

While both primary and postsecondary education have been given significant donor attention, the intervening link, secondary education, has been given less attention. This has resulted in a distorted profile of education in Lao PDR. If the strengths now being introduced at the primary level are to eventually benefit postsecondary education through an increased availability of better qualified students, there will need to be a more balanced development of the system with additional attention given to the middle years. One of the main goals for education development during the next five-year plan period is greater balance in its education system.

4.1 Status

The Government of the Lao PDR has made notable progress in expanding access to secondary education, raising the minimum qualifications for teaching at the secondary level, improving utilization of teachers by raising student/teacher ratios, and better controlling costs. The central task during the next five-year plan period is to continue and persevere in the course that has already been started.

While MOE has made significant headway in addressing the issues confronting secondary education, this level has not been the main priority within educational development in Lao PDR over the last decade. Rather, priority, quite appropriately has gone to development of the primary subsector and consolidation and strengthening of higher education.

The following analysis of secondary education yields no surprises. The actions needed to strengthen secondary education over the next decade are essentially the same actions identified in virtually every education study over the last 15 years. However, MOE can take pride in having raised the level at which those issues can now be addressed through its accomplishments during the current five-year plan. Yet major challenges still remain.

Secondary education is organized into a three-year lower secondary cycle followed by a three-year upper secondary cycle. Students who complete lower secondary can leave school and join the workforce, continue to upper secondary, or enter a three-year teacher training course which prepares them to teach at the primary and junior secondary levels. Students completing upper secondary can join the workforce, continue their education at NUOL, continue their university studies abroad, enter a one-year teacher training program which would prepare them to teach at the primary or lower secondary level, or enter a teacher training program that would prepare them to teach at the upper secondary level.

Few students achieve a full six years of secondary education. Approximately 62 of every 100 school-age children start first grade and, of those 62, about 31 will complete the primary cycle and continue into lower secondary. Three years later, 14 of these students will enter upper secondary school. About five will graduate. Fewer than two of every 100 children will go on to postsecondary education.

National Goals and Strategies

Among the goals established by Government in its five-year plan, Strategy for Educational Development by the Year 2000, and its subsequent amendments were to:

- extend and improve secondary school capacity;
- increase the participation rate to 40 percent in lower secondary and 17 percent in upper secondary schooling;
- raise the student/teacher ratio to 25:1 in secondary school;
- improve school access for ethnic minority groups;
- promote the creation of private schools (in particular, private vocational schools) and assure the quality of the management of those schools;
- raise teacher quality through preservice and in-service teacher education.

To accomplish these goals, MOE undertook a major review of educational policy during the early 1990s with the intention of updating and streamlining the operation of the education system. It subsequently issued policies that raised the minimum level of education required to be a secondary school teacher. MOE has also modified its teacher assignment procedures to raise the student/teacher ratio at the secondary level and it undertook a World Bank project to help improve educational quality at the primary and lower secondary levels through the development of curriculum, printing of textbooks and provision of in-service teacher training. MOE holds an annual convergence to assess its progress in meeting its five-year plan targets.

Organization Structure

Formal responsibility for secondary education is shared by the central MOE and the PESSs, with some duties allocated to DEBs and local communities, as described in Figure 4.1. The Party at the national, provincial and district levels also has a significant influence on the actual operation of the education system. Endorsement

Figure 4.1
Distribution of Responsibilities Across Levels of the Education System

Education Authority	Primary Responsibilities
Ministry of Education	<ul style="list-style-type: none"> • policy development • teacher training • curriculum development • textbook provision • development of secondary school leavers examination (grade 11 exam)
Provisional Education Service	<ul style="list-style-type: none"> • teacher assignment • distribution of teacher salaries • development of school inspection,
District Education Office	<ul style="list-style-type: none"> • preparation of transition examinations (grades 6-10)
Community	<ul style="list-style-type: none"> • school maintenance • subsidization of teachers • special contributions, as requested by Village Education Committee

of candidates for key positions at each level is an important factor in personnel selection and in selection of quota students. Educational planning and program implementation by MOE and PES operates in conjunction with input from the Party.

Programmatic Concerns

MOE officials are aware of the problems of their education system. They collect considerable data and participate in a continuing series of studies commissioned by the international organizations. The challenge is not in further elaborating the problems that confront the system (though that may still be useful) but in identifying solutions that are viable within the economic and political constraints under which the country operates.

Solving one problem often creates new ones. While government has done much to improve the education system through the formulation of policy, the urgent need now is to give greater attention to implementation of those policies on a national basis.

Students and Teachers

Secondary education is the fastest growing component of the education system. Between 1995/96 and 1996/97 new enrollment in primary school increased 3.8 percent while new enrollment in lower secondary increased by 15.5 percent and in upper secondary by 13.4 percent (see Table 4.1). Such rapid growth has put pressure on facilities, teacher supply, and the availability of instructional materials.

Table 4.1
Secondary Education: Number of Classes, Students, Teachers,
and Non-Teaching Staff

Level / Year	1993-94	1994-95	1995-96	1996-97
Lower Secondary				
Students	105,497	111,381	119,771	138,361
Private	996	788	1,361	2,049
Classes	3,084	3,277	3,596	3,816
Teachers	8,235	7,319	7,315	7,840
Private	68	48	70	193
Non-Teaching Staff	2,871	203	200	294
Students per Teacher	12.8	15.2	16.4	17.6
Students per Class	34.2	34.0	35.3	36.3
Upper Secondary				
Students	38,176	42,352	42,163	47,755
Private	—	—	—	—
Classes	955	1,113	1,196	1,174
Teachers	2,831	2,747	2,715	2,968
Private	—	—	—	—
Non-Teaching Staff	452	136	153	153
Students per Teacher	13.5	15.4	15.5	16.1
Students per Class	40.0	38.1	35.3	40.6

Source: Mingat, A. (1998a)

In response, MOE has made considerable progress in raising the student/teacher ratio at lower secondary from 13:1 in 1993/94 to about 18:1 and was able to reduce non-instructional staff from 2,871 to 294. This allowed MOE to absorb the additional students without an increase in number of teachers. The number of teachers at lower secondary dropped from 8,235 (1993/94) to 7,840 (1996/97). However, this saving will soon be overtaken by the continued rapid enrollment growth at this level unless action is taken to limit the intake of new students.

During this time, enrollment in upper secondary schools grew by 25 percent (increasing from 38,176 in 1993 to 47,755 in 1996/97), while the teaching force grew by 5 percent. The number of students per teacher increased modestly from an average of 14:1 to 16:1. However, class size remained about the same at 40 students per class.

MOE has recently increased the qualification needed to teach at primary and lower secondary levels. Under the new requirements, those teaching in grades 1- 8 must have completed lower secondary plus three years of teacher training (8+3 option) or upper secondary plus one year of teacher training (11+1 option). To teach at the lower secondary level, teachers must, at minimum, complete 11 years of schooling with at least three years of teacher training (8+3 or 8+4 option).

