Pre-Primary and Primary Education 3

This section provides an overview of primary education in Lao PDR. It begins an introduction to the system for the provision of primary education with special mention of the difficulties associated with providing access to girls and ethnic minority people. The current status of primary education is then described, with a focus on provincial and district variations in development. Primary education is analyzed through an examination of both growth rates for new entrants and internal efficiency. In addition, quality issues are addressed with an examination of current teacher training practices and use of teaching aids. This analysis is provided at a national and provincial level in order to facilitate the setting of targets at the provincial level.

3.1 Status of Pre-Primary Education

National Goals and Strategies

The purpose of pre-primary education is to prepare children physically, emotionally, socially and mentally to enter grade 1 of primary school. This preparation is considered the foundation for further psychological development. Specific objectives for pre-primary school set by MOE include to:

- enhance the physical development of children;
- train young children to follow instructions of the teacher;
- train children to be leaders and followers as appropriate;
- encourage children's imagination and creativity;
- train children to be disciplined;
- facilitate the learning of different movements;
- train children to be brave;
- create an environment for children to be happy and enjoy themselves;
- train children in memorizing;
- provide a range of experiences for children's development.

Unlike at other levels, families are required to pay a fee to send their children to pre-primary school. In order to estimate the relative net enrollment ratios (NERs) of pre-primary for different provinces, the following data were used. The total population of kindergarten children (3-5 years) was estimated from 1995 census data (Table 3.1). The table shows that only about 8 percent of boys and girls aged 3-5 years are enrolled in pre-primary schools, with the highest enrollments in Vientiane Municipality. To understand these data, the NERs of pre-primary boys and girls are plotted against recent growth rates in enrollment. The results of this analysis are shown in Figure 3.1. This figure demonstrates both the low levels of participation in pre-primary education and also the wide variation in participation across provinces. Growth rates have also varied somewhat with negative growth in Savannakhet

(for girls only), Bolikhamxay, Attapeu and Saravan. Data for teachers and schools are reported only for all pre-primary and are not separated for kindergarten; therefore, an analysis of the matching of teachers to student growth is not possible.

In light of the current low levels of participation, and in some cases access, in primary level education and the urgent need to improve quality of learning and efficiency of participation, the further expansion of pre-primary education may be of lower priority. A change to the age at which students enter primary school will affect the need for a three-year-long kindergarten period.

Table 3.1
Pre-Primary Participation, 1995

	Students - kindergarten			Population (3 to 5 years)		NERs		Census	Census distribution	
	Total	Male	Female	Male	Female	Male (%)	Female (%)	0-4 yrs	Male (%)	Female (%)
Vientiane Municipality	6,414	3,304	3,110	18,008	18,371	18	17	60,632	49.5	50.5
Phongsaly	518	273	245	7,027	6,998	4	4	23,375	50.1	49.9
LuangNamtha	558	267	291	5,074	4,953	5	6	16,712	50.6	49.4
Oudomxay	646	324	322	10,750	10,579	3	3	35,548	50.4	49.6
Bokeo	341	176	165	5,112	5,363	3	3	17,458	48.8	51.2
Luangprabang	2,609	1,278	1,331	18,524	18,973	7	7	62,495	49.4	50.6
Houaphan	1,797	909	888	13,323	13,430	7	7	44,588	49.8	50.2
Sayaboury	3,451	1,562	1,889	13,512	13,532	12	14	45,071	50.0	50.0
Xiang Khouang	924	423	501	11,359	11,359	4	4	37,864	50.0	50.0
Vientiane Province	2,626	1,290	1,336	11,898	12,686	11	11	40,974	48.4	51.6
Bolikhamxay	837	443	394	7,978	8,305	6	5	27,140	49.0	51.0
Khammouane	1,942	931	1,011	13,015	13,172	7	8	43,646	49.7	50.3
Savannakhet	8,636	4,085	4,551	31,054	32,975	13	14	106,714	48.5	51.5
Saravan	336	169	167	12,953	13,591	1	1	44,240	48.8	51.2
Sekong	215	105	110	3,187	3,291	3	3	10,797	49.2	50.8
Champassack	3,098	1,444	1,654	23,238	23,612	6	7	78,083	49.6	50.4
Attapeu	263	56	207	4,184	4,234	1	5	14,030	49.7	50.3
Saysomboune	128	64	64	3,152	3,334	2	2	10,811	48.6	51.4
Total	35,339	17,103	18,236	213,348	218,758	8	8	720,178	49.0	51.0

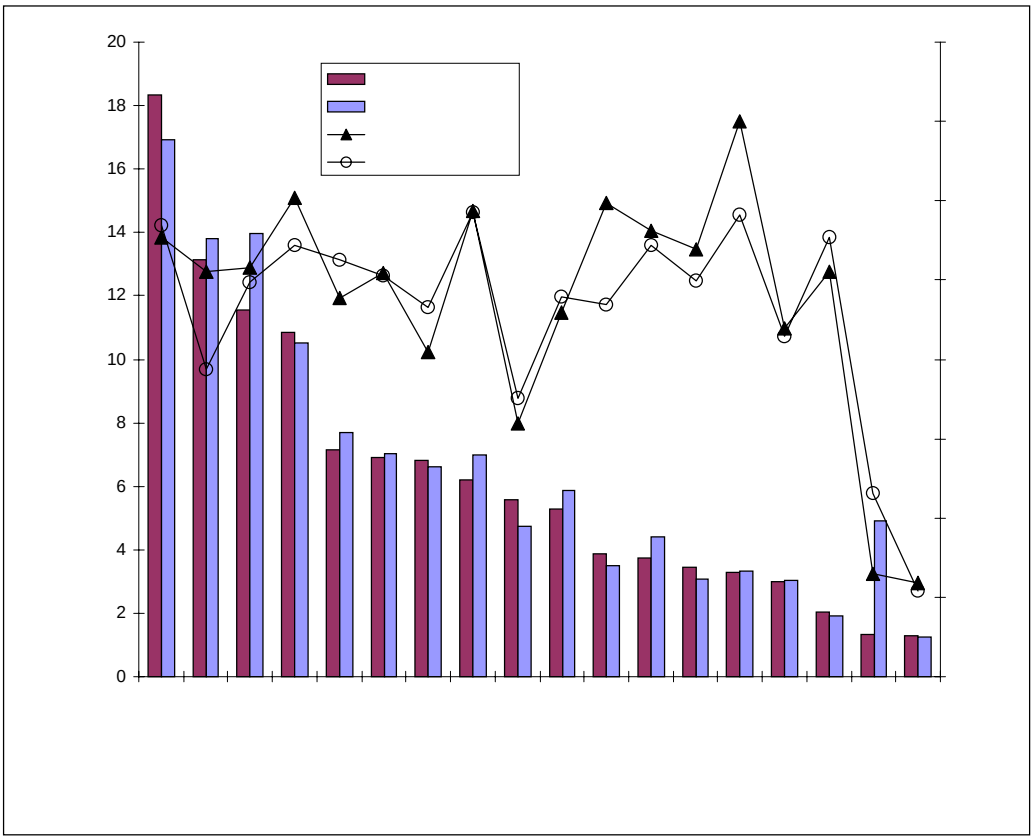
Source: MOE Annual Statistical Bulletins

3.2 Analysis

Pre-primary education consists of two levels: nursery or crèche, with an intake for children from 2 months to 2 years of age; and, kindergarten, with an intake for children from 3-5 years of age.

Current participation in pre-primary education is at very low levels with wide differences between provinces. Provision of a three-year pre-primary period is expensive, both for human and capital expenditure. For example, teacher training

Figure 3.1
Status of Pre-Primary Education, 1996/97



Source: MOE Annual Statistical Bulletins.

for pre-primary teachers occurs at one TTC in Vientiane Municipality with an annual quota of one place for each province except for Vientiane Municipality which has a quota of two. These quotas do not take into account population differences. Additionally, nursery schools are also provided as part of pre-primary education, although it is not clear from the data to what extent this is within the private sector or is subsidized. In view of the very low internal efficiency in primary education, further expansion of pre-primary education should be a low priority.

Fees for pre-primary education are relatively high and not all families are able to send their children to kindergarten. Likewise, MOE does not have sufficient resources to fund countrywide participation in pre-primary schooling. An alternative approach would be to utilize the private sector as the provider of private education, either completely or through the use of a voucher system.

This report suggests consideration of a change in the entry age of beginning primary school children and implementation of a pilot to investigate the impact of such a change on repetition, dropout, etc. If the pilot is successful, then it will have significant impact on the nature and purpose of pre-primary education. The results of such a pilot program should be examined before implementing further expansion of pre-primary education.

3.3 Status of Primary Education

National Goals and Strategies

The primary education cycle in Lao PDR is five years. MOE has overall responsibility for coordination, planning, policy development and quality control for formal education while management of functional responsibilities is distributed geographically to 18 PES offices and 135 DEBs. At the village level the village head, village school management committee, and the school principal are directly responsible for the operation and maintenance of schools in more than 8,000 villages.

The human resources development Medium-Term Program 1997-2000, produced by the SPC of Lao PDR in May 1997, provided a general framework for identifying priorities for education. For primary education MOE has the following immediate priorities:

- universal primary education with quality improvements;
- increased access to education in rural and ethnic minority areas;
- eradication of illiteracy;
- improved internal efficiency of schooling;
- improved professional training and academic status of teachers;
- improved management and control of education to ensure quality.

The current Education Sector Development Plan (MOE, 1995c) provides a planning framework for MOE. It outlines a long-term reform agenda and provides broad policy themes to 2020, in accordance with general Association of South East Asian Nations (ASEAN) planning.

The major medium-term priority is to improve quality in primary and lower secondary education by improving internal efficiency and student achievement. To achieve this, the current plan calls for revision of the school curricula, textbooks and instructional materials together with a reorganization and reform of teacher training and pedagogical support services. Other components of the current Plan include:

- standardization of preservice teacher training;
- improved access to educational services through large-scale school infrastructure initiative;
- selective expansion of adult literacy and vocational educational programs, particularly for girls, women and minorities;
- strengthening of educational planning and management at central, provincial and district levels;
- enhanced planning capacity, co-ordination and co-operation with MOE and external agencies.

Activities are currently underway in all of these areas, assisted in most cases by funding from international donors and agencies. Policy targets (MOE, 1995c) have been set for many activities, for example, a primary repetition rate of 14 percent by the year 2000; however, there is no evaluation mechanism in place to monitor progress towards targets. Likewise, a target has been set to restructure administration and management and to redistribute resources equitably among provinces and

districts but there appears to be no framework nor guidelines on how to achieve these targets.

Teacher training for primary school occurs at TTCs. There is also a Teacher Development Center (TDC) established as part of the ADB-supported Education Quality Improvement Project to improve the quality of both pre- and in-service training.

An added complexity to improving the quality and relevance of primary education in Lao PDR arises from the multiple purposes of primary education and the linguistic variability of target groups. Graduation of local people is needed for future supply of teachers and other skilled workers but also to improve the productivity of subsistence farmers. The former requires an academic approach linked to transition to secondary school, while the latter requires a greater focus on basic technology and applied science. In the context of poor subsistence farming communities, literacy and numeracy as the sole aims of primary education are not enough, particularly among ethnic minorities where Lao is not the first language and where their own language has no written form. In such communities there is a need to introduce content of primary education that will directly improve their income and living condition.

