

Teaching and Learning: The Classroom and School

Improvements in the quality and, to some extent, the efficiency and equity of education depend on the nexus of teaching and learning. Schooling, the formal teaching-learning environment, can be influenced by resources and ideas from many sources. However, to a degree it is a self-contained system, and different schools (or even classrooms) may respond to a given set of inputs in different ways. The implication of this condition is that the characteristics, meaning, and effects of the interaction of teachers and students may be influenced through national policies but cannot be mandated from the central offices of ministries of education.

The Figure identifies some of the variables and sketches some of the relationships influencing student performance. The interrelationships between concepts of teacher quality, policies designed to enhance them, the context of schooling, and the dynamics of teaching and learning are highly complex. Because of the complexity in the linkages and relationships, policies aimed at improvements in teacher quality are difficult to research. However, two broad generalizations with policy implications can be made from the extensive body of research on the teaching-learning experience: (i) teacher quality (although difficult to capture by common indicators) has a powerful influence on student achievement; and (ii) national policy initiatives often encounter great difficulty in penetrating the school context. Increasingly, educators, researchers, and policymakers believe that teachers supported by effective management are the key to education quality and change.

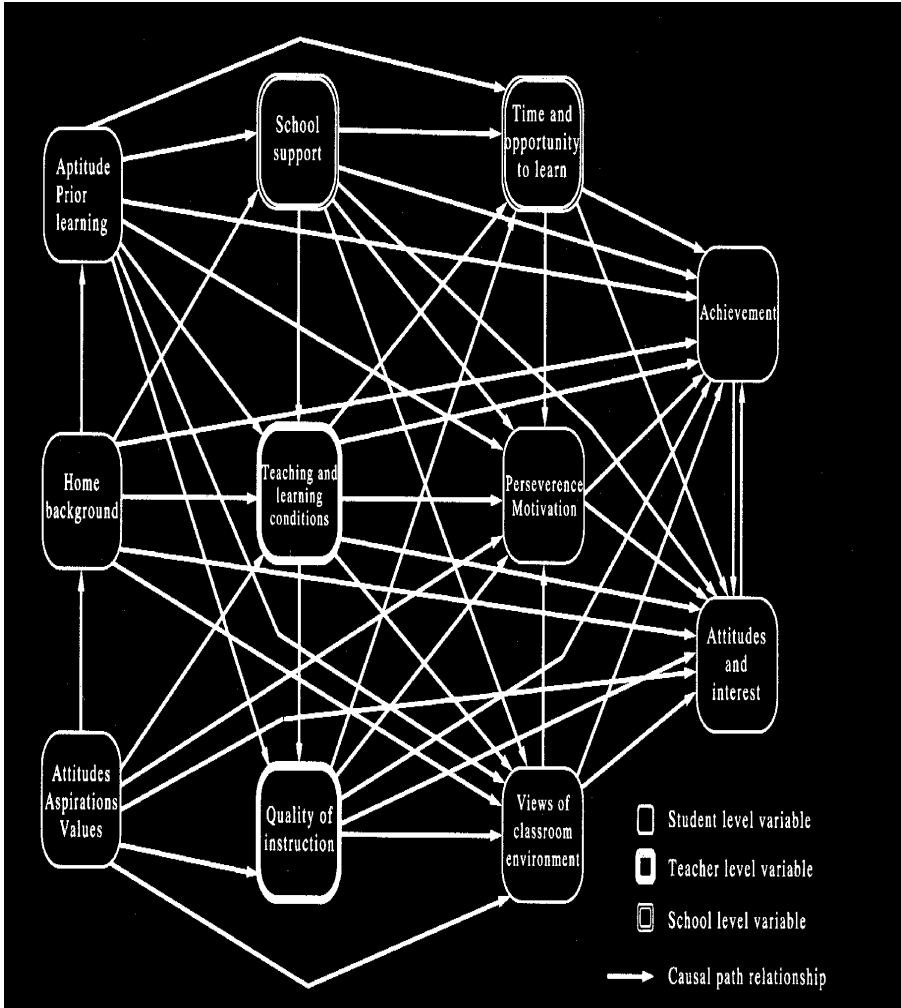
For schools to provide opportunity to learn, they must operate regularly. Teachers must be present and care about what students learn, and they should also be competent to teach the curriculum. Such conditions can be found throughout Asia. Also, however, particularly in poorer and rural areas, these conditions are frequently missing. This section briefly examines the Asian and international research base for effective schooling, and the quality issues surrounding teachers and teaching, curricula, and education governance and management.

The Research Base for Effective Schooling

Many of the policy documents published by the World Bank and ADB seek to specify those inputs which determine academic achievement and knowledge skills which translate directly into increased productivity of labor or are currency for acquisition of further formal education. Tables 4 and 5 summarize two bodies of research related to the determinants of school outputs, as typically

measured by scores on standardized achievement tests. Table 4 summarizes the findings of a number of studies of school effects in Asia using a production function or input-output model. The available studies are few and generalizations to all DMCs are not possible. However, the contradictions among the findings are striking.

Figure: A Simplified Model of Student Performance



Source: Keeves and Adams 1994, 955.

Table 4: Selected Studies of School Effects in Asian Countries

Study	Economy	Findings	Source
School expenditures per pupil	Indonesia (secondary)	School expenditures are not associated with higher achievement.	Harijati 1998
	Thailand	Textbook expenditures raise the national academic achievement.	Heyneman and Jamison 1984
	Malaysia (secondary)	Higher school expenditures are not associated with higher achievement.	Beebout 1972
Class size	Thailand	Negative evidence that small class size improves student achievement in reading and science.	Heyneman and Loxley 1983
	India	No evidence that smaller class size raises achievement.	Heyneman and Loxley 1983
	Indonesia (secondary)	No evidence that smaller class size improves student achievement.	Sembiring and Livingstone 1981
	Malaysia (secondary)	Fewer students per teacher improve the quality of interaction and raise achievement.	Beebout 1972
School size	Thailand	School size does affect student achievement.	Comber and Keeves 1973
	Indonesia (primary)	Large school size has positive effect on student achievement.	Muhammad 1997
School library	Thailand, India	The presence and active use of a school library raise achievement.	Thorndike 1973
	Indonesia (secondary)	Use of a library does not improve student achievement.	Beebout 1972; Harijati 1998; Sembiring et al. 1981
Number of class shifts	Malaysia (secondary)	More than one shift of classes each day strains the effectiveness of resources and lowers achievement.	Beebout 1972
Instructional materials	India	Greater availability of instructional materials leads to higher student achievement in reading and science.	Comber and Keeves 1973
	Philippines	Instructional materials do impact on student achievement in science.	Heyneman et al. 1983
	Indonesia (secondary)	No evidence that instructional materials lead to higher student achievement.	Sembiring and Livingstone 1981
		Instructional materials do not improve language achievement.	Harijati 1998
Laboratories	India (primary), Thailand, Iran	The presence and instructional time spent in laboratories raise science achievement.	Heyneman and Loxley 1983
Preservice teacher training	India	Teachers' years of schooling raise student achievement.	Comber and Keeves 1973; Heyneman and Loxley 1983
	Indonesia (secondary)	Teachers' years of schooling do not affect student achievement.	Sembiring et al. 1981
In-service teacher training	Indonesia	Upgrading the skills of teachers leads to higher student achievement.	Sembiring and Livingstone 1981

