Education Management in Asia

The Management of Education

The extraordinary success of many Asian countries in expanding access and improving education quality is strong evidence of success in education management. While recognizing the remarkable achievements in the region, this booklet necessarily focuses on the challenges and problems that remain. Five generalizations about education management in Asia are supported by recent literature and country experience, and provide a framework for discussion:

(i) *The management of education across Asia has improved greatly over the last 10 years*, but remains one of the weakest links in quality and efficiency of schooling in the region. In part, this is because management issues have become more complex, but also because the context, philosophy, and goals of education management are changing. Also, the education sector has not been competitive for the best managers: in the booming economy of the region, strong managers have had attractive alternative employment opportunities.

(ii) *Many of the most serious problems facing education managers across Asia are not themselves education problems,* but stem from factors within the larger environment that constrain the range of options available to education leaders. These factors include competition for resources, lack of attention from senior government officials, and lack of public support for the education sector. Even excellent managers may not be able to command the attention and resources they need to do their jobs well. In addition, many advocates of education acknowledge the threats posed by:

- degradation of the environment (pollution, deforestation);
- rise in HIV/AIDS and other health threats;
- persisting poverty; and
- rapid population growth.

Within the political process of most countries, national budget priorities are formulated with attention to *immediacy of impact* and *severity of consequences.* The most immediate and catastrophic threats are generally given priority. In this situation, education tends to lose. The pressures on national development posed by poverty, epidemics, and pollution are commanding because they threaten highly probable short-term catastrophe if ignored, while education offers less certain promises of long-term gain. Education managers will need to become increasingly articulate about the payoff from continued investment in education, increasingly knowledgeable

about strategies that are effective in producing those outcomes, and skilled at moving the system toward those ends with even fewer resources than in the past.

(iii) *The judged adequacy of education management depends, in part, on what problems we lay at the feet of school and system administrators*. The tendency is to hold administrators responsible for fixing virtually all the problems that beset the education system. An easy assumption is that, since management problems keep cropping up, administration must need improvement. Good management does not necessarily mute criticism of administrators. The resolution of high profile management problems may only allow administrators to move on to the next set of problems that need their attention.

(iv) The present weaknesses in education management are essentially the same ones identified in virtually every previous study of education administration in the region*. The curious issue is not that weaknesses persist, but that previous efforts to strengthen education management have not been more successful.* This suggests that previous analyses have been wrong, that proposed solutions were inadequate, or that other factors have operated to limit the effectiveness of central, intermediate, and school-level management in ways that have not yet been addressed. Better management probably depends on careful analysis and new thinking.

(v) Given the issues that are likely to dominate education development agendas over the next decade, *the school head teacher is the level of management that will experience the greatest change in role and responsibility, and the level least prepared to do so*.

Education management in virtually all DMCs follows a pyramid model, in which national policy, programs, and logistics are formulated by a central ministry of education organized into a set of divisions, bureaus, and units. This central ministry then works through a network of provincial, regional, and district education offices that largely duplicate the structure of the central Ministry of Education (MoE) and are responsible for ensuring that central policies are communicated and implemented in the schools. Individual schools are managed by head teachers, whose authority and responsibilities differ by country, but usually involve some combination of school management, school-ministry communications, school-community relations, and instructional supervision. The administrative and management issues at the various levels of the pyramid differ, and, given the new pressures for decentralization and community participation, are changing substantially.

Indicators of Effective Education Management

Across Asia, authorities are reasonably clear about what constitutes good education management, regardless of the strengths or weaknesses encountered in any particular country. While Table 1 is not comprehensive, it presents a sound picture of what effective management looks like. In general, good management is indicated when resource needs are correctly anticipated, resources are

Table 1: Indicators of Effective Management of an Education System

Indicators of effective system level management (central ministry level):

- textbooks are produced in sufficient numbers and distributed to schools on time
- instructional supplies are delivered to schools on time
- supply of qualified teachers meets demand
- teachers are appropriately assigned/deployed to schools
- teachers' salaries are paid on time
- schools have copies of syllabuses
- the ministry knows the location of schools throughout country
- schools are appropriately located across the country
- a national plan is available which provides vision and focus for education activities

Indicators of effective intermediate level management (regional and district levels):

- teachers are appropriately assigned/deployed to schools
- school inspection occurs on an appropriate and regular basis
- teachers receive instructional supervision
- questions from head teachers and teachers receive timely responses
- ministry information flows to schools in a timely way
- school information is conveyed to the ministry in a timely way
- staff development activities for school personnel are well designed and implemented