Girls and Ethnic Minorities

The draft final report of the Lao PDR Women's Education Project (ADB, 1997d) identified the significant disparities in educational provision and access for girls and women, both in rural and urban areas of the country. It also identified provinces where more than 60 percent of the population aged six years and over have never attended schools. The report also indicated that only 50 percent of the total population have Lao as their first language with some 47 ethno-cultural and linguistic groups in existence.

The importance that MOE has placed on overcoming these disparities can be seen by the establishment of a Gender and Ethnic Minorities Education Unit (GEMEU) within the Department of General Education to advise MOE in the development of policy for the special needs of girls and ethnic minorities.

Improving access to education among girls, particularly from minority groups, is not simple within the socioeconomic and cultural context of Lao PDR. There are approximately 4,000 villages in mountainous ethnic areas without primary schools, and of the 46 percent of the population living in poverty 88 percent are in rural areas. Ethnic minority villages tend to be small and widely scattered in highland and mountainous areas and based on subsistence agriculture.

To understand access to education, particularly for ethnic minority girls, it is necessary to understand child labor in terms of traditional rural life and the characteristics, roles and obligations children hold within the family. Families earn a living through farming that is labor intensive with low productivity. Economic hardship and a heavy workload are the norm. Parents often believe that girls should be ready for family life, to become a wife, and that there is little, if any, economic rate of return in a girl's education. Thus, reading and writing is seen as sufficient schooling for girls. For girls to attend school, they must continue to fulfil their work obligations (housework, farming and preparation for marriage at a relatively early

age). Thus, their economic role in the household must continue as a priority. In some minority cultures, there is a traditional view against education for girls and women. This implies a need to increase awareness about the relationship between girls' work and access to education through advocacy and social mobilization. More generally, awareness needs to be increased of the relationship between family health and girls' education.

Strategies for Improvement

Current initiatives in primary education aim for improved internal efficiency, largely through the systematic introduction of multigrade teaching, and for quality improvement through better-trained teachers and the implementation of the revised curriculum. There are currently three major initiatives in primary education, the ADB/AusAID-supported Basic Education (Girls) Project, the World Bank/Swiss-supported EDP and the UNICEF projects (Early Childhood Education, Basic Primary Education, and Development for Women and Families). These initiatives are addressing different issues and there is complementarity between them, particularly concerning community participation, multigrade teaching, and strengthening of local capacity for planning and management.

School Age Population and Student Growth

Participation in primary school over the period 1993/94 to 1996/97 is shown in Table 3.2, indicating a steady increase in the number of students and teachers over the period although there has been some rationalization of schools. In order to understand the significance of these increases, population growth must be taken into account. Population data exist from the 1995 census and can be used to estimate population growth. Census data (National Statistics Center, 1996) indicate that with a likely improvement in mortality and a reasonable decline in fertility, a yearly increase in population can be expected of 2.4 percent over the period 1995-2000 and 2.3 percent for the period 2000-2005.

Table 3.2
Primary Education: Schools, Students and Teachers

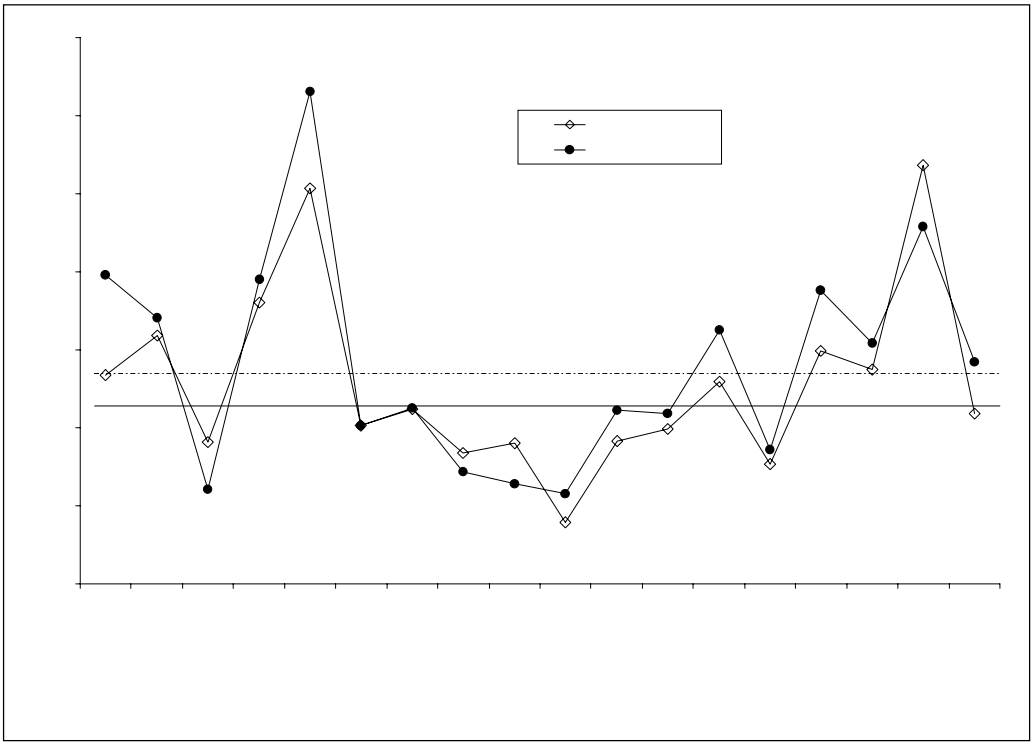
Time Period	Schools	Classes	Students	Teachers
1993/94	8,028	24,039	681,044	22,649
1995/96	7,789	26,156	757,508	24,793
1996/97	7,896	24,708	786,335	25,718
Average annual growth rate: (93/94 to 96/97)	-0.5	0.9	5.2	4.5
Average annual growth rate: (95/96 to 96/97)	1.4	-5.5	3.8	3.7

Source: Analysis of MOE Annual Statistical Bulletins, 1993/94 to 1996/97. Data from 1997/98 are not included since these data appear to be defined differently from those of earlier years.

The population projection described by the census data imply a need to expand access to primary education by 2.4 percent per annum simply to maintain the status quo of educational access. Improvements to access, such as an increase in participation rates will require expansion greater than 2.4 percent. Table 3.2 indicates that the annual growth in total primary student numbers has averaged 5.2 percent over the recent period. During the last period for which data are available (1995/96 to 1996/97), growth at grade 1 level has increased to 2.4 percent; however, this growth rate is only sufficient to match the natural increase in the student population.

Figure 3.2 describes the growth rate of grade 1 enrollments by province. The figure describes average annual growth rates for both total grade 1 enrollments and new grade 1 enrollments. The growth in new enrollments is the best indicator of improvement in access to primary education given the wide distribution of ages of grade 1 students. The dashed line represents a growth rate of 2.4 percent and is the growth rate required to match natural growth in the population of school-aged children. Thus, real improvement in access to primary education requires an annual growth rate that is greater than this dashed line (2.4 percent). The most striking feature of Figure 3.2 is the disparity of growth across provinces. It is also clear that many provinces are not making any gains and that, in some, absolute numbers of new students to grade 1 are in decline.

Figure 3.2
Growth of Grade 1 Enrollments, 1993/94 to 1996/97



Source: Analysis of MOE Annual Statistical Bulletins, 1993/94 to 1996/97

Private Sector

A government decree in 1990 permitted the delivery of educational services via the private sector. Technical assistance from ADB for private sector education development in 1995/96 (ADB, 1996f) assisted the government of Lao PDR to develop a framework for government assistance to the private sector and to establish a Bureau for Private Education within MOE and a Consultant Council for Private Education. Private sector involvement in primary level education, shown in Table 3.3, is relatively small in Lao PDR and has demonstrated a decline in recent years. This decline has been in evidence since 1993/94 but has sharpened over more recent times. This decline has occurred at the same time as, and has probably been caused by, high inflation, a fall in the value of the currency and low salaries.

Table 3.3
Private Sector Provision of Primary Education

	Schools		Classes		Students		Teachers	
	Total	Private	Total	Private	Total	Private	Total	Private
1993/94	8,028	184	24,039	459	681,044	14,409	22,649	480
1995/96	7,789	156	26,156	582	757,508	16,725	24,793	617
1996/97	7,896	104	24,708	451	786,335	15,704	2,5718	553
Growth rate: (93/94 to 96/97)	-0.5	-14.5	0.9	-0.6	5.2	3.0	4.5	5.1
Growth rate: (95/96 to 96/97)	1.4	-33.3	-5.5	-22.5	3.8	-6.1	3.7	-10.5

Source: Analysis of MOE Annual Statistical Bulletins, 1993/94 to 1996/97

Over the period 1995/96 to 1996/97 the number of private classes has declined by 22.5 percent with student numbers contracting by 6.1 percent. The number of private teachers has declined by 10.5 percent. An informal scanning of raw data suggests that private schooling began on a very small scale, often consisting of only one teacher and 20 to 40 students. Such private schools would be very vulnerable to the economic crisis that occurred in Lao PDR over the period and, thus, it is not surprising that the sector has declined. It is unlikely that the government can rely on the private sector for any significant expansion of primary education, particularly in less developed provinces. The extent of private education across different provinces is shown in Table 3.4.

There are large disparities in the numbers of private schools between provinces. Vientiane Municipality accounts for 50 percent of all private schools and 70 percent of all private students (MOE, 1998e). Private education has disappeared completely from some provinces (Oudomxay, Houaphan, and Saravan) while others (Phongsaly, Sayaboury, Vientiane Municipality, Bolikhamxay and Savannakhet) have experienced an increase in student numbers. Oudomxay has demonstrated the most severe contraction with the disappearance of all 55 classes, 42 teachers, and 1,152 students. Interestingly, Vientiane Municipality has shown a 5.5 percent increase in private students although the number of classes has declined by 10

Table 3.4
Private Primary Education Across Provinces, 1995/96 to 1996/97

	Classes		Teachers		Students		Pupil/Teacher Ratio	
	1995/96	1996/97	1995/96	1996/97	1995/96	1996/97	1995/96	1996/97
Phongsaly	19	15	12	14	343	367	29	26
LuangNamtha	4	1	3	1	66	15	22	15
Oudomxay	55	0	42	0	1,152	0	27	
Bokeo	0	0	0	0	0	0		
Sayaboury	2	5	2	5	71	170	36	34
Luangprabang	59	22	60	22	1,590	831	27	38
Houaphan	1	0	1	0	22	0	22	
Xiang Khouang	0	0	0	0	0	0		
Saysomboune	0	0	0	0	0	0		
Vientiane Province	20	13	20	13	347	208	17	16
Vientiane Municipality	342	308	395	401	10,605	11,188	27	28
Bolikhamxay	6	7	6	7	99	112	17	16
Khammouane	48	45	50	48	1,564	1,564	31	33
Savannakhet	24	35	25	42	821	1,247	33	30
Saravan	2	0	1	0	45	0	45	
Champassack	0	0	0	0	0	0		
Sekong	0	0	0	0	0	0		
Attapeu	0	0	0	0	0	0		
Lao PDR	582	451	617	553	16,725	15,704	28	26

Source: Analysis of MOE Annual Statistical Bulletins, 1993/94 to 1996/97

percent. The slight increase in pupil/teacher ratio indicates an increased efficiency in dealing with economic constraints.