Study	Economy	Findings	Source
Teacher experience	India, Iran, Malaysia, Indonesia (secondary)	Teachers with longer experience improve student achievement.	Beebout 1972; Harijati 1998; Heyneman and Loxley 1983;
	Indonesia	No evidence that teacher experience is associated with student achievement.	Sembinging, et al. 1981
Length of instruction	India, Thailand	More hours or days of instruction increase student achievement.	Heyneman and Loxley 1983
	Indonesia	More hours of instruction increase student achievement.	Harijati 1998
Homework	India, Thailand	No evidence that homework raises student achievement.	Comber and Keeves 1973
High teacher expectation	Hong Kong, China	Teachers who expect high achievement raise student performance.	Rowe et al. 1966
Teacher's time spent on class	India, Iran	More hours spent preparing for class raises student achievement.	Heyneman and Loxley 1983
	Thailand	No evidence that class preparation leads to higher student achievement.	Heyneman and Loxley 1983
Active teaching and learning	Indonesia (primary)	Students participating in active learning perform better than students without active learning.	Tangyong 1989
Principal salary	Indonesia (secondary)	Higher salaries attract stronger principals, improve the instructional programs, and raise achievement.	Sembinging and Livingstone 1981
Vocational curriculum	Philippines, Thailand, Indonesia	Vocational curriculum is negatively associated with an effective labor force and earnings.	Clark 1983; Psacharopoulos 1973
In-plant vocational training	Korea, Rep. of	In-plant training is more cost effective.	Lee 1985
Preprimary schooling	Thailand (primary)	Third graders who attended preprimary schools performed better in mathematics and Thai language than did children who had no preprimary experience.	Raudenbush 1991
SES of parents	Nepal	Socioeconomic status (SES) of parents significantly determines the school access of children.	Shresta et al. 1986
	Indonesia (secondary)	Education of parents is not associated with student achievement.	Muhammad 1997
Gender differences	Malaysia, Indonesia	Both girls and boys demonstrate favorable attitude toward mathematics and possess equivalent problem-solving skills.	Swetz et al. 1991

Source: Consolidated by Muhammad 1998.

Table 5: Dimensions of Effective Schooling

<i>Dimensions</i>	<i>Core elements</i>	<i>Facilitating elements</i>
Leadership dimensions	<ul style="list-style-type: none"> • Positive climate and overall atmosphere. • School and classroom-site management and decision making. • Goal-focused activities toward clear, attainable and relevant objectives. • Planned and coordinated curriculum . • School-wide staff development. • Consistency of school values. 	<ul style="list-style-type: none"> • Shared consensus on values and goals. • Long-range planning and coordination. • Stability and continuity of key staff. • District-level support for school improvement.
Efficacy dimensions	<ul style="list-style-type: none"> • High and positive achievement expectation with a constant press for excellence. • Visible rewards for academic excellence and growth. • Cooperative activity and group interaction in the classroom. • Total staff involvement with school improvement. • Autonomy and flexibility to implement adaptive practices. • Appropriate levels of difficulty for learning tasks. • Teacher empathy, rapport, and personal interaction with students. 	<ul style="list-style-type: none"> • Emphasis on homework and study. • Positive accountability; acceptance of responsibility for learning outcomes. • Strategies to avoid nonpromotion of students. • De-emphasis on strict ability grouping; interaction with more accomplished peers. • Sense of school community. • Parental involvement and support.
Efficiency dimensions	<ul style="list-style-type: none"> • Effective use of instructional time: amount and intensity of engagement in school learning. • Orderly and disciplined school and classroom environment. • Continuous diagnosis, evaluation, and feedback. • Intellectually challenging teaching. • Well-structured classroom activities. • Instruction guided by content coverage. • School-wide emphasis on basic and higher-order skills. • Pupil acceptance of school norms. 	<ul style="list-style-type: none"> • Positive teacher models. • Opportunities for individualized work. • Number and variety of opportunity to learn . • School-wide recognition of academic success.

Table 5 summarizes a body of literature known as effective schools research. Although this research, in terms of variables examined, overlaps with the studies referred to in Table 4, somewhat more attention is given to school process variables.

The studies reviewed in Table 4 sought to determine the effects of variations in common inputs and with school processes on student achievement. Effects of exogenous variables, for example, socioeconomic status of families and gender were also reported. Contradictory findings on effects of such variables as school expenditures , class size, instructional materials, years of schooling for teachers, etc. suggest that the picture presented by research lacks clarity.

This set of studies to a degree reflects the lack of agreement found in the more inclusive body of similar international research. Within the larger body of research, the most common variables associated with student achievement include use of textbooks, instructional time, and education level of teachers. Some research suggests that in-school variables in developing countries (in contrast with family and household variables) have a larger impact on school output than they do in industrialized countries. Clearly, the body of research summarized in Table 4 does not hand the policymaker a package of manipulable inputs and processes that can be utilized to guarantee higher student achievement. Moreover, as demonstrated later, the input-output (production function) model on which these studies are based radically oversimplifies the dynamic and situation-specific nature of the teaching-learning processes.

The second strand of national and cross-national research was stimulated by a number of concerns, including the need for explanations of between-school differences in student achievement. The dimensions and elements of effective schools identified in Table 5 tend to be somewhat "softer," frequently more qualitative than many of the variables reflected in the studies summarized in Table 4. These dimensions were often examined directly through observation within schools and comparisons across schools or sets of schools. Table 5 offers a summary of the second body of relevant research, i.e., effective schools research, and particularly captures many of the organizational and process variables found in these studies. However, Table 5 is one of many summaries that could have been developed from this loose body of research.

Because of the general, and sometimes vague, nature of several of the dimensions and elements (e.g., positive school climate, effective use of instructional time), attempts at utilizing the research to develop more effective schools is likely to involve controversy. Moreover, the research on effective schools, largely carried out in Europe and North America, shares many of the weaknesses of school effects studies: (i) lack of underlying theory that validates indicators; (ii) use of standardized measures of pupil achievement that are not as sensitive to quality improvement efforts as curriculum-based assessments; (iii) exclusion of indicators of other student cognitive achievement measures (e.g., student self-concept, student behavior in school and in the community, student retention, teacher attitudes, and teacher behavior) that could provide a more comprehensive understanding of education quality improvement; and (iv) use of school-level indicators or aggregation of student data to the school level that can mask differential effects of factors on different groups of students (e.g., gender, ethnic, and social class differences) in the same school.

Because of these characteristics, research is unlikely to provide prescriptions readily adaptable across societies, regions, or even school sites; and explains little directly about the process of improving education, that is, implementing the policies and sustaining practices derived from such research activities. Lockheed and Longford make two additional points about the value of the production function model (school effects model used to identify determinants of student achievement). First, different regression models with different variables may yield new results. Second, "without any prior knowledge of the educational system, any justification for an intervention policy based on

the results of regression (or variance component) analysis, or even of structural modeling has no proper foundation" (Lockheed and Longford 1991,146). However, in spite of these serious limitations, the reported research does offer insight sufficient to initiate small- and large-scale interventions that can be viewed as experiments. Further, research on school effects and effective schools, coupled with critical examination of practice, offers insights that can influence the content and delivery of in-service training programs for teachers and head teachers and the design of district- or school cluster-level innovations.