The need to improve the internal efficiency of secondary education through better recruitment, deployment and utilization of teachers has been identified by virtually every study of the Lao education system in the last 15 years.

Teacher recruitment poses the biggest problem over the next five years. There has been a sharp fall in the number of graduates from TTCs and intake to secondary school teaching has been dropping. For example, in 1998 only 20 students entered upper secondary teacher training. Moreover, more than half of those who complete teacher training do not enter teaching. Even if all of them were to enter teaching and MOE continued to raise student/teacher ratios, the production of teachers would not keep up with projected demand.

In the last four years, MOE has made dramatic progress toward better teacher utilization at the lower secondary level where the student/teacher ratio has risen from 16:1 in 1995/96 to 23:1 in 1997/98. During this same period, however, the student/teacher ratio in upper secondary has declined, dropping from 15:1 in 1995/96 to 11:1 in 1997/98. This poor utilization, in combination with a dramatic drop in the number of students entering upper secondary teacher training, signals an upcoming crisis in staffing secondary schools.

While it is imperative that upper secondary teachers already in the system be better deployed, this is not easily done. Current teachers have roots in their community. They have second jobs, often own land, and are often bound by the employment of their spouse.

Government-mandated, large-scale teacher redeployment probably can not alleviate the problem. A second way to improve deployment is through the initial assignment of new teachers. However, most graduates from teacher training who actually go into teaching attended training under the quota system and are obligated to return to their own province upon completion of that training. To redirect the deployment of some of these teachers to higher need areas of the country would require MOE to develop a system for releasing quota students from obligations to their own province and to create a sufficient incentive for these graduates to not return to their home areas.

In addition to better recruitment of new teachers, there is an urgent need to upgrade the content knowledge and pedagogical skills of teachers already in the system. Secondary teachers have been teaching an average of nine years. This means their own training occurred at a time when secondary preparation was even weaker than it is now. Even though most secondary teachers meet minimum qualifications, the quality of the instruction they provide is generally low. This reflects a combination of inadequate preparation, lack of textbooks and instructional materials, and lack of meaningful in-service opportunities to update and refresh their content knowledge.

Efforts of the ADB-supported Educational Quality Improvement Project and the World Bank/Swiss-supported EDP to remedy this situation are not yet evident at the school or classroom level. School visits found that many students did not have the new textbooks and that teachers seldom had the new curriculum or teacher guides. In the one school visited where textbooks were available, they were in storage and were not being used. The reason offered was that teachers were not sure how to teach the new material despite having attended the in-service training. Another possibility is that teachers did not have the content expertise to teach the material or respond to student questions. Upgrading of content knowledge, however, was not provided in the in-service training which covered pedagogical issues. In short, the in-service training provided to some lower secondary teachers as part of the Educational Quality Improvement Project was too limited and of too low a quality to be of meaningful support to the teachers. As a result, the effort under both the Educational Quality Improvement Project and the EDP to improve curriculum, textbooks, and teacher preparation does not seem to have permeated the classroom level outside the capital area.

Curriculum, Textbooks, and Instructional Materials

With funding provided under the EDP, NRIES developed a new integrated curriculum which reduced the 12 subjects forming the old curriculum at the lower secondary level into an integrated curriculum of seven subjects. Figure 4.2 presents the old and new lower secondary curricula. To date, no new curricula or instructional materials have been developed for upper secondary.

Textbooks are prepared by NRIES. Government policy is that every student have a textbook for every subject. MOE offices hold sharply different views as to the actual availability of textbooks in the schools. The NRIES reports that enough textbooks were published as part of the EDP so that virtually all students in primary and lower secondary grades should have about nine textbooks each. Data collected by the Statistics Department as part of the annual school survey indicates that there is an inadequate supply of textbooks in the schools outside of the urban areas surrounding Vientiane. There is some concern within MOE that textbook availability results could be due to reporting errors in the annual school survey. However, to disregard these data for fear of error would call into question the validity of the entire annual school survey. Moreover, even substantial amounts of error in these data would not offset the policy implications of the findings.

These MOE data indicating the lack of textbooks are confirmed in two other ways: school visits by international assistance organizations indicate that many

Figure 4.2
Outline for Old and New Curriculum for Lower Secondary School

Lower Secondary Old curriculum	Lower Secondary New Integrated Curriculum	Upper Secondary Current curriculum
History Geography Civics Education	Social Science (3 hours per week)	History Geography Civics Education
Chemistry Physics Biology	Science (grade 6 – 3 hours per week) (grade 7 – 5 hours per week) (grade 8 – 7 hours per week)	Chemistry Physics Biology
Lao Language	Lao Language (4 hours per week)	Lao Language
Foreign Language	Foreign Language (2-3 hours per week)	
Mathematics	Mathematics (6 hours per week)	Mathematics
Technology	Technology (2 hours per week)	Technology
Physical Education Art	Physical Education & Art (2 hours per week for both combined)	Physical Education

Source: Compiled from information provided by the MOE.

teachers do not have copies of the curriculum and, in many districts, students do not have textbooks; and, school visits conducted as part of this study also found a virtual absence of textbooks and curriculum in the hands of teachers and students. Textbooks for upper secondary were not provided under the EDP and are not widely available in the schools. Such wide discrepancies suggest the need for a field study to verify the actual availability of textbooks in the school. This is extremely important because if sufficient textbooks are not available, the implementation of the new curriculum is in serious jeopardy. Perhaps more importantly, the lack of textbooks in the schools challenges the design of large-scale textbook distribution projects as a way to improve the quality of classroom instruction. There is little evidence that the textbook component of the EDP has led to improved instruction.

Teacher orientation in the use of the new curriculum was undertaken through a three-tier cascade program which trained 80 trainers in Vientiane. These 80 trainers then conducted training sessions in each province for teachers from each district who, in turn, trained other teachers in their district. Each training program lasted 10 days and was intended to introduce participants to the new curriculum in all seven areas. Consequently, only about a day was spent on each subject area; not enough time to provide meaningful teacher upgrading in subject content. MOE officials recognize that the short time devoted to each subject and the weakness in

the content knowledge of many teachers resulted in the training being of limited usefulness. Moreover, the textbooks and instructional materials to support the new curriculum are not widely available in the schools. MOE officials also point out that not all teachers attended the orientation sessions in 1996/97 and that new teachers coming into lower secondary do not have an opportunity to attend any orientation.