Primary Expansion Relative to that of Secondary

Table 3.5 shows growth at the secondary level. It can be seen that growth rates at secondary level are much higher than at primary level, despite government policy that expansion of primary education remains the top priority. Although secondary education is starting from a low base level, the higher annual growth rate over the period 1995/96 to 96/97 compared to that for 1993/94 to 1996/97 suggests that demand for secondary education is rapidly increasing. The difficulty for MOE is that with a budget already under strain, significant increases in secondary education run the risk of diverting funding away from primary level education.

Figure 3.3 describes relative growth for primary and lower secondary across provinces. It is, perhaps, noteworthy that those provinces that demonstrate greater than 30 percent annual growth at lower secondary are those that also demonstrate close to zero growth at primary school level.

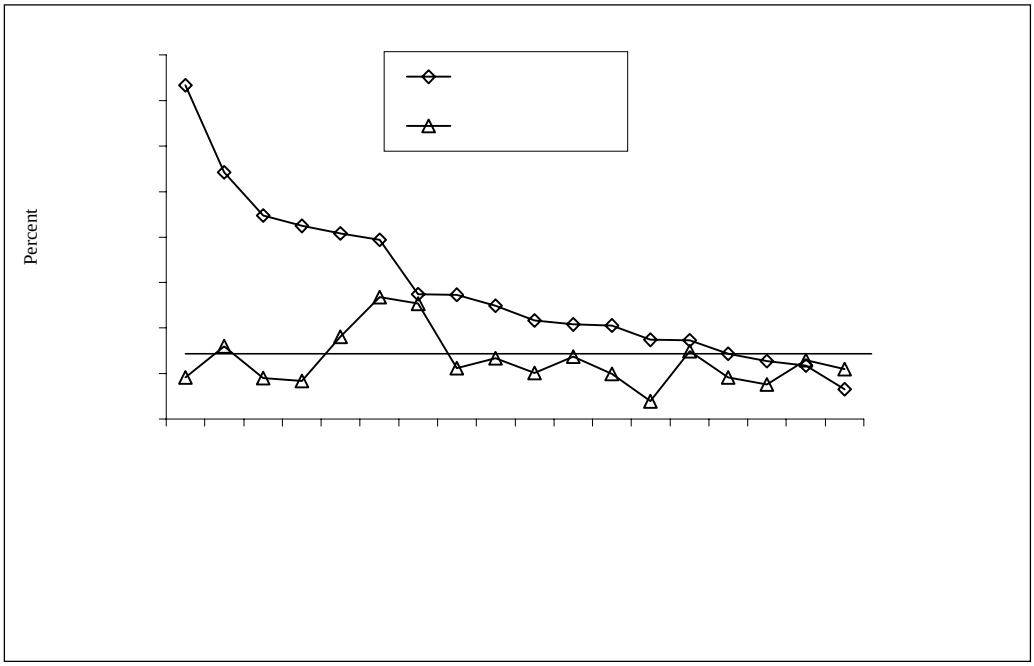
Of greater concern is the possibility that local demand for secondary education may be driving enrollments and that this unplanned secondary expansion will

Table 3.5
Secondary Growth Rates (Average Annual Rate)

	Lower		Upper	
	Grade 6	Total	Grade 9	Total
1993/94 enrollments	44,628	105,497	16,219	38,176
1995/96 enrollments	48,074	119,771	15,943	42,163
1996/97 enrollments	58,192	133,891	20,162	46,269
Growth rate: (93/94 to 96/97)	10.1%	9.0%	8.1%	7.1%
Growth rate: (95/96 to 96/97)	21.0%	11.8%	26.5%	9.7%

Source: Analysis of MOE Annual Statistical Bulletins, 1993/94 to 1996/97

Figure 3.3
Growth Rates for Primary and Lower Secondary Entrants



Source: Analysis of MOE Annual Statistical Bulletins.

have a negative impact on the ability of government and families to continue to fund expansion of primary education. It is important to investigate the underlying reasons for these trends. From the perspective of a family, education is expensive and already consumes a significant proportion of household income. (Such expenses at primary level include uniforms, stationary, examination fees, classroom fees, maintenance fees, etc.). Although speculative, it may be that families perceive secondary education to have greater economic rates of return than primary and encourage their older children to continue through to secondary level at the expense of their younger siblings commencing primary school. It is suggested that a small survey be conducted to investigate the dynamics of this differential pattern of growth.

Curriculum, Textbooks and Instructional Materials

The same curriculum is used all across the country, although ideally MOE would like to see local content comprise approximately 20 percent of the curriculum. However, resource constraints do not allow this plan to be implemented. The negative side of this policy is the lack of relevance that the curriculum holds for many students, particularly among ethnic minority groups. This situation contrasts with that found in some pilot projects among the same ethnic minority groups in Vietnam. The ADB/AusAID-supported Basic Education (Girls) Project has as one of its aims the introduction of materials into the school curriculum that support locally relevant life skills.

Of particular interest and relevance is the VAC (Vietnamese acronym for "Stable, Garden, Pond) Pilot School project. This project links the Vietnamese school curriculum to local needs and provides a model for demonstrating to community members the value of education, particularly among girls. A key element of this pilot project is linking the curriculum to life skills, including raising of fish, small animals such as pigs or chickens, and growing garden produce. Each school has its own small pond, animal stable, and garden. In many cases a small loan was provided to enable the school and community to provide the basic infrastructure (pond and animal enclosure) and materials (seeds and fertilizer) and this was repaid by sale of school produce to local markets.

The possible adaptation of the VAC school model to the Lao PDR situation should be investigated, including identification of curriculum and school needs, teacher training requirements, and materials provision. Links to the Basic Education (Girls) Project should be developed since this project will include development of materials for teaching locally relevant life skills. This would introduce a practical component to the curriculum to reinforce the teaching of life skills.

The current core curriculum consists of seven basic subjects as described in Table 3.6. The first three subjects (Lao language, mathematics and The World Around Us) are the main ones. The current curriculum was introduced in 1993 and a lack of resources will mean that the usual five-yearly review will not occur in 1998/99.

MOE, with the support of Redd Barna, reprinted 500 copies of the curriculum statement: Curriculum for General Primary School (MOE, 1998a). These copies will be distributed to all teachers in 16 project schools. This reprinting is in addition to an earlier print run of 15,000 copies. However, there is some discrepancy in reports of the availability of the curriculum statement. The Instructional Materials Unit (IMU) maintains that 14,000 copies were printed earlier and distributed to all schools, while the National Research Institute for Educational Science (NRIES) and a consultant's report (Thongchai, 1997) indicate that many schools and most teachers do not have them. This is an important issue to clarify since the curriculum statement is perhaps the most pivotal document for teachers and schools to use as a framework for all their activities. Field visits reinforced the consultant's report that school principals and teachers are unaware of the curriculum statement and have no knowledge of its contents. Thus, subjects are being taught in an isolated manner with no knowledge or understanding of how subjects interlock and the level of student competency to be achieved during different grade levels.

Table 3.6
Basic Subjects and Hours Per Week Taught

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Total
Lao Language	12	10	10	8	8	48
Mathematics	3	4	5	6	6	24
World Around Us	2	2	2	3	3	12
Art	2	2	2	2	2	10
Physical Education	2	2	2	2	2	10
Music	1	2	2	2	2	9
Handicraft	1	2	2	2	2	9
Total	23	24	25	25	25	122

Source: MOE documentation

Furthermore, the lack of familiarity and application of the curriculum among teachers and others causes problems of quality control. Unless teachers and schools teach according to the common curriculum, there is no mechanism to ensure that students are learning what is required and in the correct sequence. Doubtless, this is one of the reasons student grade repetition is high.

It is suggested that during training of teachers, at both pre- and in-service levels, time be devoted to explaining and demonstrating the importance of a curriculum statement and how it acts as a "map" for daily teacher activities. Given the academic nature of teacher training, it is likely that training in understanding of the curriculum will be required for trainers and staff of teacher training colleges.

MOE, with support from the Save the Children Fund (UK) and the Government of Norway is involved in the development of a curriculum and supplementary materials for cluster schools and multigrade teaching (1996-2000). AusAID is to provide support (1999-2004) for development of textbooks and supplementary materials for multigrade teaching, teaching Lao as a second language, and teaching locally relevant life skills to minority students, as part of the Basic Education (Girls) Project. UNICEF is supporting the development of supplementary materials and an evaluation of textbooks and the curriculum at grades 4 and 5, including reading books consisting of 16 stories for grades 3 to 5. UNICEF is also supporting development of a Lao grammar book.

It is clear that multigrade teaching will be the major process whereby student access to primary education will be expanded. However, introduction of a curriculum for multigrade teaching is more likely to be successful when appropriate and practical training of teachers in both multigrade pedagogy and management take place before the introduction of the curriculum. It is, therefore, suggested that appropriate teacher training in multigrade pedagogy and management occurs before the introduction of the multigrade curriculum to schools, pedagogical advisers, and teacher training colleges. The basis of this training could be through the development of a teacher guide for multigrade schools.

NRIES has a mandate to develop and design textbooks for primary and secondary level education. NRIES provides camera-ready-copy for the IMU which then determines print-runs and distribution. NRIES employs 33 staff for all its operations, including curriculum development and textbook design.

Through funding from the World Bank, NRIES is involved in development and evaluation of textbooks and teacher guides (for pre-primary level only, teacher guides are included). The availability of textbooks and teacher guides is given is Table 3.7. The original plan for textbook development was to publish and review textbooks at the rate of one grade per year and continue through to 1999. However, the Lao government asked that this phase of the project be completed by 1996 and as a result, doubling up of grades was instituted. The second phase of the World Bank project is now underway and consists of an evaluation of textbooks.

Table 3.7
Text Book and Teacher Guide (TG) Availability

	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5	
	Text	TG	Text	TG	Text	TG	Text	TG	Text	TG
Lao Language	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mathematics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
World Around Us	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Art	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Physical Education	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Music	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Handicraft	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Source: Data from NRIES

Teacher guides for the four minor subjects often refer to practical activities and it is the responsibility of teachers to gather local materials where necessary. For example, the teacher may use his/her own knives or ask students to bring bamboo or coconut husks to the school. Kits of teaching materials are not available, although the Basic Education (Girls) Project will develop such kits for project schools. The approach to development of educational aids is very focused on textbook and teacher guides with little emphasis on supplementary materials.

Some staff at NRIES have had international training or study tours related to textbook design and the World Bank project provides training for textbook development. However, NRIES lacks both an appropriate library of exemplar textbooks and access to resources (such as the Internet) that are useful to textbook design. It is suggested that NRIES staff be provided with a larger range of exemplar materials, particularly materials that promote an interactive approach to student use. Training of NRIES staff in development of student workbooks linked to existing textbooks should be a priority.

Textbooks do not exist for four of the seven subjects, and for one of the three basic subjects, textbooks are available only for grades 4 and 5. The reason given for the lack of a textbook for the core subject The World Around Us in grades 1, 2, and 3 is that "at these levels children cannot read." It is suggested that suitable, interactive textbooks be developed for grades 1 through 3 for this core subject, combining textbook and workbook. Graphics and pictures should be used to stimulate the child's interest in reading. However, this suggestion should only be implemented if teachers are explicitly trained to use textbooks.