Indicators of effective school-level management:

- instructional supplies are ordered on time
- teachers come to school on time
- teacher absenteeism is low
- school facilities are in good repair
- teachers have copies of syllabuses
- teachers receive instructional supervision
- each school has a functioning parent-teacher association
- parents know how their children are progressing in their studies

allocated when and where they are required, and effective instructional practices occur in the classroom. Despite widespread agreement, these conditions often are difficult to achieve, due to resource constraints and the complex social and political context in which education operates. To provide a framework for understanding these indicators better, the next section examines the management challenges facing the different levels of the system.

Central-Level Management: Growth and Elaboration

The countries of Asia are rightly proud of the extraordinary growth of their education systems over the last two decades. So dramatic has it been that, across much of Asia, education is the largest public sector employer after

the military, and in many cases commands one of the largest shares of government resources (Table 2).

The rapid growth has exacted a cost. In many countries, the education system expanded faster than qualified teachers and administrators could be recruited or trained. This led to larger proportions of unqualified teachers trying to teach without adequate textbooks or understanding their subject matter, led by school and system administrators with limited management skills working within poorly organized ministry structures. With the increasing size of education systems came greater elaboration and compartmentalization (though not necessarily greater clarity) of functions. Instead of solving the problem, this only drove up costs and further reduced effectiveness.

Table 2: Public Expenditures on Education

Economy	*Years of compulsory education*	*Education, as % of GNP (1993-1994)*	*Education, as % of government expenditures (1992-1994)*	*Primary & secondary education, as % of all levels*	*Higher education as % of all levels*
Bangladesh	5	2.3	8.7	88	8
Cambodia	6	—	—	—	—
PRC	9	2.6	—	67	17
Fiji Islands	—	5.4	18.6	88	9
Hong Kong, China	9	—	17.0	66	30
India	8	3.8	11.5	64	14
Indonesia	6	1.3	—	47	18
Korea, Dem. People's Rep. of	10	—	—	—	—
Korea, Rep. of	9	4.5	16.0	80	8
Lao PDR	5	2.3	—	83	4
Malaysia	11	5.3	15.5	71	17
Maldives	—	8.1	13.6	99	—
Mongolia	8	5.2	—	59	18
Myanmar	5	—	14.4	88	12
Nepal	5	2.9	13.2	62	28
Pakistan	—	2.7	—	67	18
Philippines	6	2.4	—	—	—
Papua New Guinea	—	—	—	—	—
Samoa	—	4.2	10.7	78	—
Singapore	0	3.3	24.2	62	33
Solomon Islands	—	4.2	7.9	86	14
Sri Lanka	11	3.2	9.4	72	11
Thailand	6	3.8	18.9	73	17
Vanuatu	6	4.8	—	87	3
Viet Nam	5	—	—	—	—
All developing countries		3.6			
Least developed countries		2.8			
Sub-Saharan Africa		5.5			
Industrial countries		5.4			
World		5.1			

— Data not available.

Sources: UNESCO 1995, 1998; various national sources.

That elaboration resulted in a proliferation of administration. For example, in Cambodia, 75,000 employees, *half of all public employees*, work in the education sector. Within that, administration consumes a high proportion of the positions. Over one fifth of the education service consists of administrators (ADB 1995c). In the Lao People's Democratic Republic (Lao PDR), the number of staff in nonteaching positions in 1994/95 was equivalent to over 20 percent of the number of teachers (Mingat 1996).

Clarity was often the victim of growth. In Cambodia, the Ministry of Education, Youth and Sports was until recently organized into 16 departments, averaging 58 staff members per department. One study estimated that there were nearly 1,300 staff across the 13 provincial headquarters, and 1,750 to 2,000 staff in district bureaus (ADB 1995c). The delineation of functions between the provincial and district headquarters was unclear: both largely performed the same kind of tasks.