While the curriculum indicates the amount of time that should be devoted to each subject each week and MOE advises schools of how many lessons need to be covered each semester, decisions about how to organize the weekly teaching schedule rests with the school principal and teachers involved. In practice, few teachers and principals have the new curriculum, so the allocation of class time is determined on other bases. To support implementation of the new curriculum, the EDP provided for the recruitment and training of pedagogical advisers, master teachers who would go to each school to assist and support teachers in their use of the new curriculum. About three pedagogical advisers were appointed for each district. However, given the number of schools, the difficulty of travel, and the lack of funds to support travel, pedagogical advisers in some districts may only get to a school once a year. This is insufficient to provide meaningful support to teachers during their implementation of the new curriculum.

MOE officials recognize the importance of ensuring that teachers in the NUOL Faculty of Education and the TTCs learn the official curriculum and work with the textbooks and materials they will eventually be expected to teach. However, teacher training officials point out that the lower secondary curriculum and the teacher training curriculum are both under revision and that keeping them coordinated is not always possible. At present, copies of the new curriculum and instructional materials for lower secondary are not readily available to students in TTCs. For example, in the TTC serving Vientiane Municipality only five copies of the new lower secondary materials in each subject area were available to be shared among TTC instructors and teacher trainees. Teacher trainees did not graduate from the TTC with their own copies of the curriculum or textbooks for their specialization.

TTC officials also expressed concern that TTC faculty were having difficulty teaching the new lower secondary integrated curriculum because they, themselves, had been trained in separate subject specializations and did not have adequate content background to handle the integrated nature of the materials. For example, the new English textbook discusses how to conduct a science experiment. TTC English instructors did not necessarily have the background in science to answer questions about the reading.

The language of instruction throughout secondary school is Lao. While Lao is the secondary language of about half the population of Lao PDR, MOE officials suggest that by the time students have reached secondary school, they will have attained sufficient proficiency in Lao so that language is no longer an impediment to learning. However, no special second language teaching techniques are employed in primary school. The low achievement of students in areas in which Lao is predominantly a second language suggests that language problems may persist into the secondary level. One way to improve student achievement would be to introduce second language teaching techniques to help students improve their Lao language abilities. Some efforts in this direction are now underway at NRIES.

Evaluation

a) Monitoring and School Inspection

Responsibility for assuring the quality of instruction and school operations at the secondary level rests with the PES, which has two or three inspectors who are responsible for ensuring school compliance with MOE regulations. However, schools seldom receive an inspection visit since funds for inspectors' transportation and expenses are limited and inspectors do not have time to visit all schools. For example, in Vientiane Province, the PES inspectors try to visit each district at least once a year. Within the district they visit only selected schools, based on recommendations from the district education staff. Schools not perceived to have a problem can remain unvisited for several years. DEBs also have school inspectors. However, the districts visited during this study had only one motorbike for 30-35 district staff, so visits to schools were necessarily limited.

One consequence is a de facto decentralization of school management. Responsibility for school operations is largely left to the principal. This can work well when the school principal has strong skills in instructional supervision, staff development, leadership, and community-school relations. Where principals lack these skills, such decentralization can lead to low quality schools. At present, there is no preservice principal training program.

Pedagogical advisers are not responsible for monitoring compliance but try to support teachers in their use of the new curriculum. However, there are only about three pedagogical advisers in each province who work with junior secondary schools and their work is limited by constraints on transportation and budget. Their work is widely reported to be helpful to teachers and schools, but the large number of schools in some districts means pedagogical advisers are not always able to get to schools very frequently.

b) Assessment of Student Learning

Student grade progression is based on student performance on transition examinations given in five subject areas (five examinations) at the end of each school year. Examinations for grades 6-10 are developed by each district (with some assistance from their PES). Each district convenes a teacher panel that writes and selects items for the test. The rationale for decentralizing the test development is that districts can adjust the test to local conditions. For example, if schools in a district are unable to cover the full curriculum, they can focus the test on the materials that were actually covered. Tests are administered and scored at the school level. Scoring is supposed to be completed by a teacher panel, but in some areas the responsibility reverts to individual teachers.

One implication of this decentralized test development procedure is that examination results are not comparable across districts or provinces. Moreover, analysis of variability in test results reported by Mingat (1998) indicates there is often more variability in test performance across districts within a province than there is across provinces. At present, it is impossible to tell whether differences in test scores between provinces are due to the amount students have learned or to differences in the construction of the tests.

At grade 11, all students take a national examination prepared by MOE, administered by the provincial education departments and scored at the provincial level by a panel composed of a representative from MOE, representatives from the PES, and teachers from schools in the province. Results are reported in Table 4.2. The high failure rate on the annual examinations suggests: the examination is not well aligned with what teachers are actually teaching; the quality of instruction is low and students have not learned the material being taught; or, the examination itself has low reliability; or some combination of these factors.

Table 4.2
Number and Percent of Students Graduating from
Upper Secondary in 1996-97, by Sex and Province

Province	Candidates		Graduates		% of Candidates Graduating	
	Total	Female	Total	Female	Total	Female
Vientiane Municipality	4307	2040	4092	1972	95	97
Phongsaly	92	34	92	34	100	100
LuangNamtha	134	41	110	36	82	88
Oudomxay	128	36	118	35	92	97
Bokeo	111	32	86	26	78	81
Luangprabang	534	230	482	212	90	92
Houaphan	214	98	205	94	96	96
Sayaboury	719	213	660	203	92	95
Xiang Khouang	135	25	113	23	84	92
Vientiane Province	1560	552	1317	546	84	99
Bolikhamxay	522	198	432	171	83	86
Khammouane	530	200	495	191	93	96
Savannakhet	1736	613	1503	586	87	96
Saravan	237	65	203	59	86	91
Sekong	42	17	34	15	81	88
Champassack	1486	531	1421	512	95	96
Attapeu	123	35	86	24	70	67
Special Region	75	5	65	5	87	100
Total	12,685	4,965	11,514	4,744	91	95

Source: MOE (1997). Annual Bulletin, 1996/97.

Data drawn from end-of-year reports of PESs.

Costs, Financing and Donor Support

Teacher salaries are modest. A lower secondary teacher with an 8+3 education receives approximately US\$10 per month at current exchange rates. Salaries are also relatively flat across levels of the education system. That is, in 1998 secondary school teachers with 11 years of general education and three years of teacher training earn only about 15 percent more than primary school teachers with eight years of general education and three years of teacher training.

While low compensation has long been recognized as a reason for the difficulty in recruiting new teachers, the situation has grown more serious in the last year due to the high inflation. For example, between May and October 1998 (six months) inflation was about 100 percent. Government is severely limited in its ability to raise salaries to offset this loss, in part because raising teacher salaries would necessitate raising all civil service salaries. To recruit and retain a qualified teaching force, it will be necessary to provide teachers with a more attractive level of compensation. As discussed later, this should not be done as an across-the-board increase in compensation, but should be linked to quality improvement efforts.