There are no supplementary learning materials (maps, charts, alphabet guides, etc.) produced for the primary curriculum. Some teachers may copy materials out of teacher guides or develop materials on their own initiative but this does not occur in a systematic manner through supervision.

As there are no student workbooks, students typically use blank exercise books to copy what the teacher says or writes on the blackboard. This was the practice in all schools observed during the field trip. The development of student workbooks for the three core subjects is needed. These workbooks should be explicitly related to current textbooks and include space for student work such as answering questions, completing sentences, selecting alternatives, etc. Producing student workbooks would: force teachers to facilitate students' use of textbooks; enable better monitoring of student achievement and, therefore, improve quality; and, ensure that student work follows the curriculum, also improving quality.

However, the introduction of student workbooks should follow in-service training of teachers both in content knowledge and the pedagogy of using textbooks. If this sequence is not followed, schools may not use the student textbooks produced.

Of greater concern is that textbooks, even if available, are not generally being used in schools. MOE policy is for each student to be provided with a textbook for each major subject and at each grade in which he/she enrolls. Educational personnel at all levels suggest that content knowledge of teachers is not high and in some subjects, such as mathematics, is seriously below that provided in textbooks and teacher guides. Thus, providing textbooks to students has the potential to place the teacher in the difficult (culturally relating to "loss of face") position of not being able to answer a student question. In addition, teachers do not have a culture or history of textbook usage. Textbooks for teacher trainees at teacher training colleges are not available and library resources at these colleges are small. In essence, teachers are simply teaching as they were taught. It is suggested that further development and production of textbooks take place only after teachers are trained to use textbooks and monitoring indicates that textbooks are, indeed, being used in schools.

Printing of textbooks has been supported by a World Bank loan (grade 1) and funding from the Government of Norway (grades 2 to 5). Printed textbooks are stored in MOE warehouse from which they are distributed once per year to schools and/or district education bureaus. The World Bank loan allows distribution of copies of both textbooks and teacher guides for teachers in private schools at no cost. However, students in private schools must pay for textbooks.

In the larger provinces, some public students also need to buy textbooks at the market when government supplies are insufficient. Field visits to schools, PESs, DEBs, the warehouse and other institutions have not clarified the location of textbooks. It is suggested that appropriate monitoring and auditing procedures be developed and implemented so that MOE can more efficiently track textbook distribution.

IMU staff argue that there is a need to reprint textbooks for grades 1 through 3 and negotiations are underway to use World Bank funding to implement this during 1999. However, it is suggested that no further textbook reprinting be implemented until measures are taken to ensure that textbooks are actually used. These prior actions are described under "teacher training".

Evaluation

a) Monitoring and School Inspection

To improve the quality of school-based activities, the World Bank/Swiss-supported EDP funded three pedagogical advisers to each district. Pedagogical advisers operate from DEBs and are responsible for supervision of schools and for improving the quality of teaching. A major part of their time is spent on content upgrading, particularly in mathematics. However, many schools receive no more than one visit per year and some schools are visited less frequently. A prior condition for systemic supervision is that all teachers being supervised have a minimal level of competency. A supervisory system for quality assurance also assumes that a common set of competencies and activities are being monitored and this is clearly not the case among teachers of Lao PDR. Given the large numbers of unqualified teachers in the system and the lack of resources in schools, a full-fledged, effective supervisory mechanism to monitor teachers is not yet practical in Lao PDR, particularly given the high cost of implementing such a system and the limited benefits that would occur. Effective supervision is also hindered by the geographical isolation of many schools. Thus, initial approaches to improved monitoring and inspection need to be school-based rather than system-based. This will entail strategies such as development of individual school improvement plans, involving school principals, teachers and local community members assisted by pedagogical advisers. At a later stage, when communication between schools is improved, a district-wide approach to improving quality of instruction can be introduced.

b) Assessment of Student Learning

Currently, teachers are responsible for assessment of their students although, where practicable, examinations for grade 5 are set by DEB staff and marked by local teachers. The geographical isolation of many schools and the lack of a sufficient number of trained personnel make common assessment procedures difficult if not impossible to implement and monitor. The difficulty in utilizing assessment as a device for quality improvement is also increased by the lack of a common curriculum being taught in schools. Although there is a common curriculum statement, the reality is that not all teachers have a copy of this or are familiar with it. As a result, subject content being taught varies across schools and districts. Typically, school tests are based on content that local teachers have taught rather than on the curriculum with the result that school assessment has little relevance to quality of learning outcomes and student competencies. The number of hours being taught by teachers also varies considerably.

The Assessment of Student Learning Outcomes Project of EDP is investigating assessment procedures at a number of grade levels, including grade 5 of primary education. This project includes training of those personnel

responsible for monitoring quality of student learning, and development of sampling strategies to adequately monitor learning outcomes across the country. While the major focus is for grade 11 examinations, the project will also provide a framework for improving assessment procedures across all levels of primary education. Such a framework is expected to be produced by the middle of 2000, and will enable a systemic approach to assessment of the quality of education to be introduced and monitored across the country.

3.4 Analysis

a) Internal Efficiency

Internal efficiency is the extent to which the resources within the education system are used effectively. Indicators of internal efficiency include such things as student flow through the system, availability and use of instructional materials, and appropriate deployment of teachers and other staff. External efficiency concerns the extent to which the education that students receive adequately prepares them to enter the labor market or continue their education. External efficiency is indicated by students' ability to find employment and to succeed in their work, or have the knowledge necessary to successfully continue their education. Access is concerned with children's ability to enter the system; equity is concerned with the extent that access is without regard for factors that are outside the control of children or their families, such as gender and ethnic background. Administration and management concern the operation and oversight of the education system.

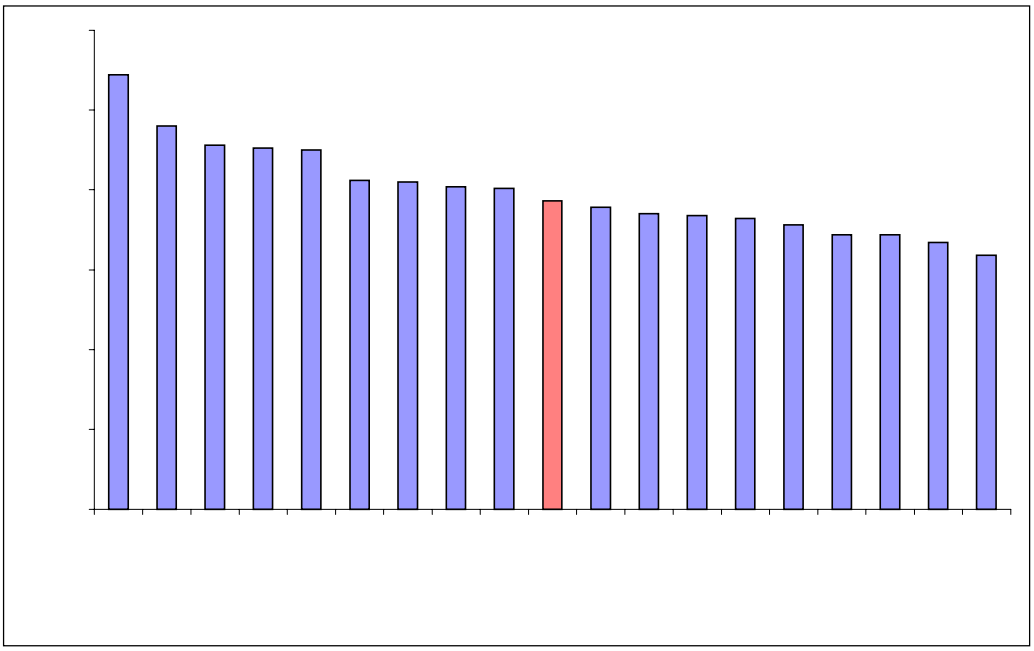
The internal efficiency of the primary subsector was examined using the reconstructed cohort method with UNESCO EFA-2000 software The analysis was carried out for the school years 1995/96 and 1996/97. (Data for 1997/98 was not used since there were inconsistencies between these data and the previous year. These inconsistencies arise from changed boundaries and one district being omitted from previous census years.) This analysis produces three main flow-rates: promotion, repetition and dropout.

An analysis of dropout rates averaged over the five grades of primary education and presented by province is shown in Figure 3.4. Average dropout rates vary from 27.2 percent in Phongsaly to 15.9 percent in Sayaboury with an average of 19.3 percent for the country as a whole.

An analysis of average repetition rates is presented in Figure 3.5. Repetition rates vary from 32 percent in Saysomboune to 21 percent in LuangNamtha with a countrywide average of 24.4 percent. For educational indicators by province, also see Appendix 1.

The major cause of these high repetition rates is grade 1 repetition. Repetition of the first grade of primary school is shown in Figure 3.6 and ranges

Figure 3.4
Dropout (Average Grades 1-5), 1995/96 to 1996/97



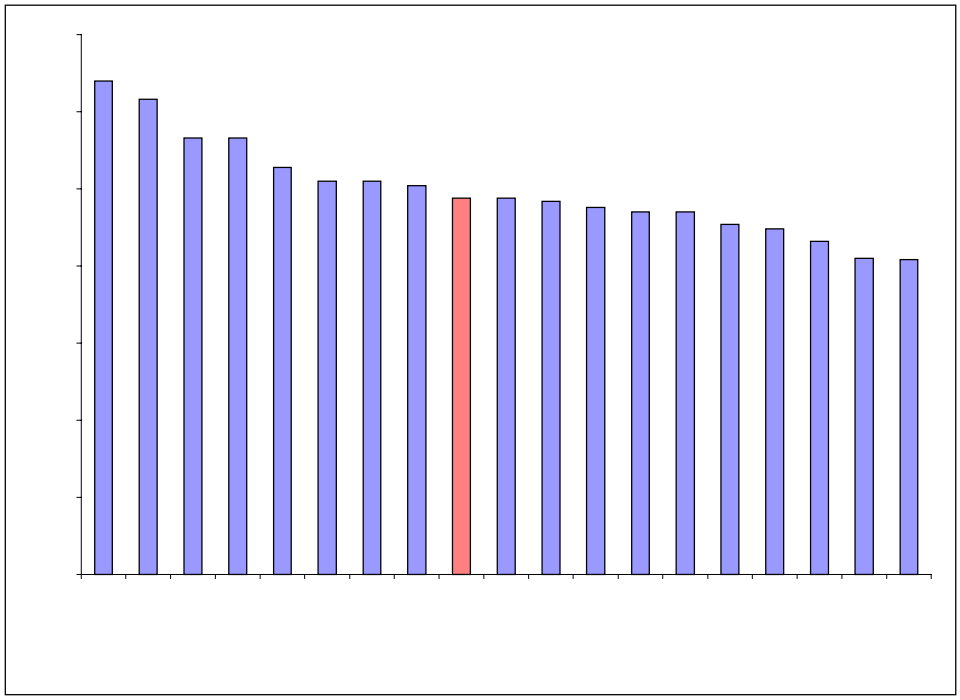
Source: Analysis of MOE Annual Statistical Bulletins

from 45 percent in Saravan to 34 percent in Vientiane Municipality with a countrywide average of 38.6 percent. The end result of these patterns of dropout and repetition can be seen in Figure 3.7. This analysis indicates that for every 1,000 students who commence grade 1, only 205 graduate without repetition while a further 347 graduate with repetition. Of this 1,000 cohort, 448 drop out before graduation.