This Cambodian example reflects a larger problem: the most common and persistent criticism of education management in Asia is that linkages across and among units of government are weak. There often is little communication either vertically (across levels of the ministry) or horizontally (between units at the same level). Ministry organization is characterized by a multiplicity of departments, some with alternative titles and very few staff, in which responsibilities assigned to the departments do not match department titles. Operations suffer from frequent mismatches between organizational charts and unit activities, jurisdictional ambiguities, redundant operations, slow or absent coordination, and conflicts between units over control of programs and resources. This is not news: it is widely recognized by the governments involved. However, as inefficient as the structures might be, there are constituencies that benefit from them and resist streamlining, fearing that their special advantages might disappear. Nonetheless, serious attempts are now under way in some countries to reduce the size of central ministry bureaucracies, sometimes prompted by pressures toward decentralization, sometimes by the push toward greater efficiency. For example, in 1995, the Kazakhstan authorities reduced the size of public sector employment by 40 percent across all ministries and regional offices, down to 160 staff in the central MoE.

A further problem is that responsibility for education is commonly distributed across several ministries. This multi-ministry oversight of education complicates effective coordination. Examples from Cambodia, Indonesia, Kazakhstan, and Lao PDR illustrate the point. Table 3 shows the multiple groups that have partial (or overlapping) responsibility for policy development and operational control of the education system in Kazakhstan. Given the overlapping responsibilities of the Cabinet of Ministers, the central Department of Education, and the oblast (regional) departments of education, the opportunities for confusion and conflict are enormous.

In Lao PDR, the administration of different subsectors, levels of education, and institutions rests with different ministries. The administrative functions are divided between different levels of government (e.g., national, provincial, district, and village) with the absence of essential linkages and coordinating mechanisms. Table 4 illustrates this just for one subsector – vocational/technical education. Yet conflict and confusion are not just between ministries, but also between units of the same ministry, as seen in Cambodia (Box 1).

Table 3: Kazakhstan: Overlap of Major Policy Functions between Ministry of Education and Other Government Agencies

Function	***Education Ministry***	***Overlaps with***
Education Policy	Drafts policies and regulations.	Cabinet of Ministers
Curriculum policy	Develops "conceptions," elaborates standards, develops humanities curriculum.	Cabinet of Ministers, Institute of Educational Problems
Higher education policy	Development of regulations, policy issues regarding private institutions.	Cabinet of Ministers
Teacher education policy	Projects teacher staffing needs.	Oblast (regional) department of education
School staffing levels	Ensures that staffing meets government norms.	Oblast department of education
Education finance	Monitors expenditures and payments to institutions.	Ministry of Finance, oblast department of education
Quality assurance	Operates the Department of Inspection (mainly for higher education institutions and republican institutions).	Oblasts and raions with responsibility for schools
Other functions	Statistics, health.	Oblasts

Source: ADB 1995b, Annex 1.

Box 1: Overlapping Responsibilities Among Offices within an Education Ministry – Cambodia

During 1994-1996, demands for planning, policy analysis, and coordination of burgeoning donor assistance programs increased substantially. The Planning and Aid Coordination Unit (PACU) grew to 22 staff; but no officers in the unit had a background or training in policy analysis, and few had first-hand work experience in schools. The limited staff capacity, heavy demands on the Director, and some internal personnel difficulties all contributed to PACU's inability to respond effectively to the rapidly growing needs for planning and policy within the Ministry.

Under pressure to be ready for an ADB appraisal mission, and faced with limited capacity in PACU, in 1995 the Ministry of Education, Youth and Sports accelerated the creation of a Program Management and Monitoring Unit (PMMU). Once established, the Minister increasingly drew on its services for a widening circle of tasks, and the PMMU role expanded.

PMMU began with a small mandate, but expanded its role and functions. PACU began with a broader mandate but, lacking resources and the capacity to produce needed results, played a smaller role than had been expected. The problem started when the two offices drifted into competition and confusion arose over delineation of authority.

Source: Wheeler, Calavan, and Taylor 1997.

Table 4: Who is Responsible? Vocational/Technical Education in Lao PDR

Level of education	***Who is responsible***
Preschool and kindergarten	• Run by factories, state enterprises, cooperatives, etc., under administrative control of District Education and Sports Division
Primary education	• District Education and Sports Division • Local community
Lower secondary education	• District Education and Sports Division (financing) • Provincial Education and Sports Service (planning, financing, administration) • Local community • Ministry of Education and Sports
Upper secondary education	• Provincial Education and Sports Service (planning, financing, administration) • Individual schools • Department of Education and Sports
Vocational/ technical education	• Ministry of Education and Sports • Ministry of Communications, Transport, Post, and Construction • Ministry of Culture • Ministry of Industry • Ministry of Public Health • Ministry of Justice • Ministry of Agriculture and Forestry • Ministry of Economy, Planning and Finance • Provincial Education and Sports Service
Teacher education	• Ministry of Education and Sports • Provincial Education and Sports Service

Source: ADB 1993a.