The lack of compelling research findings and the often contradictory evidence culled from experience stresses a need for caution in drawing implications for interventions. However, the potential for improving the teaching-learning process and raising the quality of individual schools is not as bleak as the inconsistencies in research and complexities of practice may suggest. First, there is sufficient international research to suggest "good bets" for investment of resources. Table 6 identifies some of the most frequently cited characteristics of a generic high-quality school. As noted earlier, these characteristics are frequently missing in the poorer DMCs. Second, in individual countries the implications of research for practice may be clearer than in cross-country analyses.

Two key observations are that the patterns of school factors associated with higher learning vary by location, and that the effectiveness of different inputs varies according to initial conditions. Box 2 reports school-level research in primary schools in India and Thailand. The study by Shukla et al. (1994) of achievement in 22 states of India identified about 10 statistically significant

Box 2: School Factors Associated with Higher Learning Achievement

Factors associated with higher student learning achievement include:

- creation of demand for improvement (given the limitations of supply-driven assistance);
- creation of reliance on local resources;
- participation and sharing of information;
- identification of stakeholders;
- division of tasks among stakeholders;
- diagnosis of community needs and supports;
- identification of relevant existing local organizations;
- formulation of methodology for mobilization of communities;
- development of technology for planning, implementation, and monitoring;
- capacity building and long-term commitment.

Patterns of school factors associated with higher learning achievement vary by location, and the effectiveness of different inputs varies according to initial conditions.

Source: Shukla et al. 1994, as cited in World Bank 1997.

Box 3: Effective Teacher and School Characteristics

"The results from our final analysis indicate that some teacher and school characteristics are **positively** associated with student learning in Thailand:

- the percentage of teachers in the school that are qualified to teach mathematics,
- an enriched mathematics curriculum, and
- the frequent use of textbooks by teachers.

At the same time, some teaching practices are **negatively** related to learning:

- the frequent use of workbooks, and
- time spent maintaining order in the classroom.

However, these causal statements do not hold if they are to be interpreted as the result of an external intervention. Obtaining additional textbooks for the schools is not a simple procedure unrelated to education process and management decisions: it is, itself, an outcome variable related to some unknown aspects of the education process. Similarly, discarding workbooks might not lead to improved outcomes, unless all the circumstances that lead to reduced use of workbooks are also present or are induced externally. External intervention will be free of risk only if we have, and apply, causal models for which the educational system functions. The models developed here, and elsewhere in the literature, are purely descriptive. Use of regression methods and of various component analysis allows improved description but does not provide inferences about causal relationships. In addition, interpretation of the estimates of effects is subject to a variety of influences, and there may be alternative regression models, with different variables that are equally correct in terms of prediction."

Source: Lockheed and Longford 1991, 145-6.

Table 6: Characteristics of a Quality School

- Teaching methodologies designed to encourage independent thinking;
- Capable, motivated, well-trained teachers;
- Appropriate, well-designed curriculum;
- Effective learning materials including, but not limited to, textbooks;
- A safe, well-maintained learning environment;
- A valid, reliable examination system;
- Effective school leadership, including instructional supervision;
- Ample direct instructional time;
- Adequate financing; and
- Effective organizational structure and support.

school-level determinants of learning in each state, but only two – the presence of "Operation Blackboard" and of parent-teacher associations – were positively associated with higher levels of learning in at least a third of the states (World

Bank 1997, 92). To a degree the factors identified in Box 2 may be seen as preconditions to some of the characteristics listed in Table 5.

Box 3 quotes the summary of the findings of a study on effective schooling in Thailand. The findings on the importance of the competence of teachers, well-developed curriculum, and use of textbooks support the list in Table 6. The comments in both Box 2 and Box 3 caution against oversimplification of research interpretation. Such studies as these, unfortunately, are not plentiful among DMCs, and other studies and evidence are needed to properly support policy choices in any given country.

Teachers and Teaching

Although the concept of quality teaching remains elusive, teachers and their behavior in the classroom are at times considered convenient indicators of school quality and very frequently are at the center of attempts at quality improvement. Of particular concern, as reported in the Country Sector Studies, are teacher status, changing teacher roles, and career patterns that locate teaching as a craft or profession and define the potential of the workplace. In terms of improving teacher performance, continual focus has been on content and delivery of skills during preservice and in-service training programs.

Teacher Status, Recruitment, and Deployment

Teacher status varies significantly across DMCs. Moreover, it varies over time and by level of education. In much of Asia, teachers historically have had a revered status. In Hong Kong, China; Republic of Korea; Singapore; and Taipei, China, status has been protected partly by tradition and through teacher salaries that have evolved and become moderately attractive. Rapid growth of enrollments accompanied a lowering of qualifications; competition from a

Box 4: Teacher Status

"Primary-school teaching has the lowest status of any profession and offers few chances for promotion. Most teachers start at government service Grade 7 – a rank they consider demeaning – and remain there throughout their careers. Unlike other government employees, who can enter at low grade but can move up to be supervisors, teachers have no career ladder" (Warwick and Reimers 1995, 29).

"Primary-school teaching has come to be seen as work attracting those with dubious academic skills who happen to know politicians. Unlike countries in which primary school teachers enjoy great respect even though they receive low salaries, in Pakistan they suffered from the stigma put on their work. The government and the society showed little respect for their professional credentials and treated them accordingly" (Warwick and Reimers 1995, 31).

Table 7: Working Conditions for Teachers in Low-Literacy Districts, Eight Indian States, 1993
(percent)

State	Schools with safe drinking water	Schools with toilet facilities	Schools with chairs for teachers	Schools with electricity	Grades in pukka buildings	Grades with classrooms	Schools with multigrade classes
Assam	21	10	81	0	22	43	59
Haryana	76	57	92	27	56	81	59
Karnataka	41	09	65	26	68	77	62
Kerala	36	65	65	27	65	105	1
Maharashtra	36	20	85	26	46	73	56
Madhya Pradesh	34	16	61	10	57	56	83
Orissa	26	8	85	16	60	58	69
Tamil Nadu	61	9	73	21	60	46	62

Source: World Bank 1997, 159.

growing number of occupations associated with modernization; and in many regions (see Box 4) depressed economic conditions have resulted in a decline in teacher status and respect. The heavy use of political favors in recruitment of teachers has added to the stigma. Qualification requirements for teachers, closely associated with status, increase at each rung of the education ladder. Thus, it is usually viewed as a promotion if a primary-school teacher qualifies to teach at secondary level.

The matching of supply and demand for teachers also varies greatly within and across DMCs. In India, while the growth rate of teachers varies across states, primary teachers make up the most steadily growing profession with almost 2 million primary and upper primary teachers employed in 1993.

Even so, in some states the growth of the teaching corps is not enough to keep up with the growing numbers of students. Thus, in 1993 the student/teacher ratio was 65:1 in Bihar, 38:1 in Assam and 49:1 in all of India (World Bank 1997). In Bangladesh the primary student/teacher ratio in the 1990s exceeded 60:1. Although it is not clear how those ratios translate into class size, it can be assumed that quality improvement will require a downward adjustment.

