starting age, and composition of curriculum. There is nothing magical about six or nine years of compulsory education, a school starting age of six years, or a school program which typically gives little recognition to the external environment and the world of work. The common organizational trend, as economic resources and education development allow, is to extend basic education from six to nine years encompassing primary and middle schooling. Increasingly in the educationally more developed DMCs, there is discussion and debate regarding the priority to be given to preprimary education. The positive impact of preprimary education on the performance of children in the early primary grades is well documented. Typically, however, if faced with a choice between expansion of preprimary education and expansion or improvement of primary education, policymakers have chosen the latter. Possible experimental redesigns of basic education would include socialization and readiness training to four- and five-year-olds. Looking into the longer-term future, is it possible also to envisage a redefinition of basic education that begins with universal preprimary education?

Strategy:

- *Concentrating resources on implementation at classroom and school levels.* New programs or projects, national or local, domestically funded or in partnership with international agencies, tend to pose more problems in their implementation stage than in their development stage. Those designed to improve quality are no exception. Indeed, since many such projects involve significant changes in behavior, more difficulty may be expected. At least two basic conditions are necessary for successful implementation: (i) stakeholders agree on need and acceptability of the new program or project; and (ii) local parents, teachers, and other stakeholders have an understanding of, and commitment to, the changes.

Policy 2. Developing High-Quality Secondary and Tertiary Education

The quality of secondary and tertiary education in DMCs ranges from world-class universities to institutions that are ill housed, inadequately staffed, and have few institutional resources to support instruction. All DMCs need effective secondary and tertiary education. Those countries which have largely achieved universal basic education, East Asian countries, countries from the former Soviet Union, and some Southeast Asian countries, are more likely to give priority to the demand for upper secondary and tertiary education. (Although some tertiary institutions, because of the political power of clientele, have always held a privileged status).

Strategies:

- *Balancing equity and quality.* In many DMCs, given the history of elitism of upper secondary education and higher education, the relations of equity and quality take on a special meaning. The appropriate balance of equity and quality may be at the core of many policy debates and may be the subject of public discourse. At the minimum, typically required will be improvement of admissions examinations and establishment of minimum criteria for types of public institutions. Within the context of admissions, defensible indicators of student ability and student interest also need to be constructed. National professional and academic standards, and institutional standards developed by each institution, may need to be developed and maintained.
- *Linking quality to relevance.* The meaning of relevance is typically a subject for debate at all levels of education. To some stakeholders relevance and quality are synonymous. At the secondary education level relevance has often meant some form of vocational education. At the tertiary level relevance may imply a technical orientation or the modernizing of content in traditional professional programs. Typically at both levels relevance implies a relation to employment.

The challenge is deciding which knowledge, skills, and values are best taught in work settings and which in “academic” settings. The Country Sector Studies report that much experimentation is taking place in linking education and the world of work. The sharp distinctions that have sometimes been drawn between education and training are becoming blurred. Perhaps in the future the distinction will disappear.

Management of Teaching and Learning

Effective schools start with effective school-level administration. In DMCs, new management roles are evolving that directly impinge on quality instruction and learning. School head teachers generally have responsibility in four areas that impact on instructional quality: (i) school management, e.g., ensuring that textbooks are available; (ii) school-ministry communications, e.g., ensuring that the national curriculum is available to teachers; (iii) school-community relations, e.g., raising money for the school and securing parental support for new instructional strategies; and (iv) instructional supervision, e.g., internal supervision by head teachers (Chapman 2002). Moreover, the widespread move toward greater decentralization across Asia is thrusting head teachers into an even more prominent position, as school-level managers are increasingly expected to assume responsibilities that were previously handled at higher levels of the system. Unfortunately, few head teachers have adequate preparation for these new responsibilities.

Policy 1. Redefining Management Roles

To raise the quality of teaching and learning at the school level, new school-level management roles are evolving, and low-cost alternatives to current practice are being explored. The traditional role of head teachers focuses on routine administrative tasks. New functions may include instructional leadership; community liaison and mobilization; stimulating and monitoring innovations (e.g., multigrade classrooms, teacher assistants); generating, understanding, and utilizing information on interventions in progress; and responding to the emergence of new priorities.

Strategies:

- *Developing effective school leadership and a safe learning environment.* School principals and supervisors accustomed to narrowly defined administrative tasks will need to take greater initiative. However, new leadership skills can be acquired only under certain conditions.