The distribution of responsibility across different levels and among different groups at the same level results in ambiguities, leading to nonperformance in some areas and duplication of functions in others. This has caused delays and inefficiency in such management processes as teacher assignment, textbook distribution, and curriculum reviews (ADB 1993a).

The Bright Side

While some DMCs have encountered serious problems in their central-level management of education, the story is not all bleak. Other countries in the region have been in the forefront in experimenting with administrative practices and programs through which central governments can influence what happens at the school and classroom levels*, many with considerable success***.** In general, central managers can try to change school and classroom activities *by changing the level or mix of inputs* that go to the schools, e.g., curriculum or textbooks; or *the organization of the delivery system*, e.g., multigrade classes. They can try to change the instructional process *directly*, through such instruments as teacher training, or *indirectly,* through such instruments as national examinations or

community involvement (Chapman, Mählck, and Smulders 1997). Strategies that have most often been employed in the region include:

- curriculum revision;
- textbook revision;
- national testing;
- teacher training;
- teacher incentives;
- resource allocation to schools;
- multigrade classes;
- improved management information systems;
- increased community participation;
- decentralization of decision making; and
- decentralization of an information system to provincial, district, or local levels.

While many of these centrally initiated efforts, which aim to improve education quality and efficiency, have worked well, the Asian experience also highlights the complexity and unanticipated cross-impacts of these efforts. That experience suggests that the real challenge is not in the options for central-level intervention (though that is important), but in formulating a workable plan for implementing these strategies in some combination that recognizes the loose relationship among levels of the system and the probability that interventions to address one problem will likely have unforeseen impacts in other areas.

Ministry of Education Intermediate Levels

The importance of intermediate levels of administration varies across DMCs, with influence generally increasing with size of countries. For example, provincial education offices in the People's Republic of China (PRC) and India tend to be powerful relative to their counterparts in Cambodia or the Pacific DMCs. Organizationally, provincial, regional, and district education bureaucracies tend to duplicate the structure of the central ministry – each has offices for curriculum, testing, facilities, etc. This redundancy often results in duplication of effort, and unclear lines of authority and responsibility. Much of the analysis of education effectiveness and managerial efficiency has focused on these blurred lines.

The main responsibilities of the intermediate levels of ministry management are (i) to convey policy and program information from the central ministry to the schools; (ii) to convey data (e.g., school enrollment) and other information (e.g., book orders) from the schools to the central ministry; (iii) to ensure that schools are abiding by government policies; and (iv) occasionally, to provide instructional leadership and supervision (though this often defaults only to ensuring that schools are abiding by government policies).

The main bottleneck to effective intermediate-level administration is that provincial, regional, and district offices lack the authority to do their jobs effectively – or the resources necessary to do their jobs at all (Philippines 1992).

Box 2: Only One in a Thousand: Whose Problem is it?

Which level or unit of an education ministry is responsible for addressing a problem often depends on how the problem is defined. When various units of the ministry define a problem differently, it can lead to confusion and inattention to the problem. For example:

In 1996/97, for every 100 children who started Grade 1 in Cambodia, only 15 were expected to graduate from Grade 4 four years later, and only two were likely to finish Grade 8 in eight years. Of every 100 children who survived the first eight grades and enrolled in Grade 9, only 23 could expect to complete Grade 11 three years later. Overall, only five in 1,000 would finish Grade 11 in 11 years. In remote areas, only one child in 1,000 would complete Grade 8 in eight years.

This is a *problem of instruction, a problem in teacher assessment of student abilities, and a management problem* (to the degree that school or system administrators have a responsibility to identify low promotion rates as a national [or school] problem and do something about it). Who, then, should take the leadership to fix it?

Source: Computed from data provided by the Ministry of Education, Phnom Penh, 1997.

Because of insufficient delegation, many mid-level administrators do not have authority to make decisions or to act on information available to them. All too frequently, provincial education administrators are expected to implement programs and projects that they know do not meet the needs of their particular areas. For example, in many countries, district and regional education officials cannot fire nonperforming teachers or school administrators without lengthy consultation with central authorities. They cannot redirect resource flows to particularly needy schools without considerable time delays. Because of inadequate budgets, even minimal oversight of the schools may not occur. For example, officers in Cambodia, Nepal, and Philippines all report that provincial, regional, and district education officers do not have adequate transportation to allow them to get to the schools. Decentralization is not an automatic solution, unless decision making reflects a clearly defined division of authority and responsibility between different levels of the system.