Large classes and poor physical facilities are common problems for teachers and students. Classes of over 50 pupils are common in Bangladesh and India. Moreover, inefficient planning, political favoritism, and population factors influence school locations, resources, and subsequent numbers of teachers. For example, the PRC Country Sector Study reports class sizes in some provinces of "only several" to 60-70 pupils. Teacher surpluses and shortages may coexist in the same country. Usually this translates into urban surpluses and rural shortages, as in the Lao People's Democratic Republic (Lao PDR), where there are serious imbalances in teacher deployment across provinces (ADB 1999). However, surpluses do not necessarily translate into quality improvements. Table 7 offers some insight into the unattractive working conditions teachers may face, particularly in rural areas. Low-literacy districts in eight Indian states report most schools without electricity, typically without safe drinking water, and often with no chairs for the teachers (World Bank 1997).

DMCs, in order to improve the quality of schooling and in spite of such weaknesses just identified, are beginning to raise education requirements for incoming primary-school teachers. In the economically more advanced East Asian countries, many primary-school teachers have acquired tertiary education. In India, most states have raised the general education requirement for teachers from 10 to 12 years of schooling (World Bank 1997, 146). This reform places India ahead of other DMCs with comparable education indicators (e.g., PRC requires nine years and Pakistan requires 10 years) and equal to some of the Organisation for Economic Co-operation and Development (OECD) countries where the minimal education attainment for primary teachers is 12 or 13 years (OECD 1994). The trend as countries develop economically and education systems grow is for preservice teacher preparation for basic education to take place in secondary school (both general education and pedagogic training); then subsequently, in specialized tertiary education; and eventually in universities.

Preservice, In-service, and Continuing Training

Hanushek (1994) observes that education systems routinely and worldwide pay for two teacher characteristics not positively associated with student achievement: qualification and experience. Indian experience confirms that proxies for teacher quality – such as type of certification, preservice education, or salary – typically are not related to student learning achievement (Kingdon 1995). In further agreement, a World Bank report notes that teachers' experience has not been found to be an important predictor of student achievement in the major empirical studies (World Bank 1997, 97).

However, studies of learning achievement among primary school students have often linked low achievement to weaknesses of teachers' poor subject mastery (traced to weak general and preservice education), limited teaching skills (traced to inadequate pre- and in-service training), and high absenteeism (traced to poor motivation and working conditions). Teachers' lack of subject mastery (not necessarily reflected in official qualification certification) is a major concern reported in the Country Sector Studies. Teachers simply may not understand the content they are obliged to teach (see Box 5). This is apparently attributed to various factors, including a weak or incomplete secondary education and preservice training curriculum that omits advanced subjects.

Box 5: Teacher Preparation

Pakistan prepares its candidates for teaching mainly through two types of training: formal education and teacher certification. Though this was never its explicit purpose, formal education has a much closer relationship than teacher certification with student achievement in mathematics and science. As their education goes up teachers seem to develop a greater mastery for the material they are teaching and better methods for teaching it.

Source: Warwick and Reimers 1995, 58.

Box 6: Limited Preservice Teacher Training

In India teachers need – but do not receive – preparation for teaching in the situation that two-thirds of them have to face: multiage, multilingual, multigrade classrooms. The National Council of Education Research and Training (NCERT) model curriculum for primary preservice training allocates less than 20 percent of the program to practicing teaching and 20 percent to developing pedagogic skills. As a result, the repertoire of teaching skills among primary teachers is limited and, particularly in poor, rural areas, weighted toward practices that do not encourage active student learning: lecturing, oral reading, and copying.

Source: World Bank 1997, 27.

Strategies to improve teaching and learning are likely to include upgrading skills of teachers by upgrading preservice or in-service teacher training. Issues pertaining to current preservice programs include the amount of general education, the duration, and the proportion of time devoted to classroom demonstration and practice. Teachers, themselves, are aware of the inadequacy of preservice training. In India, a survey undertaken in rural schools in Haryana and Kerala of teachers' opinion on their preservice training disclosed their high level of dissatisfaction with their teacher preparation programs, even to the quality of the instructional staff, their textbooks, and the quality of the school libraries. Substantial numbers of teachers, particularly in South Asia and rural parts of Southeast Asia, are not fully qualified for the positions they hold. In Bangladesh, for example, 87 percent of nongovernment teachers are untrained. In India, great variations of supply of trained teachers are found across states. As noted by the World Bank (1997, 157):

Although some states in India require no teacher training, about 90 percent of primary teachers are trained and eligible to receive a primary teaching certificate after completion of two years of training (except in Andhra Pradesh, Assam, and West Bengal where there is a one-year course). Several of the smaller states report that less than 50 percent of teachers have been trained: 43 percent primary and 41 percent upper primary in Arunachal Pradesh; 6 percent and 29 percent in Manipur; 42 percent and 36 percent in Meghalay; 48 percent and 26 percent in Nagaland; 49 percent and 41 percent in Sikkim; and 34 percent and 35 percent in Tripura.

Qualified and unqualified are, of course, relative terms. Typically a teacher acquires certification through officially sanctioned training programs. If such programs have little relevance to teaching behavior and student performance, then the classification has little analytic value.

Criticisms of preservice programs in teacher training (see Box 6) have led to increased attention to the potential of in-service training as a supplement or alternative. The Country Sector Studies and various international reports

Box 7: Innovative In-service Programs

Two innovative in-service teacher training pilot programs are Joyful Learning, implemented by nongovernment organizations (NGOs) in several states in India, and Teacher Empowerment – a program sponsored by the United Nations Children's Fund (UNICEF). Joyful Learning involves child-centered activities and promotes active learning practices by motivating children and teachers to like learning, and teachers to adopt active learning activities in the classroom. The Teacher Empowerment program strives to improve the school environment by tapping into school-level resources and administrative support and to boost teachers' morale, self-esteem and will to improve teaching which, in turn, boost student enrollment and attendance. Teachers participate in a one-day motivational training session where they also receive guidance in preparing learning materials. There are monthly follow-up sessions at the school cluster level.

Source: World Bank 1997.

examine the limitations of in-service teacher training. Criticisms emphasize the lack of application to actual classroom situations, the absence of developmental and career planning, and the lack of participation of teachers in the design of training. In-service training, as in the case of Nepal and India, may simply be too rare to improve teachers' subject knowledge or to change instructional practice (World Bank 1997, 148). Also there is transmission loss in in-service training when programs do not plan for, or follow up on, the transfer of training to classroom practice. The Nepal Country Sector Study (1997, 47) stated that in-service training programs are simply not sufficient to fulfill the needs of "the huge numbers of untrained teachers" in the schools. In India, an evaluation sponsored by the National Council of Education Research and Training (NCERT) of the in-service training programs carried out in three Indian states between 1986 and 1989 for some 1.7 million primary teachers revealed that the method of instruction only rarely included demonstrations of teacher practices, although such demonstrations were in high demand by the teachers (Rao 1994).

Although issues related to teacher training tend to evolve around the content, cost, and usefulness of existing preservice and in-service training, some observers see additional types of training needed in order to produce good teachers. Teacher training is increasingly recognized as needing more than conventional training in pedagogic skills and strengthening of academic content (Harding 1996; Irvine 1995). The many programs of teacher empowering in the region demonstrate that in order to change teachers' attitudes, values, and practices, something more than technical training is needed (see Box 7). Examples abound in the region of education quality improvement programs that have failed to effect change in classroom methodology, particularly in those societies in which increases in classroom interaction run counter to established norms of authority, gender roles, and learning styles (Agarwal and Harding 1997a; Bray 1996; Fuller and Clarke 1994).