Teachers are paid in cash. Each month, MOF transfers cash for salary payments to the PES offices across the country. The PES, in turn, transfers salary funds to each DEB. School principals come to the district headquarters to pick up salaries for their school personnel and distribute those funds upon return to their schools. Over the last year, there have been serious delays in issuing teacher payments. From July to September 1998, many teachers went unpaid for about three months. Such delays undercut teacher motivation and force teachers to pursue other income activities when they should be teaching.

For families, secondary education in Lao PDR is expensive. Interview data suggest that the cost per child can be US\$13-14 dollars per year (Table 4.3). A family with three children in school might spend as much as US\$35-40 per year, in a country in which the per capita income is only about US\$360.

Table 4.3
Estimated Cost to Family for Child to Attend School

Type of Cost	Estimated Amount
Fee assessed for each family for school construction and maintenance for first child; typically half of this amount for each subsequent child in school. Amount set by parent association.	10,000 kip
Purchase of paper for end-of-year exam	1,000 kip
Uniforms, pins that identify name and number of school (for a boy; less expensive for a girl).	30,000 kip
School supplies, e.g., paper, pencils. (Estimate is for primary. Higher for lower and upper secondary.)	15,000 kip
Total	56,000 kip

Source: Constructed from interview data from school visits.

Schools are financed through a combination of the following means: central government funds from national tax revenue; provincial funds generated through additional provincial taxes; and, community support, mostly for school construction and maintenance. Central and provincial government funds are received by the schools in the form of teacher salaries, textbooks (when provided), and overall infrastructure. Schools receive a small allocation of cash to cover instructional supplies and operating expenses, based on the number of teachers in the school. In

Vientiane Province, the annual cash allocation is about 3,000 kip (US\$0.60) per teacher per year.

Most international assistance has been to strengthen primary education and support the consolidation and growth of NUOL. Limited international assistance has been directed to vocational schooling and preservice teacher training. Secondary education has received little external support.

Private Education

Private education is sometimes suggested as a means of alleviating financial and enrollment pressures on the public system. While private education options in Lao PDR are concentrated at the preschool and primary levels, there is a small but growing opportunity for both general academic and vocational private education at the lower secondary level (Table 4.4). Between 1992/93 and 1997/98, enrollment in private general lower secondary education increased by over 300 percent, from 601 to 1,957 students. Two private vocational training schools started operation in 1996/97 and now enroll over 2,000 students. Private schools offering general lower secondary education must follow the national curriculum, though they can add additional subjects to their curriculum.

Table 4.4
Enrollment in Private Education, by Level, Selected Years, 1992/93 to 1996/97

Level	1992/93			1996/97			1997/98		
	No. of schools	No. of teachers	No. of students	No. of schools	No. of teachers	No. of students	No. of schools	No. of teachers	No. of students
Pre-primary									
Crèche	39	145	3232	52	320	5825	64	335	6410
Kindergarten	29	269	8816	66	561	18845	56	467	18086
Lower Secondary	6	31	601	17	115	1883	21	68	1957
Vocational (Nonformal)	10	83	2695	24	72	5704	35	82	8154
Vocational (in school)	—	—	—	2	43	2509	2	60	2016
Total	84	528	15,344	161	1,111	34,766	178	1,012	36,623

Source: MOE (1998f).

Private education options are unlikely to provide any meaningful relief to the pressures on the formal education system any time soon. Private education is presently limited to urban centers; private schools at secondary level operate in only 5 of 18 provinces. The population density and lack of family wealth in rural areas make it unlikely that private education can operate at a profit outside of just a few urban areas.

4.2 Analysis

The following analysis addresses five considerations: internal efficiency, external efficiency, access and equity, administration and management, and cost and financing.

Internal Efficiency

MOE has improved the internal efficiency of secondary education over the last five years by raising teacher qualifications (which presumably raises quality of instruction) and increasing teacher/student ratio at the lower secondary level. However much remains to be done and improving internal efficiency remains a central challenge over the next five years. The following seven issues merit special attention:

- a) student flow through secondary education;
- b) quality and availability of curriculum and instructional materials;
- c) low quality of instruction;
- d) amount of direct instructional time;
- e) utilization of teacher time;
- f) teacher deployment;
- g) language of instruction.

a) Student Flow

A serious source of inefficiency is signaled by the high level of grade repetition and dropout throughout secondary school. Only about 44 of each 100 children who start lower secondary school will enter upper secondary school three years later (Table 4.5). Of those, only about 23 will complete grade 11, three years later. About 21 will pass the examination and graduate from secondary school. This dropout rate is high and represents a major inefficiency within the education system.

Table 4.5
Student Progression Rates for Grades 1-11 (including examination pass rates)

Grade:	1	2	3	4	5	6	7	8	9	10	11	Grad
Progression Rate (%)	100	86	78	87	85	80	94	61	77	72	72	91%
Cohort of 100	100	86	67	58	50	39	37	23	18	13	9	6
Cohort of 100						100	94	57	44	32	23	21

Source: Data for primary school progression rates is from Mingat, A. (1998a) and are based on a cross-sectional analysis. Data from lower and upper secondary progression rates was computed using from data drawn from Annual Bulletins for 1993/94 through 1997/97 provided by the Statistics Department, MOE, Lao PDR and was computed as a longitudinal analysis. This represents an improvement on the earlier Mingat (1998a) analysis of secondary level progression rates.

Two reasons are most often offered by Lao educators for the high dropout. First, the school schedule is poorly aligned with the agricultural cycle. Crops have to be planted before school closes for the summer and harvest occurs after school reopens in the fall. Children often have to assist in these events and miss substantial instructional time which, in turn, results in high failure on the end-of-year transition tests. Since many teachers also farm, they too are affected by the demands of the agricultural schedule and miss class during these periods, reducing the instructional time for all students. Changing the school calendar has been discussed by MOE officials but a satisfactory change has not been agreed upon. Some educators suggest that teachers tend to resist changing the school calendar because those that farm would then be working on their farm during their school vacation and lose their vacation time. Second, the high dropout at the end of lower secondary is often due to lack of access to an upper secondary school. Many students who finish lower secondary school are not close enough to walk or bicycle to an upper secondary school, none of which have boarding facilities (with the exception of one school for ethnic minorities).

Two other factors contribute to the high dropout: the widespread scarcity of textbooks and teacher guides, and inadequate teacher knowledge of content, resulting in low-quality instruction. Students who receive low-quality instruction tend to have trouble passing their school examinations, get discouraged, and are more likely (than other students) to drop out.