These data indicate a system that is very inefficient with a high level of wastage. Given that the aim of primary education is to produce pupils who have mastery of a minimum level of competency defined by graduation, the system fails those students who either drop out or do not graduate. The extent of wastage can be demonstrated by computing the average years of input per graduate that the system requires. This can be seen in Figure 3.8. If the system were functioning perfectly, it would take an average of five years input per graduate. However, the countrywide average is double this figure with some provinces requiring more than 15 years input per graduate. The most efficient province is Vientiane Municipality but even here the average years input is still high at eight years input per graduate. There is potential for significant cost savings by improving internal efficiency. This should be done before further expansion takes place.

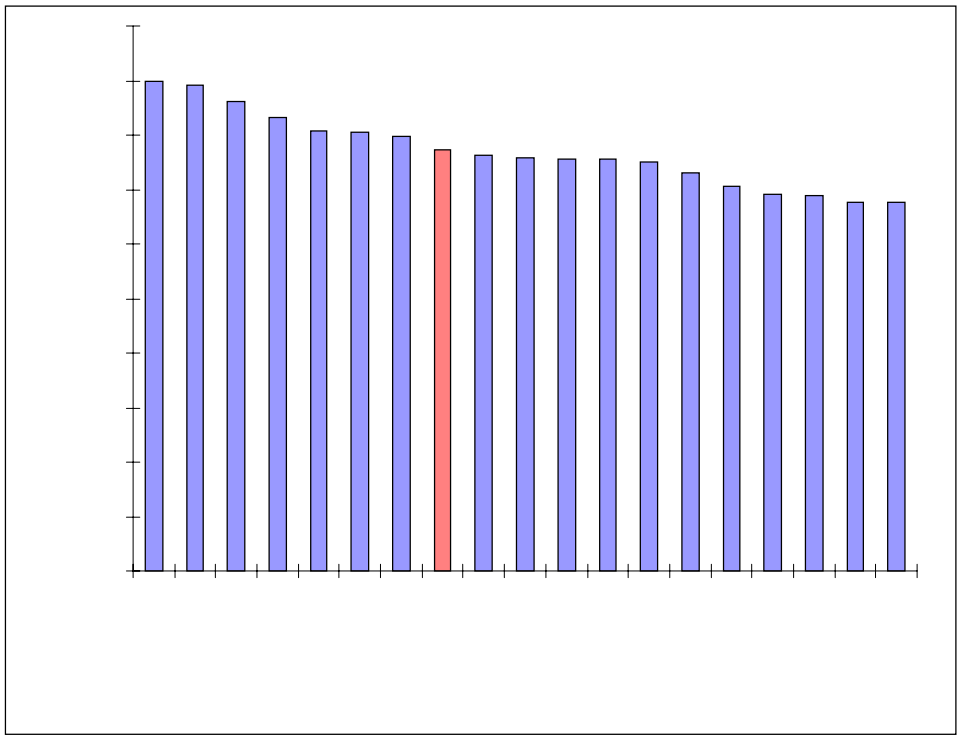
The internal efficiency of primary education in Lao PDR has been the subject of an intensive and detailed analysis by Alain Mingat. The reader is referred to his 1998 monograph (Mingat, 1998a) for more detailed information. Mingat

Figure 3.5
Repetition (Average Grades 1-5), 1995/96 to 1996/97



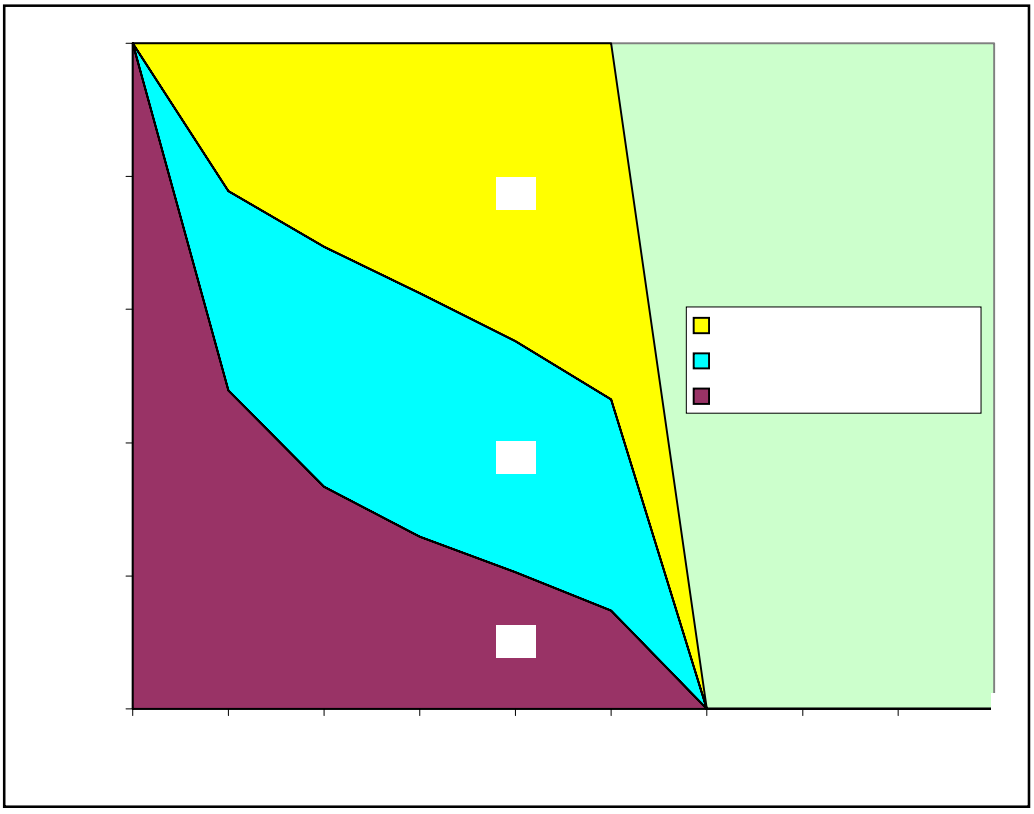
Source: Analysis of MOE Annual Statistical Bulletins

Figure 3.6
Primary Grade 1 Repetition Rates



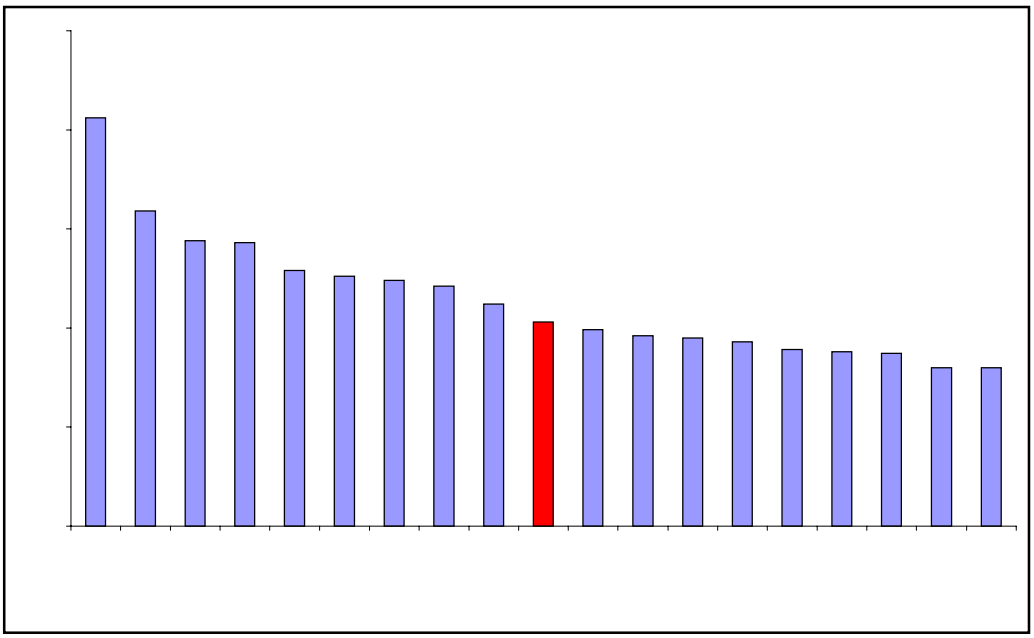
Source: Analysis of MOE Annual Statistical Bulletins

Figure 3.7
Survival to Grade 5 and Graduation, with and without Repetition



Source: Analysis of MOE Annual Statistical Bulletins

Figure 3.8
Years Input per Graduate, 1995/96 to 1996/97



Source: Analysis of MOE Annual Statistical Bulletins

concluded that 44 percent of public resources mobilized for education are wasted and further argued that 59 percent of this wastage can be attributed to dropout and 41 percent to repetition. This suggests that priority attention should be directed to reducing the dropout rate from primary school, where a major constraint is the lack of complete schools in many areas. Table 3.8 describes the proportion of complete and incomplete schools. Mingat concluded that approximately 33 percent of the pupils who currently drop out from primary school would not do so if the local school was providing all five grades of primary school. The extent of this problem is described in Table 3.9.

Table 3.8
Proportions of Incomplete Schools

	Number	Proportion
Schools offering only Grade 1	821	11.2%
Schools offering up to Grade 2	2,097	28.7%
Schools offering up to Grade 3	1,395	19.1%
Schools offering up to Grade 4	424	5.8%
Schools offering up to Grade 5	2,551	34.8%
Data not reliable	30	0.4%
Total	7,318	100%

Source: Mingat (1998a)

Table 3.9
Enrollments in Complete Schools

Province	Percent of new students enrolling in a complete school
Phongsaly	22.3
Sekong	33.8
LuangNamtha	34.6
Saravan	35.7
Attapeu	39.6
Houaphan	41.4
Luangprabang	44.2
Xiang Khouang	45.0
Bokeo	47.5
Khammouane	47.6
Bolikhamxay	49.7
Saysomboune	58.6
Savannakhet	59.5
Champassack	59.8
Sayaboury	71.3
Vientiane Province	71.6
Vientiane Municipality	85.7

Source: Mingat (1998), Data not available for Oudomxay

This analysis indicates that a significant improvement in school retention, and, therefore, efficiency, can be achieved by increasing the number of complete schools. There are two ways in which schools can be made complete: by providing more teachers, either new graduates or redeployed existing teachers; and, by introducing multigrade teaching.

b) Internal Efficiency and Teacher Supply

Mingat analyzed the allocation of resources to provinces and individual schools and identified a serious problem of misallocation of teachers to schools. The analysis indicated that the same number of teachers could be found in schools that vary widely in terms of the number of students enrolled. For example, there were schools with five teachers but with student enrollments varying from 50 to 340 students. Likewise, in a school enrolling 100 pupils, the number of teachers employed varied from two to eight. The problem of teacher allocation is particularly severe in small incomplete schools and is described in Table 3.10. This indicates a need to redeploy teachers from schools of oversupply to those with undersupply.