The teacher empowerment programs in Bangladesh, India, Nepal, and Pakistan, although not subject to vigorous evaluation, have awakened an

interest in the need to search for ways of dealing with the low self-esteem of teachers, absenteeism and corruption, and resistance to many of the education innovations which aim at achieving qualitative impacts on the classroom. As noted by Morley (1997, 4):

Teachers, who themselves are subject to the caste, class gender, and tribal disparities in many of the countries in South Asia, and who have, themselves, been subject to traditional styles of learning at school and in their training, will not change the authoritarian styles and rote learning in their teaching by being taken through yet another [traditional] training program.

Incentives for Teachers

Widespread concern about the difficulties in recruitment of talented personnel for teaching and about teachers' low motivation and high absenteeism has spurred an international search for potential teacher incentives (Lockheed and Verspoor 1991). Frequently suggested incentives include: (i) merit pay to motivate teachers with a significant portion of a teacher's salary based on performance as assessed by supervisors; (ii) salary premiums to mathematics and science teachers; and (iii) location premiums to teachers working in rural areas (Chapman 2002). Yet, apparent solutions to ineffective teaching and learning due to lack of incentives and motivations turn out to be complex because of organizational context. Teachers who do not receive merit pay may respond not by trying harder but rather by reducing their effort. And, paying premium salaries to math and science teachers may make other teachers angry, frustrated, and bitter. Further, many teachers would rather be unemployed in urban areas than work in certain remote regions (Murnane and Cohen 1986).

Teacher salaries are a perennial issue in most Asian countries. Table 8 suggests that teachers' salaries in Asia as a multiple of GDP per capita are low compared with those in Africa. Some Asian countries, for example, Bangladesh, Republic of Korea, and Thailand between 1985 and 1995 increased teachers' real wages by up to 101 percent (Table 9). Teachers in other Asian countries did not fare so well. In Viet Nam salary rates are very low in both absolute terms and relative terms (in comparison with other occupations of equivalent skill – particularly in comparison to those now emerging in the private sector). The average primary-school teacher's salary in the mid-1980s

Table 8: Teachers' Salaries as a Multiple of GDP per capita, by Region

<i>Region</i>	<i>Average salary to GDP per capita ratio</i>
West and Central Africa	7.28
South and Eastern Africa	5.90
Asia	1.84
Latin America	1.79

Source: Mehrotra and Buckland 1997.

Table 9: Changes in Teachers' Real Wages, 1985-1995

Country	1985	1989-1991	1995	Change (%)
Korea, Republic of	74	100	149 ^a	+101.0
Thailand	77	100	133 ^a	+72.7
Bangladesh	116 ^b	100	191	+64.6

^a Data refer to 1994.

^b Data refer to 1984.

Source: Mehrotra and Buckland 1997, Appendix B.

was between 0.8 and 1.2 times per capita gross national product (GNP), whereas it was 2.6 times per capita GNP in other Asian countries at that time; and the average pay for a secondary teacher in Viet Nam was 1.2 to 1.7 times GNP, compared with an Asian average of 3.8 times (Viet Nam Country Sector Study 1997, 16). In the Philippines, "The relatively low compensation of teachers makes the profession unattractive for bright people who self-select to courses that bring better payoffs after graduation" (Philippines Country Sector Study 1997, 22).

There are, of course, conditions other than salaries that affect teachers' self-esteem and well-being. Since the budgets for education currently are spent primarily on teacher salaries, other compensations and incentives must be sought. Many communities in DMCs now provide salary supplements, housing and, at times, food allowances. The Philippines has begun to implement such incentives as scholarship and training programs and recognition for exemplary performance (Philippines Country Sector Study 1997, 24). In disadvantaged communities or schools in Viet Nam where the community is too poor to provide material incentives to attract teachers, a system of honorable titles has been used ("people's teacher" or "teacher emeritus") to encourage professional improvement among teachers.

What keeps teachers in practice without adequate compensation or recognition? Research sponsored by the OECD in its member countries shows that the two primary reasons that teachers stay in their profession despite poor recognition and compensation are: (i) a tenacious commitment to helping children learn; and (ii) support from their colleagues in the workplace (OECD 1994). Where a threshold of income and compensation has been reached, these motivations may well become prominent in developing countries of Asia.

Teacher Roles and Teacher Quality

Central to the processes of teaching and learning and to education reform is the role of the teacher when engaging students in development of their intellectual and emotional strengths and in examination of learning within the context of their everyday experiences and the society around them. Teaching roles change over time in response to new patterns of education governance and management, new kinds of students, new theories of teaching and learning, and new technologies.

As the functions of school management change, the meaning of teacher effectiveness may change. Nevertheless, certain basic ingredients of "quality" teaching tend to persist. These include knowledge of substantive curriculum

areas; pedagogic skills; familiarity with multiple instructional strategies for use with individual and group activities requiring problem solving; application of concepts and higher-order thinking; ability to be reflective and self-critical; and motivation to help students learn (see Box 8). With devolution of management authority, to this traditional list may be added a more comprehensive definition reflecting newer needs and contexts, such as managerial competence and the ability to work collaboratively with other professionals (on instructional policy, curriculum, and staff development) and with students representing a wide range of cultural backgrounds.

In response to certain recent trends in theories of teaching, particularly those associated with “teacher empowerment,” a number of localized training programs have been developed in South Asia, particularly India. These programs have used motivational and participatory group training methods, linked to developing collegiality and self-help in cluster centers offering professional support (Harding 1996; Irvine 1995). The challenges for countries lie in linking such teacher empowerment programs with the community leaders, parents, and other education functionaries who are involved in defining quality and school effectiveness in a more participatory way. This particularly applies to the low-income DMCs which need to effect qualitative changes on a mass scale while at the same time increasing access by mobilizing communities – changing their perceived values of education and affecting their perceptions of opportunity costs in sending their children to school and foregoing the additional earnings of sending their children to the workplace (Agarwal and Harding 1997a).

In one of the few available studies looking at the influence of female teachers on student achievement, Warwick and Reimers (1995) examined the gender gap in Pakistan in mathematics achievement in grades 4 and 5, where students of male teachers had significantly higher achievement scores in mathematics than students of female teachers. After controlling for student and

Box 8: How One Teacher Can Make a Difference

The appointment of a teacher with a positive attitude, an interest in tribal life and culture, and a belief that, when taught properly, tribal children are educable made a big difference to an interior and backward region of Godavari district in Andhra Pradesh. When the teacher was transferred to a school in a village inhabited by one of the most “primitive tribal groups” (Kondareddi), only 8 of the 34 children enrolled regularly attended school. To bring the children to school the teacher was deliberately severe, but once they were in school, he encouraged their active participation. He visited each household in the village to obtain parents’ consent for the children to attend school and then went around the village daily to call the children to school. Researchers reported that during their field observations the children arrived at school even before the teacher. All the students in grades 1 and 2 were able to write the alphabet and to read the textbook fluently. And they were very self-confident.