Of even greater concern, however, are the questionable validity and reliability of the transition tests used to determine student progression. These transition tests are not well aligned with either the old or new curriculum and they differ in difficulty and content coverage from one district to the next. They represent little more than guessing about individual students' knowledge or ability. While they give the appearance of objectivity and impartiality, they are designed, administered and scored in a way that yields questionable decisions about individual students. These test scores are an inadequate and inappropriate basis for determining students' futures. As long as teachers do not operate from a common curriculum and students lack sufficient textbooks, it will be difficult to improve the testing procedures. There is no common basis of content being covered by all students. While continuous assessment (as opposed to end-of-year tests) offers a strategy for improving the evaluation of student knowledge and performance, continuous assessment systems only work well when teachers have substantial content knowledge and pedagogical skill. Continuous assessment is unlikely to work in Lao PDR at the present time.

b) Curriculum, Textbooks and Instructional Materials

International research suggests that textbooks may be the single most important input to student learning. Textbooks select, organize, sequence, and pace instruction. Good texts can help offset low teacher qualification by providing

content in ways that can support teachers' classroom instruction. They allow students to review, practice and learn when teachers are not available.

Previous estimates of textbook availability at the secondary level in Lao PDR have generally been based on the number of textbooks printed and appear to overestimate the actual availability of textbooks in the schools. Despite the printing of textbooks, MOE data for 1996/97 suggests that few teachers or students outside of the Vientiane area have textbooks. The lack of textbooks in the schools, despite a major project aimed at their provision, raises an important issue in the design of future projects to assist the education system. If those materials are not widely available in the schools, the reasons for such limited success need to be identified and corrected or other more effective strategies for improving instruction need to be found.

There are four additional issues concerning the curriculum and textbooks which seriously constrain internal efficiency at the secondary level:

1. Effectiveness: It is not clear that the new materials are effective. Curriculum development of the lower secondary materials began in 1992. The original plan called for a one-year pilot testing and revision cycle for each textbook and teachers' guide before moving to national distribution. However, when the project fell behind schedule, MOE moved directly to national distribution, bypassing the pilot and revision phases. To date, no evaluation has been conducted to assess the level of implementation of the new curriculum, students' ability to use the new materials, or problems teachers may be having in teaching the new integrated curriculum.
2. Life-span: Lack of capacity within government to publish the volume of curricular materials produced by the project resulted in contracts being tendered to private printing presses within Lao PDR. The eventual publications were of low quality and are expected to have a short life-span.
3. Instructional Aids: While some of the supplemental instructional aids envisioned as part of the curriculum project have been designed (flash cards, charts, etc.), they have not yet been mass produced or distributed for use in the schools.
4. Timeliness: Those involved in MOE curriculum development process express concern that instructional materials selected in 1992 may already be out of date, given the remarkable progress and development the nation has experienced since the early 1990s.

c) Quality of Instruction

While the recent upgrading of minimum requirements for teachers was a positive move, there is evidence that quality of instruction continues to be

low. This is indicated by high grade repetition rates, lack of textbooks, teachers' guides, and instructional materials in the schools, and weak content knowledge evidenced by teachers during in-service workshops and during school visits.

International research and experience identify two strategies as most important in raising instructional quality: teachers and students must have strong instructional materials; and, teachers must have a strong mastery of the content they are teaching. MOE already recognizes the importance of these inputs: providing textbooks, teachers' guides, and teacher training were a major component of the EDP. However, there is little evidence yet that the textbook or teacher training components of the EDP has led to improved instruction or more learning. The benefits of these projects did not reach the classroom or students in a way that resulted in a change in instructional practice or increased learning.

d) Amount of Direct Instructional Time

The amount of time a student receives instruction is one of the most important factors in how much a student learns. MOE policy is for students to receive 30 hours per week of instruction. Anecdotal evidence indicates wide variation in actual instructional time, with many students receiving far less. This is largely due to the demands for children to assist their family farm and for teachers to farm to supplement their income.

Education officials at all levels of the system understand and appreciate the need for children and teachers to farm, even when this reduces instructional time. It is an economic necessity. However, the variable instructional time is an important factor in the low internal efficiency of the system.

e) Utilization of Teacher Time

Many teachers in Lao secondary schools do not teach a full teaching load. Lower secondary teachers are teaching an average of 14.6 hours a week instead of the expected 20; upper secondary teachers are teaching an average of only 11.9 hours a week instead of the expected 18 (Mingat, 1998a). As Mingat points out, this finding suggests that 27 percent (at lower secondary) and 34 percent (at upper secondary) of teacher resources are wasted. In budgetary terms, in 1996/97, this amounted to 1.38 billion kip at lower secondary and 726 million kip at upper secondary.

One reason for inefficient use of teacher time is that, at the secondary level, teachers specialize by subject area. Teachers are under-utilized when there are not enough classes needing instruction in their subject area, as often happens in smaller schools. One solution, suggested in the World Bank (1997a) study, is to increase school size, thereby increasing the number of classes in each subject area. Secondary schools tend to be small, 75 percent of lower

secondary schools have fewer than 200 students and 60 percent of upper secondary schools have fewer than 300 pupils (Mingat, 1998a). Another solution is to prepare teachers who can teach more than one subject. Both strategies have limitations.

Increasing school size works best in urban areas where there is a sufficient student population from which to draw. In rural areas that option is less feasible. School size is limited by the student population within walking or bicycling distance from the school. Cross-training teachers in more than one subject is more cost-effective in rural areas but requires a considerable investment in training which, to this point, MOE has not been able to make. Both options, to work, require that teachers teach a full schedule of classes. That raises a further consideration: low teacher utilization is sometimes a function of school size. Smaller schools do not have enough sections of a subject for a teacher to teach a full load and teachers may not have the content expertise to teach other subjects. Consequently, the allocation of teacher time can often be more efficiently managed in larger schools. Within the 1996/97 Lao school data, this does not seem to be the case (Table 4.6). Even in large schools, teacher utilization is poor. Mingat's (1998a) analysis indicates that there is an over-allocation of teachers, even in large schools. This suggests the need to look farther for a satisfactory explanation for the low teaching loads.

Table 4.6
Secondary School: Utilization of Teacher Time by Size of School (1996/97)

Lower Secondary				Upper Secondary			
School size (students)	Students/class	Students/teacher	Rate of use of teacher time	School size (students)	Students/class	Students/teacher	Rate of use of teacher time
less than 50	11.8	5.7	0.72	Less than 100	21.3	6.8	0.53
50-80	21.6	9.3	0.65	100-200	34.5	11.7	0.57
80-120	30.3	13.1	0.65	200-300	35.5	12.5	0.59
120-160	3.4	15.0	0.67	300-500	40.6	18.8	0.77
160-240	35.8	17.8	0.74	> 500	43.0	19.5	0.76
240-400	38.0	19.7	0.77				
> 400	45.0	24.6	0.80				

Source: Mingat, A. (1998a).

Another reason for low teaching loads appears to be teachers' need for time to pursue outside employment. As long as teacher compensation is low and salary payments are delayed, it will be difficult to enforce any policy that reduces a teacher's time for outside employment. On the other hand, merely raising salaries or allowances will not automatically result in teachers giving up their outside employment. Rather, increases in salary or allowances need to be directly tied to increased teaching loads and, perhaps, to preparation as multi-subject teachers.