Table 3.10
Teacher Supply for Incomplete Schools

Number of teachers	Number of grades taught	Minimum pupil-teacher ratio	Maximum pupil-teacher ratio
1	1	10/1	53/1
1	2	9/1	100/1
2	2	5/1	83/1
3	2	8/1	44/1
1	3	7/1	151/1
2	3	7/1	105/1
3	3	11/1	78/1
6	3	8/1	27/1

Source: Analysis of MOE Statistical Database of School Enrollments, 1996/97

The strategy for redeployment of teachers is difficult within the context of the economic and social condition within Lao PDR. The primary difficulty lies in the lack of a culture of mobility among teachers. This lack of mobility comes from the quota system whereby they are required to return to their original home district after teacher training, and is reinforced by the economic need to have other sources of income in addition to a teachers salary. In many cases a teacher is also a farmer and will have a plot of land close to where his/her school is located. Thus, redeployment is not a simple strategy to implement. However, the minister of education has recently decided that a pilot implementation of a redeployment policy be undertaken in two provinces.

The introduction of multigrade teaching is more straightforward, particularly since in many cases, the reason for not having a complete school is a lack of sufficient numbers of students. There are many incomplete schools in Lao PDR, some with low numbers of students (see Table 3.11). Mingat's analysis indicates that 65 percent of all primary schools in Lao PDR do not offer all five grades. If a school offers only three grades, then unless students can travel to another school to continue their study to grades 4 and 5, they will be forced to drop out. There are two major remedies. The first is to appoint more teachers to the school and build more classrooms. The second is to make further use of multigrade teaching, either within existing classroom resources or in expanded classrooms.

Table 3.11
Incomplete Primary Schools with Low Population

Grades offered	Pupils teacher ratio Min. to max. (average)	Number of schools with low population
Grade 1	6/1 to 96/1 (27/1)	• 250 schools with less than 20 students • 480 schools with less than 27 students
Grades 1 and 2	5/1 to 100/1 (30/1)	• 620 schools with less than 24 students • 1100 school with less than 32 students
Grades 1, 2 and 3	7/1 to 151/1 (32/1)	• 230 schools with less than 34 students • 780 schools with less than 60 students
Grades 1 to 4	8/1 to 102/1 (31/1)	• 30 schools with less than 42 students • 200 schools with less than 74 students

Source: Analysis of MOE Statistical Database of School Enrollments, 1996/97

The data suggest that the introduction of multigrade teaching and/or a re-allocation of teachers has the potential to make many schools complete at low cost. The former will require specialized training of teachers and production of student workbooks, while the latter will entail some construction to enlarge certain schools. The importance of appropriate training in pedagogical and management strategies for multigrade teaching cannot be stressed enough and is further discussed below.

It is suggested that the introduction of multigrade schools be the priority for improving both access and internal efficiency of primary education and that appropriate training courses and materials development be provided for teachers who will become multigrade teachers.

c) Internal Efficiency and Adult Literacy

The analysis of internal efficiency also allows some conclusions to be drawn regarding factors influencing participation in school. Table 3.12 demonstrates

that adult literacy is related to promotion and dropout but not to repetition. Since repetition is related to ability and teaching processes, this would be expected.

Table 3.12
Relationship between Adult Literacy and School Dropout

	Years Input per Graduate	Average Male Literacy Rate	Minimum Male Literacy Rate	Maximum Male Literacy Rate	Average Female Literacy Rate	Minimum Female Literacy Rate	Maximum Female Literacy Rate
Promotion	-0.80	0.53	0.41	0.54	0.65	0.56	0.57
Repetition	0.59	-0.07	-0.06	-0.13	-0.28	-0.33	-0.20
Dropout (Av. Grades 1-5)	0.54	-0.69	-0.54	-0.65	-0.64	-0.46	-0.62
Grade 1 Repetition	0.33	0.08	-0.06	0.04	-0.11	-0.33	-0.07
Survival	-0.76	0.62	0.56	0.58	0.71	0.64	0.63

Source: Provincial data from MOE Annual Bulletins and 1995 Census data were used to derive correlation coefficients (District data were not available for analysis)

The relationship between parental literacy and dropout is interesting and would seem to suggest a self-perpetuating cycle of low educational value. That is, in communities with low adult literacy, children are more likely to drop out of school and remain illiterate. This would suggest a need for special intervention programs to break this cycle. It also indicates that in areas of low educational status among adults, formal primary education will continue to fail many children unless other nonformal programs of adult education are also implemented.

This analysis indicates an urgent need for improving the internal efficiency of primary education. If universal primary education of five years is to be achieved, considerable expansion of primary education will be required; however, improvement of internal efficiency needs to be given higher priority than expansion given the resource limitations that exist. This analysis also identifies the existence of a self-perpetuating cycle of low educational achievement. In order to break this cycle, provision of adult education will need to complement improvements in formal primary education.

d) Access and Equity

The most commonly used indicator of educational access is the NER. This indicator represents the proportion of school-aged children in school over the total number of school-aged children in the population. A related indicator is the GER which is the proportion of children in school regardless of age, over the total number of school-aged children in the population. While the GER may have a value greater than 100 percent, the NER cannot exceed

100 percent. The NER may be used as a measure of educational access and universality. An NER of 100 implies that all children of school age are attending school; that is, all six-year-olds are in grade 1, all seven-year-olds are in grade 2, etc. A perfect system such as the one described does not exist since not all children attend school and often children repeat a single year. Thus, the GER is a measure of school-aged and over-aged children who continue to be enrolled in school. These two ratios are used to describe educational access and to make international comparisons across systems. However in interpreting NER and GER the assumption is made that the large majority of children do indeed start formal schooling at the same age as is defined by the system and that repetition rates are comparable to other systems.

Table 3.13 describes the school-age population structure for Lao PDR and estimates for NER and GER. It attempts to make an estimate of enrollment ratios by excluding the high number of repeaters (up to 40 percent) who are found in grade 1. Figure 3.9 uses the same procedure to calculate estimated enrollment ratios for the different provinces. In both cases, it should be noted that the high levels of repetition across all five grades (average 24.4 percent) inflate GER. Figure 3.9 also demonstrates the enormous disparity between provinces. Interestingly, and perhaps not surprisingly, NER decreases as a function of distance from the national capital.

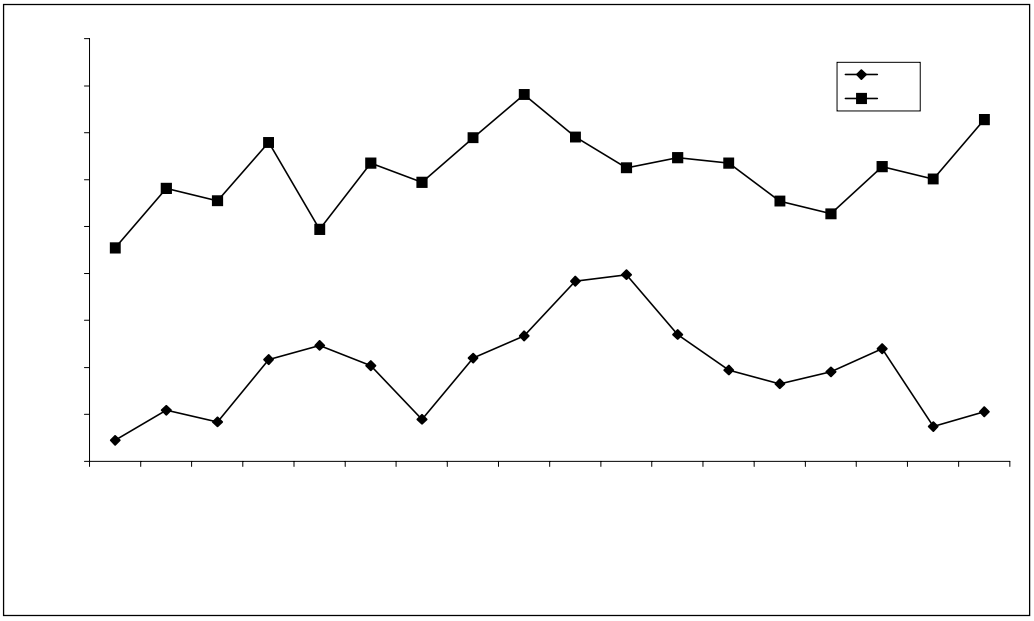
Table 3.13
Estimated Enrollment Ratios for Grade 1 Entrants

	Total	Male	Female	NER (Estimated)		GER (Estimated)	
	Students	Students	Students	Male	Female	Male	Female
Population							
6-10 years	697,253	355,119	342,134				
6 years	139,451	71,024	68,427				
School enrollments							
Entrants Grade 1							
(6-15+ years)	168,149	95,010	73,139			133.8%	106.9%
Entrants Grade 1							
(6 years)	59,819	36,018	23,801	50.7%	34.8%		

Source: 1995 Census and the 1995/96 Annual School Bulletin of MOE

A number of comments need to be made about the calculation of enrollment ratio, particularly regarding its usefulness as a planning tool. The interpretation of enrollment ratio, both gross and net, is made difficult by the fact that less than half of all new entrants to grade 1 are six years of age, repetition rates are high and many students drop out from school. This would suggest that the use of either NER or GER as an indicator for planning targets and evaluation is not useful since its interpretation is ambiguous and difficult. A final comment is that real enrollment ratios for primary school must be less

Figure 3.9
Grade 1: Net Enrollment Ratio & Gross Enrollment Ratio



Source: 1995 Census and the 1995/96 Annual School Bulletin of MOE

than the figure derived for grade 1, since children drop out from school. Thus, the figures above would represent an over-estimation of a true enrollment ratio. At the same time, it is clear that more than 42 percent (the averaged NER for boys and girls) attend school, however, not for the full duration of the five-year cycle. An indication of the attendance at school by different age groups is shown in Table 3.14.

Table 3.14
Proportion of Children at School (percent)

Age	Boys	Girls
6	25.7	25.7
7	49.4	47.4
8	62	57.5
9	72.9	68.2
10	77.4	70.4
11	84.1	76.6
12	81.7	71.5
13	80.3	66.3
14	76.4	57.8
15+	66.3	42.7

Source: 1995 Census

These census data, together with the analysis above, indicate that enrollment ratios across the duration of primary school are difficult to interpret. For example, 11 years of age represents the most frequent age group in school, however it is not clear when 11-year-olds entered the system, how many years were completed and how many years were repeated.