Head Teachers

School head teachers are on the cutting edge between the administration of education and the actual delivery of instruction to children. Yet few have adequate preparation for their jobs or authority to change the way their schools operate. They have difficult tasks that will only become more difficult over the next decade. *One of the ironies of education development is that the push toward decentralization now under way to varying degrees in virtually all countries in the region shifts more responsibility to the group of education administrators least ready to accept it.*

School head teachers generally have responsibility in four areas:

(i) *School Management*. This includes ordering supplies, ensuring that teachers are hired and assigned, information gathering, and basic record keeping. In many DMCs, it is viewed as the chief set of responsibilities.
(ii) *School-Ministry Communications.* Completing reports required by the central ministry is a major task for head teachers in some countries. For instance, until only a few years ago, head teachers in Nepal had to complete a 52-page form for the School Administration Section of MoE and a four-page survey, collecting much the same information, for the Manpower and Statistics Section of the same Ministry (Chapman and Dunghana 1991). In another DMC, head teachers until recently were required to complete a 46-page survey about their schools three times a year. Head teachers also share responsibility with district education officers for ensuring that ministry policies and programs are conveyed to teachers and parents.
(iii) *School-Community Relations.* The demands of school-community relations involve working with community councils, community development associations, parent-teacher associations, and other local organizations that have an interest in the schools (Bray 2000). The goal is usually to encourage community support for the school (e.g., for teacher subsidies, facilities construction, maintenance) or for the schooling process (encouraging parents to ensure that their children do homework, send their daughters to school, etc.).
(iv) *Instructional Supervision.* The extent to which school-level administrators regard instructional supervision as part of their responsibility varies across countries. However, one common by-product of decentralization is an increased expectation that head teachers rather than inspectors will play this role. As will be discussed later, this shift toward head teachers taking more responsibility for instructional supervision has major implications for their selection and training.

With few exceptions, instructional supervision is the function least well served by the typical allocation of responsibilities across the administrative structure of the education ministry. Teacher supervision in most DMCs is the responsibility of officials operating from the provincial or (more often) district level. This removes it from the administrator most aware of a teacher's pedagogical skill (e.g., the head teacher) and assigns it to individuals removed from the school context, who visit the school only intermittently or not at all, and who often view their main role more as one of enforcing rules than of demonstrating to teachers how they could improve their teaching. For example, in the 1980s in the Philippines, district supervisors were commonly responsible for up to 600 teachers; some supervisors had no transportation to get to the schools; and some schools were not on transportation routes, making them largely inaccessible even when supervisors had vehicles (Philippines 1992, 88-9). In Nepal, district inspectors may have to walk for three days to reach remote schools, and it is not uncommon for such schools to go without supervisory visits for four years at a time. The experience of the Philippines in the 1980s and Nepal in the 1990s is typical of many countries in the region.

Table 5: Mongolia: Number of Primary and Secondary School Employees, 1992/93

Administrators and teachers	*Number*
Total	21,762
Principals	617
Vice principals	1,019
Teachers	19,441
Teachers/Psychologists	53
Chairs of departments	28
Department specialists	72
Heads, research/training methods centers	22
State inspectors	116
Assistants	22
Other employees – Subtotal (including accountants, physicians, librarians, managers, secretaries, office cleaners, janitors, cooks, locksmiths, etc.)	12,437
Overall	34,199

Source: ADB 1993b.

The supervision of teachers is complicated by the difficult conditions under which many teachers have to live and work. The Philippines Congressional Committee found that their teachers in the 1980s generally lived below the poverty line, had low aspirations, and were dissatisfied with their working conditions. The Congressional Committee estimated the average family monthly income of teachers at P3,205, which was well below the poverty line of P5,821 for Metro Manila and P3,864 in other regions. Moreover, salaries were not always paid on time. Under these conditions, it was difficult for head teachers and higher-level administrators to exercise much effective leadership or supervision of teachers. And administrators do not necessarily see it as within their own power to remedy the situation.

Head teachers' ability to meet these responsibilities is partly determined by the size and complexity of the schools they oversee. The head teacher/teacher ratio is one indicator of this. The ratio of school administrators to teachers varies considerably by country. For instance, in the Philippines the overall administrator/teacher ratio is estimated at 1:17, while in Mongolia, it is about 1:12 (Table 5).