Despite the challenges, improving teacher utilization can be a cost-effective way to improve internal efficiency because it concentrates on teachers who are already in the schools; thus, the costs of teacher recruitment, preparation, and deployment have already been paid. Nonetheless, merely formulating policy requiring teachers to teach more hours a week is unlikely to change their behavior. Implementing either of these recommendations (school consolidation or multi-subject teaching) will require changing the informal norms that have developed among teachers who are not now working a full schedule.

In addition to improving utilization of teacher time, there is evidence that student achievement tends to be higher in larger schools (Mingat, 1996). This is, in part, because larger schools are located in more urbanized centers in which students tend to benefit from a wider set of advantages. Nonetheless, larger schools often are able to gain economies of scale that allow them to provide better library and laboratory facilities. They also can provide teachers with greater peer support. And, larger schools have a lower unit cost, as evidenced in Table 4.7. The cost per student in an upper secondary school of 30 students is over five times greater than in a school of 600 students.

Table 4.7
Unit Cost as a Function of School Size (in kip)

Number of students in school	30	50	80	100	200	400	600
Lower Secondary	127,775	85,617	61,903	54,618	38,189	30,285	27,650
Upper Secondary	220,319	145,387	103,238	89,189	61,089	47,040	42,356

Source: Mingat, A. (1998a).

The World Bank (1997a) already has recommended that, where access considerations permit, small schools should be consolidated. Few would disagree with this recommendation but given the access considerations outside of the Vientiane area, it is of limited usefulness. If access to secondary education is to be extended, it will require additional schools to be constructed in areas where population densities are too low to support large facilities. While these small schools can be expected to have higher unit costs, that should not be confused with inefficiency. Efficiency pairs the notion of low cost and goal attainment. Higher costs may contribute to an efficient system if they are offset by important gains in access.

The data needed to identify possible school consolidation opportunities are already available in MOE (in conjunction with population density data from the national census bureau). An analysis of consolidation opportunities could estimate the improved teacher utilization that might be achieved through consolidation. These results would help determine if consolidation can meaningfully improve teacher utilization or whether cross-training of teachers in several subject areas should still be pursued.

f) Teacher Deployment

MOE data suggest that even in large schools, some staff are underutilized (World Bank, 1997a). The World Bank has recommended that where large schools are overstaffed, teachers should be redeployed to understaffed facilities. Mandating relocation might result in a substantial loss of teachers at a time of a projected teacher shortage. Moreover, new enrollment to lower and upper secondary continues to be high, and the growth in enrollments (and resulting teacher shortage) may overtake the need to redeploy teachers,

If some level of redeployment is desirable, one strategy is to offer a one-time bonus of two years' salary to any currently employed and qualified teacher in an overstaffed school willing to relocate to an understaffed school in a different district or province. This bonus would be paid over five years to ensure that teachers remain in their new location. While a careful study would be needed to estimate the current need for redeployment and the costs and feasibility of such a bonus scheme, it may be possible to achieve a useful level of redeployment for well under a half million dollars US. While representing a seemingly large one-time cost, the use of the bonus is substantially less expensive (and results are much faster) than trying to remedy the imbalances through increased preservice training. This strategy may not totally correct the current misallocation of teachers, but might represent a meaningful start toward that end in a relatively short period of time.

g) Language of Instruction

While the exclusive use of Lao language in instruction may help build national identity, it can constrain the achievement of students for whom Lao is a second language. The assumption of MOE officials is that the exclusive use of Lao as the language of instruction poses little or no problem for Lao-as-a-second-language students by the time they enroll in secondary school. This assumption can be tested by comparing examination scores of Lao as first language and non-first language students. Until such a study is completed, it is appropriate to assume that students learning in their second language work at a handicap.

It is unlikely that the Government will change national language policy. Alternatively, MOE should give serious consideration to introducing second language teaching techniques to support students who may still have limited proficiency in Lao.

External Efficiency

Three factors are of concern in the analysis of secondary education in Lao PDR. First, the high dropout rates during secondary education mean that many children will not have the benefit of a secondary education as they seek employment. Most school graduates follow their parents into agriculture. As farmers, they benefit from

attaining literacy and numeracy, but have limited opportunity to use additional education. However, to the extent that Lao PDR is developing international industry and commerce, it will need a better-trained labor force. Students who drop out before completing their education generally lack the skills necessary to find employment in the modern sector.

Second, the low quality of graduates' academic preparation puts many secondary school graduates at a distinct disadvantage in competition for jobs. MOE recognizes that the national investment in education is wasted if graduates do not have the skills necessary for employment or continued education. To date, no tracer studies have been conducted to determine graduates' ability to find employment, employers' assessment of graduates' performance, or graduates' own assessment of their educational experience. Such studies can play a useful role in curriculum development and job advisement. However, current evidence suggests that the quality of instruction is low and graduates are poorly prepared for postsecondary opportunities. Employers in modern sector businesses and industry and instructors at NUOL complain about the academic preparation of secondary school graduates. This puts Lao PDR at a disadvantage in regional competition for new business and industry.

Third, the exclusive use of Lao language and the weak preparation in foreign languages limits school graduates' options in the regional labor market as they lack fluency in international languages widely used in international business and commerce. This has two results: secondary graduates who are not fluent in a major international language have not been exposed to as wide a range of information on career opportunities as students in other countries; and, graduates are limited in their ability to secure employment in international business and industries.

Access and Equity

While females outnumber males in preschool, males outnumber females in all subsequent grade levels. Nationally, female enrollment at lower secondary has remained at about 40 percent over the last five years. At upper secondary, female enrollment declined slightly between 1993/94 and 1996/97, from 39.6 percent to 38 percent. However, these aggregate statistics mask notable differences across provinces in both initial female enrollment and in grade-to-grade progression rates. For example, in Vientiane Municipality girls and boys in lower secondary progress at about the same rates; in Sekong, girls progress at only about half the rate of boys.

Discrepancies across provinces seem to be more pronounced than differences between gender. This is illustrated in Table 4.8, which reports the number of students sitting for and passing the examination at the end of the lower secondary cycle by province and gender. The percent of girls passing the examination ranges from less than 10 percent in the Special Region to 58 percent in Phongsaly Province. However, in all but three provinces females outperform males.

Minority access to secondary education is more problematic. School enrollment is not reported by ethnic minority. However, there are dramatic disparities in literacy across ethnic groups (see section 6) which might limit the number of ethnic minority students in school. Better information about the participation and progress of ethnic minority children may be developed through the Basic Education (Girls') Project now being implemented by MOE with support from ADB and AusAID.