Cummings (1997) recommends three strategies to develop more effective leadership in management and supervision:

- (i) *Change the span of control.* A major obstacle in most DMCs to the quality of supervision is the heavy load assigned to supervisors, and the physical difficulties that stand in the way of their reaching schools. Cummings describes a reform in Malaysia that transferred many of the supervisory functions to more localized division offices. "The division offices, staffed with up to three supervisors, in turn related to cluster principals. The reform added a level in the organizational hierarchy but reduced the number of units, or span of control, for each level to an average of ten units: ten clusters per division, up to ten divisions per provincial office. This arrangement significantly improved communication" (Cummings 1997, 230);
- (ii) *Strengthen horizontal linkages.* Another strategy of management reform is to open up horizontal linkages so that the more effective schools have an opportunity to share their wisdom (and other resources) with their neighboring schools (p. 230); and
- (iii) *Train principals to assume greater initiative.* Additional training, even if relevant, to impact on quality improvement requires further conditions. Cummings argues "... training programs are not guaranteed to have the desired impact if they are not accompanied by other changes which actually empower principals, altering their status from that of last-line implementor of central decisions to first-line innovators of a flexible and responsive system. In the absence of empowering reforms, principals may consider the lessons hollow in that they are at the bottom of a large hierarchy and everything they initiate is ultimately subject to review. If they do well, they will be ignored. If they do poorly, they will be sacked!" (p.230).

Another strategy to improve the learning environment is to select more female teachers and administrators. Lee (2002) documents the many obstacles to gender equity in school access and the inequities in professional opportunities. Is there a link between gender of teachers and administrators and school quality? The earlier reported research in Pakistan by Warwick and Reimers (1995) and in India by the World Bank (1997) suggests that, under certain conditions, female teachers may be more effective.

- *Providing adequate direct instructional time.* International research strongly supports the notion that “time on task” leads to higher student achievement. The amount of instructional time students encounter is determined by the length of the school day, scheduling of the school year, teacher attendance, and student attendance. The length of the instructional day and school year are the most directly amenable to policy and regulation. However, changes to existing practice generally have consequences for teacher compensation and facilities’ use that, in turn, create other issues. Strategies to ensure full student and teacher attendance are harder to implement and often require a community-wide effort.

In some countries the amount of learning time outside school may be the key to high student achievement. As noted by Lee (1997, 95-6) “Foreign assumptions that the longer school year is a factor in the higher achievement of East Asian students has led educators in other countries to recommend an increased number of school days for their systems. Korean primary schools (grades 1-6) offer less instructional time, especially at lower grades, than do western primary schools. Pupils in Korea spend only 66 percent of the time French pupils spend, and 75 percent of the time spent by British students; the gap narrows at upper grades.... Korean students’ high achievement is not because they study long hours in school, but because they study long hours at home....” The significance of out-of-school private tutoring has also been addressed by Bray (1999).

- *Providing instructional leadership.* One strategy in improving teacher competence on the job, other than in-service programs, is “internal supervision” provided by head teachers with appropriate training. Research in Thailand by Raudenbush and Bhumirat (1991, 36) concludes that “There is clear evidence of a link between the intensity of internal supervision a teacher receives (supervision provided by the principal or by designated teachers) and the academic achievement of that teacher’s students.” The researchers added that there is equally strong evidence that students view teachers receiving such supervision as providing higher quality instruction than teachers with less supervision.

A related study in Thailand using observational and interview techniques supported the above findings. Wheeler et al. (1997) found that in several of the most effective schools, regular internal supervision was a critical component in the school principals’ strategy to create and sustain a strong academic focus. Such schools were char-

acterized by an “ethos of improvement” that encouraged teachers, to come to school on time; to provide academic instruction in the afternoon as well as the morning; to use test results to evaluate instruction; and to discuss teaching and learning during lunch breaks. In some schools, principals who were effective at encouraging such an ethos were also active in mobilizing community resources to purchase instructional materials and in identifying resources at the district level that could support academic learning. In these settings it would be hard to imagine effective leadership without classroom supervision, but it is also clear that supervision is linked with a broader constellation of strategies for supporting the academic mission of the school. Identifying appropriate in-service courses could certainly fit into such a constellation, but field reports suggest that the locally generated improvement efforts of which supervision is a crucial element contrast with traditional approaches to in-service education, which too often emphasize a top-down orientation in which instructions “transmit” knowledge to the teachers. Though this sketch of the meaning of the “supervision effect” is somewhat speculative, it warns against a mechanical application of the practice of supervision divorced from the “ethos of improvement” that supervision can both reflect and reinforce (Raudenbush and Bhumerat 1991, 37-8).

- *Mobilizing community resources, developing school-community linkages, and putting community-oriented education into practice.* Parents' investment in children's education is perhaps the most powerful intervention for enhancing learning achievement. This investment in time and money continues to affect children's learning while they are in school (World Bank 1997, 89). Some head teachers, teachers, and school committees are highly successful both in developing school programs that support community interests and in mobilizing community human and fiscal resources to support teaching and learning (Bray 2000).