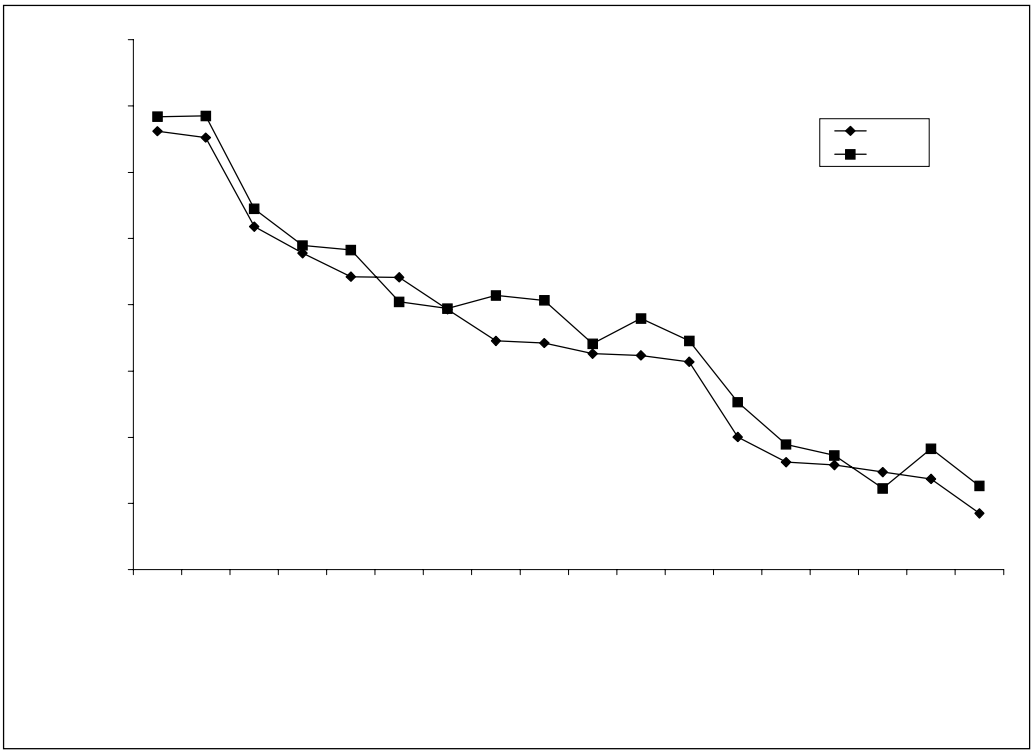
In describing access to primary school, the most likely scenario is that 84 percent of boys enter primary school at some time and that 13.3 percent of these will drop out during the first year. Among girls, 77 percent enter primary school at some time and of these, 14 percent will drop out during the first year. This means that 23 percent of all girls and 16 percent of all boys can be considered "out-of-school". However, the high repetition rates found across Lao PDR indicate that this is an optimistic scenario. The worst case scenario, assuming an average repetition rate of 24 percent, is that 36 percent of all boys and 48 percent of all girls are out-of-school.

The number of six-year-old boys entering grade 1 has increased from 27.7 percent in 1993/94 to 37.9 percent in 1996/97. For the 1996/97 school year, the proportion of six-year-old boys making up the grade 1 class ranged from 8.5 percent in Phongsaly to 66 percent in Vientiane Province. The proportion of six-year-old girls entering grade 1 for the first time has increased from 32.5 percent to 41.8 percent over the four-year time period and ranged from 12.2 percent in Sekong to 68 percent in Vientiane Municipality.

Figure 3.10 suggests that six years of age may not be the appropriate school starting age for many children in Lao PDR. It also indicates that many parents already know this and are acting to delay the entry of their children into primary school. The large drop in proportion from Vientiane Municipality and province and the distribution suggests that in many rural areas children are not ready to go to school at six years of age. This non-readiness may stem from many reasons, including cultural and social processes. The situation is similar in Thailand, where official policy is for children in rural areas to start school one year later than their peers in urban areas. The benefit to teaching and learning is that the class is more homogeneous and, therefore, easier to pace with a likely reduction in repetition. The cost is that many parents need to look after their children for an additional year. It should be noted, however, that primary school is an expensive way of providing what is essentially day-care. Therefore, it is suggested that in Lao PDR, consideration be given to an official starting age for rural primary school of seven years of age. Discussions with UNICEF suggest that such a delay would improve learning since children would be older and more ready to learn.

The variation in educational access across provinces suggests that the setting of national targets is of limited usefulness. NER ratios vary from more than 50 percent to only 12 percent and annual growth rates of new enrollments vary from almost 20 percent to 11 percent. There is also no evidence of growth rates being in line with current enrollment ratios; that is, greater supply of

Figure 3.10
Grade 1 Entrants: Proportion of Six-Year-Olds



Source: Annual Statistical Bulletins 1993/94 to 1996/97

resources and efforts to improve enrollments are not being provided to provinces of greater educational need. Indeed, use of national targets may continue to reinforce disparities since they may be achieved by advances in three or four of the more densely populated provinces without any improvement in provinces with small populations. The fact that ethnic minority groups tend to be found in larger numbers in the less populated provinces also suggests that the use of national targets will not be beneficial to reducing disparities among ethnic groups. A preliminary analysis of district level data indicates that the same variation that is found between provinces also occurs within provinces. It is important, therefore, to conduct an analysis similar to that used here at district level. If such an analysis is not conducted and targets set for each district, educational access will continue to be uneven, particularly among those districts distant from the PES office.

The picture of uneven development and different growth implies that individual planning targets must be set for each province, and within provinces an analysis of district level access must be undertaken to determine how best to implement that target. Provincial targets will take the form of achieving a set level of enrollment growth over a period of time or an NER to be achieved. It is also suggested that gender and ethnic minority equity targets be determined separately for each province. It is suggested that one target be set for the end of the current planning period (2000) and one for 2005.

Data provided in Annual Bulletins report enrollments by geographical (lowland, foothill, mountains) distribution rather than by ethnic or linguistic grouping. Thus, it is difficult to determine access and equity by ethnicity using MOE statistical data. However, since many ethnic minority populations live in remote mountainous regions and provision of schools and teachers becomes more difficult as the geography becomes more difficult, it would be expected that ethnic minorities have reduced access to schooling.

The 1995 census data do provide some comparative data on school attendance across major ethnic groups indicating that the proportion of attendance for each ethnic group varies considerably across provinces. This would suggest that it is not ethnicity, itself, that is a barrier to education but rather provincial supply of educational services. It is suggested that specific targets be set for improving the attendance of ethnic minority groups as part of the planning process and identification of targets by each district.

International figures indicate that some 15 to 20 percent of all children have learning difficulties of some nature and require additional assistance if they are to benefit from schooling. Lao PDR does not have the resources to provide extensive support for special education students. However, there is a need to identify interim strategies that may be implemented to raise awareness of special education needs and to provide teachers with advice on how to deal with the more frequent examples of need. An example of a common learning impediment would be hearing loss through poor sanitation and health. Simple interventions by teachers can often lead to a significant reduction of such hearing loss among students.

It is suggested that an investigation of special education needs among primary school students be carried out, perhaps using a sampling approach, and that a set of simple and inexpensive teacher intervention strategies be developed. Such teacher intervention strategies should be identified and described within the context of existing teacher competencies, skills and available resources in rural areas of Lao PDR.

e) Teacher Supply and Teacher Training

The existence of teacher oversupply and undersupply between provinces is consistent with the earlier reporting of problems in teacher deployment by Mingat (1998a). The additional argument made here is that unless separate provincial targets and plans are developed, there is no logical basis on which to determine quota places for teacher training. Thus, it is suggested that the determination of primary teacher training quotas be derived from individual provincial targets and plans.

The number of new primary teachers appointed during the period 1994/95 through 1996/97 is shown in Table 3.15. Anecdotal evidence from UNICEF field workers suggest that teacher resignations have increased dramatically

Table 3.15
Number of New Primary School Teachers Appointed, 1994/95 to 1996/97

	1994/95		1995/96		1996/97	
	Qualified	Unqualified	Qualified	Unqualified	Qualified	Unqualified
Vientiane Municipality	116	18	97	26	101	13
Phongsaly	17	3	8	4	46	33
LuangNamtha	27	15	27	11	37	24
Oudomxay	9	47	13	48		
Bokeo	5	1	19	2	43	29
Luangprabang	14	22	18	4	63	33
Houaphan	37	24	25	32	64	28
Sayaboury	19	2	71	2	72	1
Xiang Khouang	7	7	54	25	67	11
Vientiane Province	13	2	51	1	67	2
Bolikhamxay	10	0	18	1	52	4
Khammouane	23	12	34	8	110	2
Savannakhet	27	1	78	4	130	12
Saravan	4	3	14	3	28	5
Sekong	2	4	14	2	27	10
Champassack	11	0	48	2	74	1
Attapeu	34	0	20	1	38	0
Saysomboune	2	0	18	1	26	1
Total	377	161	627	177	1045	209

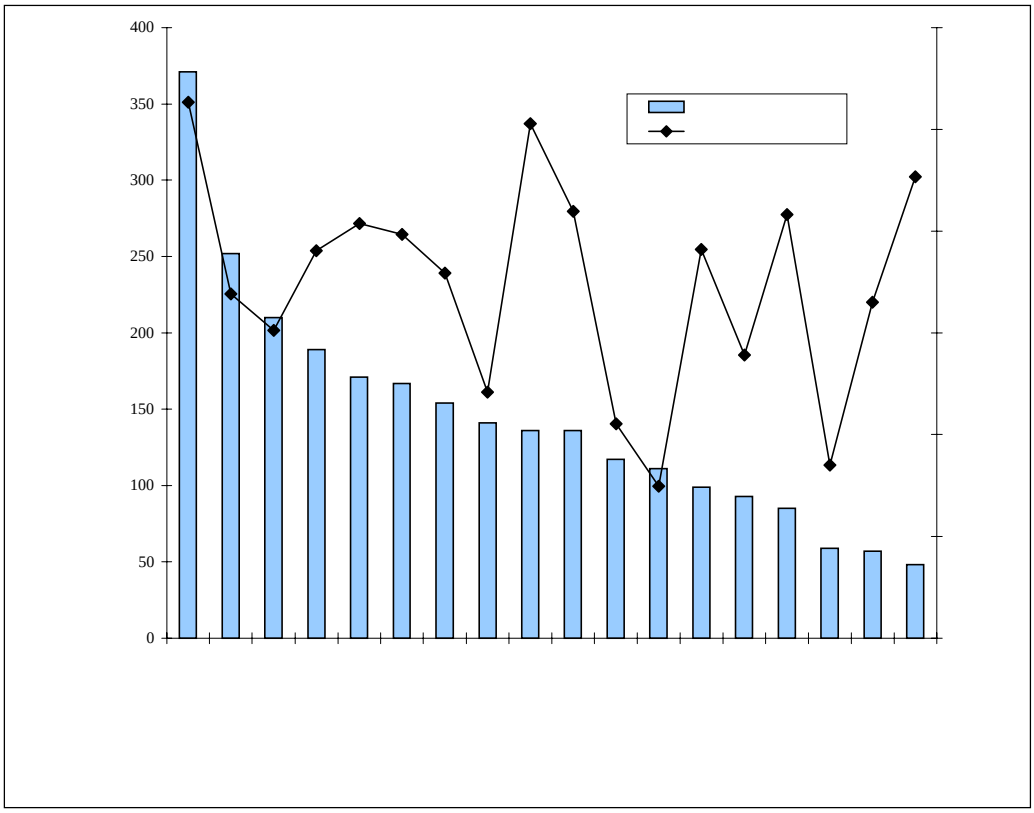
Source: MOE (1998) Evaluation of Progress on the National Plan, 1991/92 to 1997/98

during 1998/99 and that this is due to inflation and delays in payment of salaries.

Figure 3.11 attempts to demonstrate the adequacy of new teacher appointments to education demand measured in terms of current participation rate. It indicates that recent appointments of new primary teachers bear no relationship to educational need. Together with Mingat's earlier analysis of existing disparities of the number of teachers across provinces, it is strong evidence to indicate the need for a review of current provincial quota mechanisms for teacher deployment.

As noted, redeployment of teachers will be difficult to achieve as almost all teachers require additional employment and/or income generation activities such as farming in order to survive. In some cases, such as very small schools in remote ethnic minority areas, two teachers need to be appointed for security or cultural reasons. Of greater concern, and where action can be taken more easily, is to ensure that the balance of teacher supply does not get worse. Current teacher appointments are simply compounding the problem of over- and undersupply across provinces. A further argument against redeployment is that while there are relative oversupplies of teachers in some provinces, all

Figure 3.11
New Teachers Appointed by Province



Source: Analysis of MOE Annual Statistical Bulletins & DTT Data

provinces need to improve the participation rate and no provinces have teachers who are not required. What is needed is a mechanism to better utilize existing teachers.