Equally important, the administrator/teacher ratio within countries, e.g., the PRC, commonly differs widely by level of school (primary, secondary), type of school (government, community-run, private), and location (urban, rural) (Tables 6 and 7).

Summary

While there is considerable agreement on the indicators of effective education management, the majority of DMCs still suffer from weak management. This is most often because (i) lines of authority and responsibility for education management are confusing, and (ii) education managers do not have the knowledge or skills to do their jobs. Both problems must be solved if education management is to improve, and the solutions need to be synchronized.

Training is wasted if managers, once trained, do not have the authority, responsibility, or motivation to act. Structural reform is wasted if managers still do not know how to do their jobs. Some central-level interventions to improve school-level practice have been successful but, across the region, the movement is toward more decentralized management. Ironically, this movement to improve local management of education may only exacerbate the problem. Decentralization may shift more responsibility to the group of education administrators least prepared to handle it.

Table 6: PRC: Number of Teachers and Administrators in Primary Schools, 1997

	Total			*Urban*		
School run by	***Teachers***	***Administrators***	***T/A***	***Teachers***	***Administrators***	***T/A***
State Education Commission (SEdC)	3,983,522	397,702	1:10	639,104	78,353	1:8.2
Non-SEdC	327,980	34,621	1:9.5	190,156	20,974	1:9.1
Community	1,402,148	23,536	1:59.6	35,146	1,119	1:31.4
Private and other social sources	22,140	1,860	1:11.9	6,743	1,396	1:4.8
Overall total	5,735,790	457,719	1:11.9	871,149	101,842	1:8.6
Number of females	2,718,842	102,599				
Percentage of females	47%	22%				

Table 6: (cont'd)

	County seat and towns			*Rural*		
School run by	***Teachers***	***Administrators***	***T/A***	***Teachers***	***Administrators***	***T/A***
State Education Commission (SEdC))	875,705	80,723	1:10.8	2,468,71	238,626	1:10.3
Non-SEdC	51,331	5,400	1:9.5	86,493	8,247	1:10.5
Community	124,552	1,738	1:71.7	1,242,45	20,697	1:59.0
Private and other social sources	2,958	253	1:11.7	12,439	211	1:6.0
Overall total	1,054,546	88,114	1:12.0			

T/A = Teacher/Administrator ratio.

Note: Data do not include part-time or substitute teachers or workers in school-run factories.

Source: PRC, Department of Planning and Construction 1997.

Table 7: PRC: Number of Teachers and Administrators in General Secondary Schools, 1997

	Total				*Urban*			
School run by	***Junior secondary***	***Senior secondary***	***Adminis-trators***	***T/A***	***Junior secondary***	***Senior secondary***	***Adminis-trators***	***T/A***
State Education Commission (SEdC)	2,530,156	507,600	430,529	1:7.1	457,340	167,884	141,266	1:4.4
Non-SEdC	215,432	59,817	53,623	1:5.1	138,927	38,841	36,617	1:4.9
Community	134,793	614	5,288	1:25.6	3,065	22	262	1:12.0
Private and other social sources	12,307	4,040	4,083	1:4.0	6,604	2,831	2,863	1:3.3
Overall total	2,892,688	572,071	493,523	1:7.0	605,936	209,578	181,008	1:4.5
Number of females	1,107,288	173,032	120,573					

Table 7: (cont'd)

	County seat and towns				*Rural*			
School run by	***Junior secondary***	***Senior secondary***	***Adminis-trators***	***T/A***	***Junior secondary***	***Senior secondary***	***Adminis-trators***	***T/A***
State Education Commission (SEdC)	691,512	255,233	138,084	1:6.9	1,381,304	84,483	151,179	1:9.7
Non-SEdC	35,506	11,755	8,321	1:5.7	40,999	9,221	8,685	1:5.8
Community	17,319	291	1,043	1:16.9	114,409	301	3,983	1:28.8
Private and other social sources	3,005	969	805	1:4.9	2,698	240	415	1:7.1
Overall total	747,342	268,248	148,253	1:6.9	1,539,410	94,245	164,262	1:9.9

T/A = Teacher/Administrator ratio.

Note: Data do not include part-time or substitute teachers or workers in school-run factories.

Source: PRC, Department of Planning and Construction 1997.