As identified in Table 14, head teachers can influence a wide range of school-community interactions. Head teachers can assist one of the most powerful interventions for enhancing learning achievement by encouraging households to provide a supportive home environment. At a different but equally important level is a truly community approach to education planning. Among the potential advantages of closer linkages of school and community is the possibility for more involvement of students, teachers, and parents in data collection, verification, analysis, and use organized as an interactive process. This may be seen as part of a local process of inquiry which, itself, is part of a process of sustaining improvement.

Table 14: Difference Between Centrally Controlled and Community-Oriented Approaches

Domain	<i>Centrally controlled education system</i>	<i>Community-oriented education systems</i>
School-community relations	Schooling mainly the domain of professionals; limited roles for parents and community.	Education as partnership; collaboration between government and community in goal-setting, supporting, and monitoring; school supports community development and vice versa; community collaboration in school construction and upkeep.
School-language policies	No first or second language support; children are placed in mainstream classrooms with native speakers of the official language as the instructional medium; mainstream culture stressed at the expense of nondominant cultures.	Based on particular needs of communities. If a community expects native language instruction, bilingual programs are offered. If a community expects official language instruction, modified immersion programs are offered with continual second-language support and bilingual teachers and bilingual curriculum. All cultures stressed.
Curriculum	Standardized curriculum preparing children for standardized exams; exclusive emphasis on urban and industrial lifestyle, images, cultural values; the prescribed textbook as the de facto curriculum.	Local and regional themes prominent in curriculum; representation of cultural realities, lifestyles, and images of peripheral groups, as well as mainstream cultures.
Teacher policies	Standardized systems of teacher recruitment, training, and professional support.	Selective recruitment of locals into teaching force; training adapted to circumstances; local organizational support and teacher access to professional development through distance or school-based education.
School/classroom organization	School/classroom organization based on industrial model/age grade emphasized.	School/classroom organized "family style" using flexible time and space, teacher resourcefulness, student tutoring and self-instruction, and community support as assets.
Management system	Top-down management oriented toward control and efficiency, characterized by standardized rules, regulations, and resource allocation formulas; centralized procurement and distribution.	Management starts with needs of the community; resource allocation based on need, includes community-generated resources; local procurement.

Source: Nielsen and Beykont 1997.

Monitoring and Sustaining Quality Improvement

To help monitor and sustain continual improvements, there is need at all levels but particularly at the local level for both practical technology and, within contexts of decentralization, for participatory decision processes. Head teachers, in order to provide leadership and mobilize community support, should be able to assess the quality of their schools and utilize such information in local strategic planning.

A Technology for Assessing and Monitoring Education Quality

Improving quality and efficiency at the classroom and school levels suggests, at the minimum, information on teaching and learning conditions and potential. One approach to building a supporting information base is to develop easily quantifiable indicators at the school level and largely ignore classroom dynamics and intricacies of environment. Several different evaluation and monitoring schemes of varying complexity are currently being used in a number of developing countries (Heneveld 1994; Horn 1992).

To acquire a perspective on the utility of school-level monitoring and evaluation schemes, two approaches may be contrasted. In one approach, indicators for assessment of school quality are built on information and data that are relatively easy to collect. For example, checklists may be prepared by the ministry of education to reflect the government's interpretation of the basic requisites for schooling, for example adequate facilities, availability of instructional materials, qualification of teachers, etc. These lists may be adapted by school committees, teachers, and community representatives to include local priorities and preferences. They do not, of course, offer deep insight into the meaning and implications of the conditions observed. Nevertheless, such indicators may provide benchmarks that encourage worthwhile improvements.

To provide a sharp contrast with the example above, assume that a given school wanted to improve language achievement. The use of some simple checklist of the presence or absence of readily visible conditions that are assumed to be significant to school practice might still be possible. However, a more technical approach would be to reach into the sciences of pedagogy and language to obtain: a list of precise determinants of language achievement; analytical tools to interpret the distinctive learning characteristics of the particular students; and criteria for the choice of instructional technology by the teacher to be used in any given situation (Adams and Boediono 1997).

In the first approach, many of the basic limitations of typical national indicator sets are repeated at the local level. Perhaps such lists should be best seen as providing information more useful for informing a process of discussion and debate than offering a clear course of action for improving practice. Although this "checklist" approach maybe faulted for being too unsophisticated, the latter approach appears overly ambitious. Such a level of precision of education "science" is probably not yet attainable. In selecting any approach to building localized monitoring and assessment, two questions

persist: "Who develops the technology of measurement?" and "For whom is a given measure satisfactory?"