Source: World Bank 1997, 139.

teacher gender, teaching practices, student social class, teachers' education, and location of school, the authors concluded that relationships between student achievement and teacher gender did vary in mathematics performance from one level of teacher education to another (Table 10). At one teacher's level of education, Table 10 confirms the common belief in Pakistan that students of male teachers score higher in mathematics. However, for teachers with university degrees, the gender gap favored the female teachers.

The location of the primary school was significant in helping explain the gender gap. In urban schools students with male and female teachers had the same mathematics achievement, except in two cases: where teachers had university degrees and where teachers taught more than the median content of curriculum. In both these cases the female teachers had higher-achieving students in mathematics. Warwick and Reimers (1995, 73) concluded that:

...given that 30 percent of Pakistan's elementary school students attend urban schools and that students of female teachers in urban settings have achieved higher than students taught by men, [there is a] need to use caution in assuming that male teachers are better. In urban schools, female teachers and students clearly have the edge.

The research by Warwick and Reimers also showed that the rural elementary schools were the main source of the gender gap in student achievement in mathematics in Pakistan in grades 4 and 5, "particularly among teachers responsible for more than one grade" (Warwick and Reimers 1995, 73). The researchers added (p.75) that:

Pakistan has a distinctive and often negative environment for women to teach mathematics in its rural schools.... For women from cities [there is] an inhospitable environment around these schools, both physical and cultural. Local suspicions force them to find housing with watchmen and boundary walls or companions for their safety.

Another study of the gender gap in student achievement conducted by the World Bank (1997) in India noted that India's primary schools have twice as

Table 10: Relationships Between Student Achievement and Teacher Gender in Pakistan

<i>Teacher's level of education</i>	<i>Difference in student achievement in mathematics</i>	
	<i>Male teacher</i>	<i>Female teacher</i>
Completed middle school or less	Students of male teachers scored the same as those of female teachers.	Students of female teachers scored the same as those of male teachers.
Completed matriculation (largest group of teachers)	Students of male teachers scored significantly higher in both math 4 and Math 5.	Students of female teachers scored lower in both math levels.
University degree (approximately 15 percent of the teaching force)	Students of male teachers scored lower.	Students of female teachers scored significantly higher.

Source: Warwick and Reimers 1995.

Table 11: School Characteristics that Narrow the Gender Gap in Mathematics and Language Achievement in Low-Literacy Districts, Six Indian States

<i>State</i>	<i>Mathematics</i>	<i>Language</i>
Assam	Access to teaching materials; parental involvement.	Teacher assigning homework.
Haryana		Head teacher acting as leader.
Karnataka		Stable teaching staff; high share of female teachers.
Madhya Pradesh	Teacher assigning homework.	High share of female teachers.
Orissa		High share of female teachers; more school physical facilities.
Tamil Nadu	Good teacher attendance and provision of special help.	High education attainment among teaching staff; high share of female teachers.

Source: World Bank 1997, 127.

many male teachers as female ones. In several states the gender gap was narrowed in schools with a higher percentage of female teachers, confirming the importance of increasing the share of female primary teachers (Table 11). However, the effects of the various school characteristics they identified were inconsistent across states, and “several of these effects may be due to the high share of male teachers in the schools with these characteristics and the fact that quality-enhancing inputs are disproportionately directed at male students” (World Bank 1997, 127-8).

Is there a link between the number of female teachers and administrators, and school quality? Warwick and Reimers (1995) suggest that under some conditions the answer is “yes.” A World Bank report (1997, 164) suggests that there is a need to match teachers with students:

Teachers often are more effective with students who share their characteristics. Female teachers are more effective with female students ... the gender gap in learning achievement is smaller in schools with a higher share of female teachers.

The India and Pakistan studies both agree that recruiting female teachers for rural primary schools is a particular need.

Teacher development, individual and collective, is cumulative and integrative, with earlier skills incorporated and built upon by later skills. Within the teaching pool, however, teacher quality may reflect varied and differentiated criteria. National or local contexts may prize certain objectives or values, which then promote various dimensions of teacher quality over time. Also, the problematic nature of teacher supply in the labor market and the expense involved in developing and sustaining high levels of competence have led in many DMCs to a teaching force that is heterogeneous in terms of teacher quality. Thus, the concept of teacher quality is stubbornly contextual and remains elusive.

Developing Quality Teaching in the Periphery

Improving the ability of teachers to perform more effectively in small rural and remote schools with students of widely ranging ages is a major challenge for raising student achievement in many DMCs. In India, the Government has been trying to meet this challenge by improving teacher quality on several fronts by raising preservice education requirements, improving teacher training, increasing the diversity of the teaching force (although it has to meet the diversity of the student population), and promoting stronger participation by local government and community organizations (World Bank 1997, 28).

The complexity of improving education in multiethnic, remote areas is illustrated by the case of a village in Viet Nam (Box 9). Teacher shortages in rural areas mean that rural primary schools have to ask teachers to manage multiple grades. As a consequence, multigrade teaching is beginning to come under much scrutiny as a potential viable innovation (Box 10). Rowley and Neilsen (1997, 185) observe that:

In time of teacher shortages, with projections pointing to the necessity for continued and even expanded dependence on multigrade classrooms to provide higher quality primary education, few Asian governments are developing plans for multigrade research or strategies for multigrade teaching. School systems continue to plan, train their teachers, and organize their curriculum around the single-teacher, single-grade classroom approach.

Papua New Guinea and the Philippines, however, are two of the growing

Box 9: Illiteracy in Can Ho Village, Viet Nam

Among the primarily H'Mong population of Bac Hai district (H'Mong 40 percent; Kinh 8 percent; Dao, Nung, Tay, Phu La 22 percent) there are 13,453 illiterates among a total population of 15,601 children in the age group 6 to 14 years. Among the 20,731 persons aged 15 to 35 years, 15,781 are illiterate.

In the primary school age group of Can Ho village, only 160 of 266 children attend school. School consists of five classes at first grade level and five classes at second grade level. No classes are held for third grade or above. There are 94 pupils in Grade 1, 60 boys and 34 girls, and 66 pupils in Grade 2, all boys. They study under the 120-week program for ethnic minorities. In addition there are 106 students in out-of-school literacy classes in the evening. In 1990/91, 24 of the first graders dropped out of school, 22 of whom were girls. Each had previously repeated the grade.

Among all the 266 children aged 6 to 14 who were interviewed, 45 could speak a little Vietnamese ("babble only"), six could understand a radio broadcast of Voice of Viet Nam, and only one student could read a 55-word paragraph (which took three minutes). In 1990, Can Ho "eliminated" illiteracy among 118 learners and in 1991 among 28 more learners. All have relapsed into illiteracy.

Source: Viet Nam Country Sector Study 1997, 17.