Table 4.8
Lower Secondary: Number and Percent of Students Graduating
from Lower Secondary in 1996/97, by Sex and Province

Province	Candidates		Graduates		% of Female Candidates	% of Female Graduating
	Total	Female	Total	Female	Total	Female
Vientiane Municipality	8,195	3,850	7,727	3,689	46.9%	47.7%
Phongsaly	498	246	329	191	49.3%	58.0%
LuangNamtha	566	216	512	195	38.1%	38.1%
Oudomxay	563	202	498	188	35.9%	37.8%
Bokeo	679	268	546	218	39.4%	39.9%
Luangprabang	2,064	822	1,658	696	39.8%	42.0%
Houaphan	1,057	486	669	385	46.0%	57.5%
Sayaboury	2,063	710	1,930	694	34.4%	36.0%
Xiang Khouang	1,454	534	979	373	36.7%	38.1%
Vientiane Province	3,706	1,435	3,121	1,235	38.7%	40.0%
Bolikhamsay	1,182	438	797	316	37.1%	39.6%
Khammouane	1,349	503	1,197	465	37.3%	38.8%
Savannakhet	3,714	1,566	2,777	1,238	42.2%	44.6%
Saravan	606	217	458	171	35.8%	37.3%
Sekong	129	57	80	30	44.2%	37.5%
Champassack	3,950	1,370	3,405	1,199	34.7%	35.2%
Attapeu	298	75	224	66	25.1%	29.5%
Special Region	257	47	215	21	18.3%	9.8%
Total	32,330	13,042	27,122	11,370	40.3%	41.9%

Source: MOE (1997). Annual Bulletin, 1996/97.

Data drawn from end-of-year reports of PESs.

Administration and Management

In many respects, the Lao education system is quite decentralized. Teacher recruitment and assignment, annual testing (below grade 11), school inspection, and school maintenance all operate below the level of the central MOE. Schools receive relatively few visits from district, provincial, or central MOE personnel. One implication of such a decentralized environment is that the quality of the leadership and management provided by the school principal takes on particular significance.

School principals are appointed by the Department of General Education of MOE based on recommendations by the provincial education director. Selection is based on a combination of teacher seniority, stature with other teachers, stature within the community, and standing within the Party. Usually the selection of principal is from among the teachers already in the school, though in some cases principals are brought in from other locations. Some short training courses are offered for new principals, usually at the provincial level. However, these are generally aimed at ensuring that principals are aware of government regulations; little atten-

tion is given to leadership development or instructional supervision. This is of particular concern at lower secondary, since many teachers are struggling in their efforts to implement the new integrated curriculum.

While the central government provides for teacher training, pays teacher salaries, provides some textbooks and undertakes some school construction, its financial contribution to and administrative oversight of the operation of individual schools is minimal. Schools receive about 3,000 kip (US\$0.73) per year per teacher from MOE (channeled through PES and DEBs) for operating expenses. School visits suggest that, given the difficulty of communication, lack of transportation, infrequent inspections and small contribution to the operational budget of the school, the formal administrative hierarchy of the education system (above the school level) has only a very modest (if any) impact on the operation of individual schools.

Cost and Financing

Teacher salaries are low relative to the wealth of the country (Mingat, 1998a) and the structure of teacher salaries tends to be flat. Lower secondary teachers earn only about 15 percent more than primary teachers; upper secondary teachers earn only about 22 percent more than primary teachers (Table 4.9). Of even greater concern are the delays that teachers encounter in being paid.

Table 4.9
Average Salary by Level Taught, 1996/97

	Average Salary (kip/year)	
	Teacher	Non-teaching staff
Preschool	591,109	547,800
Primary school	589,696	551,700
Lower Secondary	670,669	555,600
Upper Secondary	719,830	559,400
Technical/Vocational	671,300	559,400
Teacher Training	726,449	567,000
Higher Education	739,200	567,000

Source: Mingat, A. (1998a).

The full impact of the regional economic problems of 1998 is not yet clear, but two repercussions should be anticipated: the high inflation being experienced in Lao PDR, if it continues, could seriously undermine teacher morale and commitment, as inflation erodes the value of their salaries; and, less international assistance may be available to assist in education development in Lao PDR as these funds are reallocated to financial stabilization programs in the region.

Between January and October 1998, Lao PDR experienced a 100 percent increase in its local consumer price index. This 100 percent inflation hits civil servants, such as teachers, particularly hard since government salaries generally

increase more slowly than private sector salaries during times of rapid inflation. This means that teacher salaries are losing their value in absolute terms (the loss in what can be purchased for the same amount of money) and in relative terms (greater disparity between salaries of public and private sector employees).

One concern is that teachers may choose to devote more of their time to supplemental employment (in an effort to compensate for their loss of earning power) and spend less time on their teaching. International experience suggests that it could also result in teachers trying to increase their income through illegal practices such as selling examination results, admission to schools, or other special treatment. Ideally, Government would combat these possibilities by raising salaries to compensate for the inflation. However, Government does not have sufficient resources to do so and is confronted with competing demands for the use of any additional funds it might collect.

The economic turmoil in the region may seriously reduce the amount of international donor assistance available to the Lao education system. ADB and the World Bank have redirected massive amounts of their capital to economic stabilization loans to Indonesia, Thailand, Korea, and other countries. Their funding for education and human resource development has already been affected by these extraordinary pressures for economic bailouts.

The challenge of recruiting and retaining teachers, maintaining the morale and engagement in teaching will be severe. The reduced value of teacher salaries, the delay in salary payments, and the possible drop in international assistance will put even greater pressures on Government to find ways to ensure the quality and motivation of its teaching force. Government recognizes the need to raise teacher compensation and to pay teachers on time. However, as discussed later, any increase in compensation should be linked to a strategy to improve instructional quality. For example, it may be possible to tie any salary increases to teachers' participation in in-service training aimed at upgrading their content knowledge and teaching skills.

4.3 Suggested Priorities and Recommendations

Priority 1 Improvement of the Quality of Instruction

The highest priority at the secondary level should be improving the quality of instruction. Providing well-trained teachers, ensuring that all students have textbooks, and increasing the amount of instructional time students receive are the three most important steps MOE can take to improve instructional quality at the school and classroom level. Efforts to further expand access to secondary education, while still important, should be viewed as a longer-term goal to be pursued only when the fiscal capacity of the government improves.

Recommendations

1. Ensure that an Adequate Supply of Textbooks Is Available at the Classroom Level: Textbooks are a critical input to effective learning. However, MOE data and school visits indicate that at present most schools do not have

enough textbooks; many have none at all. Consequently, it is recommended that MOE seek international assistance to support the production, distribution and use of textbooks in the schools.

Prior to initiating such a request, however, it is recommended that MOE study the reasons that textbooks provided under the EDP are not in wider use in the schools. Before investing additional funds in textbook distribution, it will be important to: clarify the reasons EDP was not more successful in getting textbooks into the schools; and, develop a strategy for ensuring that new efforts would yield more positive results.