One of the more promising technologies or strategies is the Fundamental Quality Levels (FQL) movement, also referred to as the School Quality Standards or Minimum Quality Standards movement. FQLs are a practical tool to operationalize the concept of school quality in a given country. The FQL consists of an agreed-upon, predetermined set of essential inputs and conditions, and, in the long run, of processes and outcomes related to school quality (Horn 1992). FQLs involve the specification of a set of minimum standards below which no school should fall. Schools falling below FQLs are targeted to receive special help, usually in the form of additional resources or special programs. For example, FQLs might specify that a minimum level of acceptable practice is that every student should have a textbook for each class in which a textbook is required, that teachers come to class on time, that a teacher not be absent, that the school have an operational parent-teacher association, and that at least 75 percent of the students pass the national examination and graduate. FQLs are currently being used in Benin, Ethiopia, Ghana, and Guinea for integrating multiple indicators of school quality into larger national school improvement initiatives.

One advantage of FQLs is that they provide political cover for the unequal distribution of resources. One problem in unequal distribution is that the advantaged schools would appear to be penalized. When that happens, powerful parents complain. FQLs provide educators and government officials with a way of standing up to individual self-interest, by providing a public rationale and justification against which personal interests can be judged. A second advantage is that FQLs provide a more sophisticated means of favoring weak schools in resource allocation than the use of test results as the sole criterion. They incorporate each factor (e.g., test scores) into a larger fabric of factors known (or believed) to be important in improving student performance. This is an advantage, of course, only if the FQL factors are really the crucial ones, which raises another issue.

Those developing FQLs face a dilemma. Advocates argue that for FQLs to be an effective tool for building consensus they must be developed through a process of widespread participation and involvement at all levels of the education system (Menou-Agueh and Zevounou 1996). The participation is justified in order to bring the widest range of insights possible into decisions and to thwart criticism when disproportionate resources are allocated to selected schools. On the other hand, for FQLs to be effective, they need to capture those most critical inputs and education processes that actually have an empirical basis for influencing what students learn. While not necessarily incompatible, these two needs often conflict.

Conditions for Sustaining Quality Improvement

Lasting improvement in education quality, whether defined in terms of basic skills, critical thinking, self-esteem, or other pupil learning, must include an in-depth understanding of the current conditions at the classroom and school levels. National reforms emanating from the center may successfully demand

Box 13: Initiating and Sustaining Education Improvements

Research coupled with reviews of practice provides sufficient insights for planning effective schooling if the planning and implementation processes include opportunities to modify inputs and processes as evidence of effectiveness is acquired. Initiating and sustaining education change must be redefined as an iterative, participatory process that involves, and may begin with, critique, evaluation, analysis, and feedback at the school and local levels. Conditions for success include:

- (i) Information to interpret the meaningful internal and external environment of the school. The existing and potential influence of such context defines opportunities and limitations of the school as an organization. A basic question is: How can the organization and its environment be altered to enable teachers, administrators, and students to do what needs to be done to achieve the school's objectives?
- (ii) Information in support of school objectives on how given classroom teaching and learning processes lead to specific student outputs. What could teachers and administrators be doing that could help achieve the various learning and performance targets?
- (iii) Information on the somewhat unpredictable process involving a number of community stakeholders in transforming insights on effective school practice and context into acceptable school and classroom interventions. Which potentially useful changes or innovations make acceptable demands on the teacher?
- (iv) Information on the processes of monitoring and evaluating pupil performance and other learning integral to the process of improving school practice, collected and analyzed over time. Which innovative technology is promising, available, and user friendly?
- (v) Continued acceptance by teachers of the validity of the new practice. What opportunities can be developed to share experiences and problems with administrators and teachers from other schools to provide a useful forum in which teachers can reassess their support for an innovation in light of the experience of other teachers?
- (vi) Continued sense of ownership of the new practice by teachers and administrators. What are the indicators of ownership and lack of ownership?
- (vii) In the long term, integrating school-level change into the behavior of the larger education system. What communication channels need to be opened, and what decision processes need to be penetrated in order to extend quality improvements?

compliance and can facilitate major adjustments in the design, scope, and delivery of education services, but rarely are sufficient to foster fundamental changes in teaching and learning.

Improving teacher training and increasing teacher incentives are necessary but often insufficient conditions to sustain processes of improving quality. Box 13 suggests additional local and school conditions that increase the likelihood of sustainability.

At the school level, under policies of decentralization, sustainability requires at least three general conditions: shared goals of school and community regarding the learning objectives of the school; professional, student-focused

commitment among teachers; and autonomy to allocate instruction resources flexibly. There is also an obligation to hold the school accountable to the community for outcomes in the context of national indicators. These are challenges for all education systems and nations (Adams 2002).