Box 10: Advantages and Disadvantages of Multigrade Teaching

Advantages	Disadvantages
<ul style="list-style-type: none"> • Efficient in providing basic education in thinly populated areas. • Efficient means of utilizing scarce education inputs, such as trained teachers, classrooms, and materials. • Maintaining rural schools is important in building village identity and cultural life. • Can benefit girls by expanding available school spaces and by helping to ensure that schools are located closer to home. • Students “learn to learn” and “learn to teach” through independent inquiry and peer tutoring. • Students and teachers develop a strong relationship over time. • Students benefit from the unique multiage and peer socialization patterns. • The stigma associated with repetition is removed. 	<ul style="list-style-type: none"> • Students may receive less individual attention, and must often work independently. • Student achievement may fall if programs are not supported by the required resources and teachers are not properly trained. • Demands on teachers’ time and organizational capabilities are high. They need special training and materials to perform their jobs effectively.
<p>Source: Rowley and Nielsen 1997, 186.</p>	

number of exceptions. For example, according to the Papua New Guinea Country Sector Study (1997, 62), multigrade teaching aims to:

... achieve annual intakes in all primary schools throughout the country and to make savings in the costs of providing teachers, but if the quality of teaching and the understanding that teachers have of multigrade teaching methodologies is poor then ... the spillover effects on students in multi-grade classrooms could easily undermine the achievements of the reforms and community confidence in the reformed education system.

The Philippines, after a period of experimentation with multigrade teaching, examined negative and positive reactions (Box 11). The Lao PDR is considering a national policy combining expansion of multigrade schools in remote areas with redeployment of teachers (ADB 1999). These two strategic reforms are expected to significantly extend the availability of basic education. Rowley and Nielsen (1997) offer the following recommendations to improve the utilization of multigrade teaching:

- the benefits and contributions of multigrade teaching should be recognized;
- multigrade teaching should be officially recognized as a legitimate form of education so that schools can be allocated the resources and governed under appropriate regulations (such recognition would include the ideal of local problem-solving and adaptation, such as peer instruction and use of community volunteers in the classroom);
- pre- and in-service teacher training should be modified to provide relevant training for multigrade teachers (possibly including student teaching in multigrade classrooms);

- school administrators should approach the management of multigrade teaching in a systemic manner, with appropriate policies in: (i) teacher recruitment, deployment and training; (ii) instruction in the local language; (iii) design of curriculum and materials (emphasizing self-instruction or locally made materials); (iv) school governance that involves the local community and students in school-wide decision making; and (v) school financing that encourages flexibility in allocation of resources from both outside and within the community.

Box 11: Views of Education Administrators in the Philippines on Multigrade Teaching

Reasons for wanting to continue

1. I have developed an innate love and respect for my children despite their deficiencies and inadequacies. I can serve a greater number of this kind of children.
2. The job is more challenging.
3. I feel successful when children learn.
4. I have to sacrifice for the best interest or good of the children.
5. To know if I am an effective teacher.
6. I am committed to serve as a teacher and since this is the assignment given to me, I have no choice.
7. I have been used to the job.
8. Teacher has a chance to be flexible and find self-fulfillment/satisfaction.
9. I can serve the Lord in this way.
10. I enjoy working with cultural communities.

Reasons for not wanting to continue

1. Difficult to teach a multigrade class. More work; more preparation; more responsibilities; job so demanding.
2. Children have limited chance to learn.
3. I would like to experience teaching a single class.
4. Lesson planning is too much work; requires a lot of time and effort.
5. Teaching a single class is easier.
6. I find difficulty in budgeting time and scheduling activities.
7. Poor results in teaching; low class performance.
8. School is too far from my home; hazardous trip to school.
9. Senior teachers should handle multigrade classes.
10. No time for professional growth; no training; destructive to health.
11. Multigrade teacher devotes much more time and effort but the pay is the same.
12. Not conducive to successful learning; I want a break; pains exceed joys.
13. Many reports; more records to keep.

Source: Miguel and Barsaga 1997, 130.

Curriculum

At the minimum, a curriculum specifies the content, sequence, and pacing of what should be taught at each grade level. The organization and delivery of the curriculum have been the subject of much criticism. Curriculum development usually takes place in the center, and the content tends to be urban and middle-class in orientation. There is frequently little teacher input to the design of the national curriculum, and often the content is too difficult or too extensive for pupils. Even when prepared and disseminated, four curriculum issues are most prominent in DMCs' efforts to improve education quality: (i) the national curriculum is not well developed, objectives are not clear, and there is insufficient articulation between grade levels; (ii) the curriculum is developed but not fully accepted by the teachers; (iii) the curriculum is clearly specified, but is too difficult or covers too much material for the available time; and (iv) the textbooks and/or teacher training are not aligned with the curriculum. These may be elaborated as follows:

- (i) *Curriculum not well developed.* The curriculum is typically developed by sets of specialists and lacks integration. Further, uncoordinated changes in teacher training, textbook selection, or examinations occur without a corresponding change in the old curriculum. Over time, instructional activities in the school can move far away from the curriculum. Instruction becomes more ad hoc, driven by the textbook or teachers' personal beliefs about what should be taught or what they are most comfortable teaching.
- (ii) *Teachers do not accept or do not receive the curriculum.* Teachers may have had little input into the objectives, content, or accompanying guidelines of the curriculum. Moreover, teachers – particularly in rural areas – may not have copies of the national curriculum or may not have updates. Whether this deficit is due to budget constraints in the education ministry or just to difficulties in communication, the impact is the same: teachers lack either the confidence or the structure and support that a curriculum can provide. As a consequence, the quality of instruction drops. Then, students score poorly on the national examination because they have not covered the material that the test assumes was being taught. This is well illustrated in Pakistan, where the Country Sector Study identified the failure of improvements, which were made in the curriculum, to reach teachers or students as a serious problem in education quality.
- (iii) *Too much to learn.* The curriculum in some DMCs is overly elaborated, requiring students to cover too much content to be effectively taught or to reasonably learn. The curriculum may develop through the slow accretion of requirements, leading to a confused and overburdened curriculum. Cambodia provides an example of an overcrowded curriculum with 12 subjects at the primary level (ADB 1996, 23). Such a curriculum leads to fragmentation in teaching and a lack of integration of content across subjects.
- (iv) *Poor alignment of textbooks with curriculum.* This often happens when textbooks are revised or changed without simultaneous attention to teacher training or when teacher training is upgraded without regard to the

textbooks that are already used in schools. Reforms to one element of the education process do not ripple through the system. Parts become unaligned. Pakistan again is an example of a setting in which textbooks do not faithfully reflect the objectives of the curriculum (World Bank 1991).

In addition to these weaknesses, the Country Sector Studies criticize various curriculum reforms taking place or being considered. The focus of the following observations is largely on changing content issues in the search for social relevance.

- (i) *Philippines*. The elementary and secondary curricula have been refocused many times in the Philippines. In the early 1980s, reforms emphasized values education to balance the child's intellectual, physical, moral, and spiritual development as a human being, a Filipino citizen and a member of the world community. Then in 1993, in response to poor pupil achievement in mathematics and science, a new program was introduced which increased time allotted to those two subjects and increased the number of school days from 185 to 200 per year. During the same year, values education was eliminated from the secondary curriculum for third and fourth year students, being replaced by additional English, mathematics, or science and technology subjects (Philippines Country Sector Study 1997, 12).
- (ii) *Papua New Guinea*. From the 1970s, "community attitudes have strongly endorsed academic content in primary schooling because of its promise for high-paying jobs. More recently, parents are aware of the scarcity of jobs in the employment sector for school-leavers and they are beginning to question the relevance of an overly academic curriculum" (Papua New Guinea Country Sector Study 1997, 21). One response to the demand for relevance in an era of technological change is the introduction of technology into the curriculum (Box 12).
- (iii) *Nepal*. Quality of education is a major concern particularly in regard to social relevance. The education curriculum needs to pay attention to the social and cultural realities, particularly of the disadvantaged group, "for example, a typical literacy programme uses books ... in the national language focused on the language and the social contexts of the politically advantaged group.... Most of the programs are not people-centered" (Nepal Country Sector Study 1997, 46).