2. **Develop a Curriculum and Textbooks for Upper Secondary:** Over the last seven years MOE has developed curriculum and instructional materials to strengthen instruction at the primary, lower secondary, and university levels. If the benefits of the improved education in grades 1-8 are to result in better preparation for students entering NUOL, it will be important to upgrade the curriculum and instructional materials for the three years of upper secondary.

It is recommended that MOE seek international assistance for a limited project to upgrade the curriculum and textbooks for upper secondary. For example, it is recommended that the curriculum be an extension of the junior secondary curriculum, and that MOE consider adoption and translation of existing math, science and English textbooks from other countries rather than attempting to develop new materials. However, the activity should only be started if funds are available for adequate training of teachers to use the new materials.

3. **Strengthen Teachers' Knowledge of the Content They Are Expected to Teach:** The focus of virtually all preservice and in-service training of secondary school teachers is on pedagogical methods. The TTCs assume that students entering teacher training have already learned the necessary content during their own secondary education. School visits suggest, however, that a main reason for the low quality of instruction is that teachers have an inadequate understanding of the content they are expected to teach.

It is recommended that MOE undertake a program of in-service training aimed at strengthening the content knowledge of teachers already in the system. To be effective, such training will require that teachers participate in a carefully structured two- to three-month program of study. The training has to be accomplished in ways that minimize disruptions to the school schedule such as conducting a two-month training program over the current vacation period. Alternatively, teachers might be compensated with a one-time payment to offset their lost income.

4. **Increase Instructional Time:** The amount of instructional time students receive is one of the best predictors of how much they learn. MOE already

has a policy requiring students to receive at least 30 hours of instruction per week. However, there is considerable evidence that this policy is not consistently enforced. It is recommended that MOE conduct a study to identify low-cost ways of increasing instructional time, for example by changing the school year to be more compatible with the demands of the agricultural cycle.

Priority 2 Development of an Adequate Supply of Qualified Teachers

MOE faces a serious teacher shortage at the secondary level over the next five years. The Government has three options for addressing the problem: reduce the number of primary students continuing into the secondary cycle; employ unqualified teachers; or, increase the production of new teachers. While increasing the production of new teachers is clearly the most desirable option, it would require changing teachers' conditions of employment to make teaching a more desirable employment option for secondary school graduates. Even if teacher production is increased, it is unlikely that it can keep up to the projected demand. Consequently, it is also necessary for the MOE to consider limiting student enrollment. This would decrease the percent of the age cohort continuing in secondary school but, in combination with the recommendations under Priority 1, would help ensure that those who do continue receive a quality education.

Recommendations

1. **Increase Enrollments in Preservice Teacher Training:** It is recommended that MOE undertake an urgent study to identify ways to increase the number of students entering teacher training and to increase the number of TTC graduates actually accepting positions as teachers. A related issue is that only about half the TTC and NUOL Faculty of Education graduates actually become teachers. The same study should consider ways to increase the number of TTC and NUOL Faculty of Education graduates who enter teaching.
2. **Increase Teacher Salaries:** Teacher compensation is too low to attract many new applicants into teaching. If the supply of qualified teachers is to increase enough to keep up with demands, salaries will need to be increased. MOE recognizes that teacher salaries are too low and two bills offering different strategies for raising teacher salaries are already being considered by the National Assembly. Ideally, any increase in teacher compensation for current teachers should be linked to quality improvement, such as successfully completing in-service training to upgrade their content knowledge.
3. **Improve Initial Deployment of Teacher Training Graduates:** It is recommended that MOE implement a procedure in which new graduates from teacher training are allowed to go to areas with a teacher shortage. This procedure will need to address two considerations. First, provinces with a

teacher oversupply must be willing to release their quota graduates to another province. Second, the graduates themselves need an incentive to accept an assignment to a geographical area that is not their home province. In the past, many teacher training graduates have chosen employment outside of education rather than accept an unpopular assignment. One possibility would be an offer of a one-time bonus of six months' salary for graduates who are reallocated to a different province. This bonus could be paid over two years to ensure that the new teachers stayed at their assigned post.

Priority 3 Strengthening the Administration of Secondary Schools

Recommendations

1. **Provide Training for School Principals:** Responsibility for school operations is largely left to the principal. This can work well when the school principal has strong skills in instructional supervision, staff development, leadership, and community-school relations. Where principals lack these skills, such decentralization can lead to low quality schools. While principals receive some short-term training, it focuses mostly on ensuring that principals understand MOE regulations they are expected to enforce. Little attention is given to leadership development or in strengthening principals' ability in instructional supervision or in school-community relations. This is of particular concern at lower secondary, since many teachers are struggling in their efforts to implement the new integrated curriculum.
2. **Require that Principals Take the Same In-Service Teacher Training in the Use of the New Curriculum as the Teachers:** To provide relevant instructional supervision and appropriate support and guidance, principals need to understand the content and organization of the new materials and the demands those materials make on teachers. Moreover, principals frequently have to substitute for teachers who are absent.
3. **Increase the Capacity of MOE to Monitor and Evaluate Policy Implementation:** It is recommended that MOE undertake a study to identify the underlying reasons for the difficulties encountered during policy implementation, and to suggest ways of revising the process to better achieve the intended goals of improving the education system. It is anticipated that monitoring and evaluation activities would not necessarily require large-scale data collection. The need now is to further analyze the data that are already collected to prepare projections of the medium and longer-term impact of proposed policies, and to conduct a series of smaller special studies, most of which would be focused on the impact of policy on practice. The unit which has the responsibility for these functions could, for example, conduct studies to determine the extent that textbooks had actually been received in the schools, the extent that teachers were

actually using those textbooks in their classes, and the frequency that schools received visits from district or regional education staff.

Priority 4 Improvement in Student Flow at the Secondary Level

Of every 100 students who enter lower secondary, only about 21 will graduate from upper secondary six years later. While students who do not graduate may still benefit, they do not have access to the full range of employment opportunities open to graduates. If the system had no repetition or dropouts, MOE would pay for six years of education for each secondary graduate. At present, it pays for almost 17 years of secondary education for every secondary graduate, or almost three times more than it would in a fully efficient system.

Recommendations

1. **Improve Instructional Quality:** Improving instructional quality is one way to reduce repetition and dropout. It may be possible to accomplish this by strengthening teacher training, providing an adequate supply of textbooks, and better aligning the school year with the agricultural cycle (thereby increasing actual instructional time).
2. **Improve Annual Transition Tests Used to Determine Grade Promotion:** One likely reason that grade repetition is high is that the annual end-of-year transition tests have low validity and reliability. It is recommended that MOE examine ways to improve the procedures for determining if students are ready to progress to the next grade. Improving the tests is a less important activity than those presented in earlier recommendations and should only be undertaken after more important activities to improve textbook distribution, teacher training, and teacher deployment have been completed.