The multiple functions of the curriculum and the breadth of issues are suggested in these quotations from the Country Sector Studies. The purposes of the curriculum, explicit or obscure, go well beyond imparting textbook knowledge. Taking a broad cultural view of the curriculum, Agarwal and Harding (1997b) observe, "If school is an entry into the culture and not just a preparation for it, then there must be constant reassessment of what school does to the young students' conception of his/her own powers (her own sense of agency developed through her own talents), and her sensed changes of

Box 12: Adding Technology to the Curriculum in Papua New Guinea

The *objectives* of basic technology include developing skills and knowledge for:

- (i) Designing, problem solving, decision making, researching and the application of information, in order to carry out practical and useful tasks in the home and community;
- (ii) Using and operating the different tools and equipment safely and efficiently;
- (iii) Understanding personal, physical, mental, and emotional growth.

The *content* is built around: health and safety, tools and equipment, working techniques, design, and materials.

The *applications* focus on: useful community technologies; water, power, and sanitation systems etc; houses and building maintenance; machines and household equipment; food and nutrition; clothing construction and household sewing; crafts; and home management.

Source: Papua New Guinea, Department of Education 1993.

being able to cope with the world both in school and after (her self-esteem). We have often become so pre-occupied with the more formal criteria of 'performance' and with the bureaucratic demands of education as an institution that we have neglected this personal and humanistic side of education."

A system of education, theory of pedagogy, or national education policy that does not promote the school's role in nurturing pupils' self-esteem fails to carry out one of its primary functions. With evidence from sub-Saharan Africa and South Asia, Agarwal and Harding (1997b) support the view that a *community of learners* approach can contribute to both performance and self-esteem, where teachers, the community, and students are all learners together, the act of teaching evolves from this shared learning, and knowledge comes about through the negotiation of meaning by the individual in a social context.

Education Governance, Management, and School Organization

Changes, some major and some minor, in education governance and management are taking place in most DMCs (Adams 2002). The roles of central, provincial, and local education authorities are being modified. At the school level, management roles are under review and new relationships between school and community are redefining the organization of schooling. The general direction of change reflects devolution of certain traditional responsibilities of the center, increased responsibilities at lower echelons of education bureaucracy, and exploration of new levels of school-community relationships.

The Country Sectors Studies report some of the changes taking place:

- (i) *Papua New Guinea*. "Community participation in education has a long history in PNG. Contributions from the community in the form of labor and local materials supported by grants from government, will enable the realization of such facilities at minimal cost" (Papua New Guinea Country Sector Study 1997, 24). "Proposals to transfer distribution functions to the provinces raise the prospect of the inherent risks for further deterioration, such as occurred with the transfer to the provincial level of responsibility for education subsidies" (p. 47).
- (ii) *Pakistan*. "The day-to-day school management, as well as the power to recruit teachers and select school sites has been delegated to district officials and communities. Also, Village Education School Management Committees have been constituted in all four provinces to ensure community involvement and mobilization" (Pakistan Country Sector Study 1997, 42). "... Plans call for strengthening the grass root structures through an 'extensive training program' which would inform communities about the functions they are to perform" (p. 44)... "In the rural areas it may be too optimistic to expect the communities to be organized and motivated to take on the management of primary schools. The attempts to devolve some provincial functions may take a long time before community-based management is implemented" (p. 47).
- (iii) *PRC*. "Community Education Committees have been established since the late 1980s in cities and Parents' Committees in rural communities, advisory organs for running schools, and to encourage all sectors of the community to support education development." Problems with decentralization include uneven development in the various school and lack of strong support for schools with poor facilities, and resources (PRC Country Sector Study 1997, 30).
- (iv) *Nepal*. Between 1951 and 1971, education in Nepal was initiated, managed, and financed at the local level, and there is a "need to devise strategies for transferring the ownership of educational institutions back to the people" (Nepal Country Sector Study 1997, 61). "Regular and effective supervision of schools are still not satisfactory ... although supervisors have been appointed at the district and regional offices. The lack of community support to education [is] because of its lack of relevance, particularly in nonurban areas – [its relevance] seems more as a way of moving from an agrarian life to an urban life" (p. 47).
- (v) *Kyrgyz Republic*. Starting with independence in 1991, there was a movement away from the traditionally centralized, controlled education system. "When the state turned over the finance and running of the educational system in the early 1990s to regional and local authorities, local budgets and resources were not ready to receive the burden. In the South there were teacher strikes since the local authorities could not pay the teachers Many professional teachers left education during the time of turmoil."... "Thus, in 1996 the educational system reverted to being supported by the state again: with a present ratio of 70 percent [of funding] from local sources and 30 percent centrally provided" (Kyrgyz Country

Sector Study 1997, 40). “Teachers, school directors and parents have begun to actively work together to improve educational quality by promoting a choice of pedagogies geared to meet the various abilities and talents of the individual students” (p. 50).

The problems encountered by DMCs, as described above, are indicative of the range of concerns arising during decentralization of education. Particularly under centralized education control, the link between senior policymakers, administrators, and student outcomes or other quality indicators is largely indirect through distribution of resources and establishment of standards rather than through any direct influence on the learning environment. The primary concern with governance and management in this booklet, however, is at the school level, which, under some patterns of decentralization, has gained considerable significance.

The importance of strong school management to teaching, learning, and effective schools is well established. As the Kyrgyz Republic Country Sector Study points out (1997, 50) “The appointment of good teachers but poor professional managers gives negative results.” Yet experiments in site-based management frequently do not produce significant change in teaching and learning. Also, visible changes are not always welcomed by neighboring or competing schools, and leadership over time requires multiple advocates. The lesson is that school-level efforts at reform are fragile, and, if not reinforced by community or regional support, may not survive.

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, 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.

The push toward decentralization now under way to varying degrees in virtually all countries in the region shifts more responsibility to head teachers, arguably the group of education administrators least ready to accept it (Chapman 2002). As a result, head teachers face three issues:

- (i) Many head teachers lack the training or background to meet this challenge. Across much of Asia, massive support and training will be needed if decentralized school management is to lead to positive outcomes. Whatever education value decentralization may hold is largely lost if head teachers cannot translate it into concrete actions within their school.
- (ii) Decentralization may lead to greater community pressure for transparency and accountability on the part of school and system managers. These

administrators may have limited experience in understanding what this means or in knowing how to comply.

- (iii) To the extent that decentralization shifts decision making back to the community, it may encourage or stifle education reform. However, many communities are conservative, and even well-intentioned changes to instructional materials, teaching methods, or tests can arouse considerable opposition. They may be unwilling to risk their children's future on new ideas about what students should study, how teachers should teach, or how learning should be measured. Parents and teachers may perceive change as threatening the balance of advantage. Those who do well under the existing system may resist changes that put their advantage in doubt.