It is suggested that a review of current teacher quota determinations be undertaken and that criteria which relate to educational need (existing participation rates) and established targets (growth rates) be developed and used for determining quotas. Quotas should be set at the district level and relate to district level targets for educational growth. There should also be a mechanism for ensuring that overall quotas do, indeed, reflect the pattern of education need and are linked to established provincial and district targets for educational growth. A monitoring mechanism should also be implemented.

Quality of learning outcomes in primary schools depends directly upon the quality of the teaching workforce. Teacher quality can be enhanced through pre- and in-service training. Preservice training provides a longer time period in which to provide instruction in pedagogy and content although its impact on the entire system is much slower since new teachers make up only a small proportion of the whole teaching workforce. Thus, in-service training of

teachers is a pivotal strategy for quality improvement in primary education. The major disadvantage of in-service training lies in the need to provide training experiences for staff who are already teaching and who have second and/or third jobs.

If quality improvements are to be made within a reasonable time period and sufficient numbers of teachers gain the skills by which they can utilize resources that have recently been introduced to primary education in Lao PDR, then in-service training must be the priority. Earlier discussion has identified two major areas that require priority attention: training of teachers to allow students to use their textbooks; and, training of teachers in pedagogy and management for multigrade teaching. It is suggested that these two areas be formally recognized as priority areas for training for both pre- and in-service training.

A prior condition for achieving the first objective may be content upgrading for some subject areas, particularly mathematics. A complementary strategy that should also be considered is the appropriateness of some parts of the curriculum. Rather than assume that the mathematics curriculum is appropriate and that teachers do not have sufficient content knowledge, an examination should be made of the level of difficulty that currently exists. Such examination is particularly relevant given that the majority of primary school graduates leave school to continue life as farmers.

Previous efforts have focused on materials and curriculum support for multigrade teaching. However, successful multigrade teaching requires the teacher to be an efficient manager and facilitator and requires a set of competencies that is very different to that of a teacher in a single-grade classroom. It is important for the sustainability and acceptance by communities of multigrade teaching that teachers are provided with the necessary skills for successful implementation. If they are not trained adequately, communities will continue to see multigrade teaching as an inferior form of education and will resist sending their children to such schools. If this occurs, a significant opportunity for a cost-effective expansion of primary education in Lao PDR will be lost. It is, therefore, suggested that training in multigrade teaching include both pedagogical and management issues and that such training be supported by the development and production of student workbooks.

From discussions with staff at the TTC in Vientiane, it is clear that they have limited, if any, experience in practical teaching at primary school level. Of more concern is the attitude among senior TTC staff that this is not a problem. The clear implication of such a situation is that teacher trainees are taught more from theory than from practice. A priority should be to recruit model teachers and provide additional training so that they can become TTC staff. All new staff recruited by TTCs should have had successful teaching experience at the primary level and have demonstrated pedagogical skills that make them model teachers.

The TTC in Vientiane has an attached demonstration primary school. However, student practical experience at this school consists of three to four trainee teachers sitting in a single classroom at one time with limited opportunity for teaching in an interactive way. There is a need for staff upgrading in practical teaching methods, particularly in encouraging textbook use and interactive learning.

Multigrade teaching is perhaps the most important tool for expanding educational access in rural Lao PDR. However, current approaches provide limited exposure to multigrade pedagogy with no attention paid to associated management issues. It is suggested that TTC staff receive upgrading in the nature, structure, and function of multigrade teaching including a significant practical component. It is also suggested that existing demonstration schools (or practicum schools if no demonstration schools exist) at all TTCs be restructured so that at least one multigrade class be available for practical teaching experience in multigrade teaching pedagogy and management.

f) Management and Structural Issues

Two structural issues have been identified during the preparation of this report. The first is a suggestion to consider changing the age for entry to primary school in rural areas from six to seven years of age. Delayed entry to primary school is already a reality for the majority of new students and this suggestion would serve to formalize what is already happening. The exclusion of six-year-old students from beginning schools will result in an older and more homogeneous group in grade 1. It is also likely that an older student entering primary school is more ready for learning and that failure to learn will be naturally reduced.

The second structural issue relates to the timing of the school year. In mountainous areas, the school year does not interlock with the agricultural cycle and, as a result, students are absent from school during the time that land is being prepared, rice is being planted and when rice is being harvested. School holidays coincide with none of these periods. Thus, students are absent for a significant period of time with a result of poor learning.

It is suggested that in mountainous regions and in other areas where appropriate, the timing of the school year be modified so that a more congruent relationship between the agricultural and the school calendars can be achieved. It is clear that there will be an impact on teachers from such a change in the school year since the majority of teachers use their extra "free time" for income generating activities. Thus, some form of allowance may be needed to offset the foregone earning of teachers resulting from such a change. Such an allowance may take the form of a rice allocation. It is suggested that a pilot project be implemented to test the feasibility and cost of such an arrangement.

3.5 Suggested Priorities and Recommendations

Priority 1 Improvement in Internal Efficiency and Access

Improved efficiency will require decreased dropout and repetition rates and a larger proportion of new entrants surviving until graduation. This will require improving the quality of teachers and learning and making schools complete to grade 5. Other suggestions below facilitate the achievement of these improvements.

Recommendations

1. Adapt Entry Age to Primary Education in Rural Areas: Consideration should be given to allowing flexibility in the entry age to primary school in rural areas. Such a delay would improve learning since children would be older and more ready to learn. It would also make classes more homogenous and teachers would be dealing with a narrower range of abilities making teaching more effective and easier. It is suggested that the results of a pilot implementation be examined before consideration of further expansion of pre-primary education.

2. Set Targets for Expansion of Educational Access: For primary education, targets for educational access should be determined at the province and district levels. The uneven development and different growth across provinces reinforces the suggestion that individual planning targets must be set for each province, and within provinces, and an analysis of district level development must be undertaken to determine how best to implement that target. Provincial targets will take the form of achieving a set level of new enrollment growth over a period of time or a participation rate to be achieved. It is suggested that one target be set for the end of the current planning period (2000) and one for 2005. Both ethnic minority and gender-equity targets should be determined separately for each province

3. Expand Multigrade Teaching for Improved Access: The introduction of multigrade schools should be the priority for improving both access and internal efficiency of primary education and that appropriate training courses and materials development be provided for teachers who will become multigrade teachers.

4. Increase Attention to Special Education: An investigation of special education needs among primary school students should be carried out, perhaps using a sampling approach, and a set of simple and inexpensive teacher intervention strategies should be developed. Such teacher intervention strategies should be identified and described within the context of existing teacher competencies, skills and available resources in rural areas of Lao PDR.

5. Adapt Structure of the School Year to Local Conditions: In mountainous areas the school year does not interlock with the agricultural cycle and as a result, students are absent from school during the time that land is being prepared, rice is being planted and when rice is being harvested. School holidays coincide with none of these periods. Thus, students are absent for a significant period of time with a resulting in poor learning. In areas where appropriate, the timing of the school year should be modified so that a more congruent relationship between the agricultural and the school calendars can be achieved. It is clear that there will be an impact on teachers from such a change in the school year since the majority of teachers use their extra "free time" for income generating activities. Thus, some form of allowance may be needed to offset the foregone earning of teachers from such a change. Such an allowance may take the form of a rice allocation. It is suggested that a pilot project be implemented to test the feasibility and cost of such an arrangement.

Priority 2 Improvement of Quality of Curriculum and Instruction

During training of teachers at both pre- and in-service levels, time should be devoted to explaining and demonstrating the importance of understanding what a curriculum is and how it acts as a "map" for daily teacher activities. Given the academic nature of teacher training, it is likely that such training will also be required for trainers and staff of teacher training colleges.

Recommendations

1. Assess Potential Use of VAC School Model: An investigation should be made of the possible adaptation of the Vietnamese VAC-school model to the Lao PDR situation. Such an investigation would include identification of curriculum and school needs, teacher training requirements, materials provision, etc., to enable a piloting of this scheme. Links to the Basic Education (Girls) Project should be developed since this project will include development of materials for teaching locally relevant life skills. This suggestion serves to introduce a practical component to the curriculum that will reinforce the teaching of life skills.

2. Further Development of Textbooks and Workbooks: NRIES staff should be provided with a larger range of exemplar materials, particularly materials that promote an interactive approach to student use. Training of NRIES staff in development of student workbooks linked to existing textbooks should be a priority. Emphasis should be placed on development of student workbooks for the three core subjects. These workbooks should be explicitly related to current textbooks and include space for student work. However, the introduction of student workbooks should follow in-service training of teachers both in content knowledge and the pedagogy of using textbooks. If this sequence is not followed, schools may not use student textbooks produced.

Suitable interactive textbooks should be developed for grades 1 through 3 for the core subject The World Around Us. It is also suggested that further development and production of textbooks take place only after teachers are trained to use textbooks and monitoring indicates that textbooks are indeed being used in schools.

3. Delay Textbook Reprinting until Problems of Delivery and Classroom Use Are Addressed: Field visits and discussions with educators indicate that, currently, textbooks are not being widely used in schools. Thus, it is suggested that no further textbook reprinting be implemented until measures are taken to ensure that textbooks are actually used. A priority area for investigation should be the adequacy of the current distribution system used for textbook delivery. It is also suggested that appropriate monitoring and auditing procedures be developed and implemented so that MOE can more efficiently track textbook distribution.

Priority 3 Provision of Adequate Numbers and Quality of Teachers

Recommendations

1. Address Problems of Teacher Deployment and Teacher Training Quotas: The existence of uneven teacher oversupply and undersupply between provinces identified in this report is consistent with the earlier reporting of problems in teacher deployment by Mingat (1998a). Unless separate provincial targets and plans are developed, there is no logical basis on which to determine quota places for teacher training. Thus, it is suggested that the determination of primary teacher training quotas be derived from individual provincial targets and plans.

   A review of current quota determinations should be undertaken and criteria which relate to educational need (existing participation rates) and established targets (growth rates) should be developed and used for determining quotas. Quotas should be set at the district level and relate to district-level targets for educational growth. There should also be a mechanism for ensuring that overall quotas do, indeed, reflect the pattern of education need and are linked to established provincial and district targets for educational growth. A monitoring mechanism should also be implemented.

2. Modify and Improve Teacher Training: There are two major areas that require priority attention for both preservice and in-service teacher training: training of effective use of textbooks; and, training in pedagogy and management for multigrade teaching. A prior condition for achieving the first objective may be content upgrading for some subject areas, particularly mathematics. A complementary strategy that should also be considered is the appropriateness of some parts of the curriculum. Rather than assume that the mathematics curriculum is appropriate and that teachers

do not have sufficient content knowledge, an examination should be made of the level of difficulty that currently exists.

An examination of the level of difficulty of the current curriculum should be made, particularly given that the majority of primary school graduates leave school to continue life as farmers. The level of knowledge and skill that primary education provides should match the requirements of the current and future labor market. It is not clear that this is currently the case.

Training in multigrade teaching should include both pedagogical and management issues and such training should be supported by the development and production of student workbooks. A more intensive in-service training program should be mounted for upgrading of teachers in the two priority areas identified above. This program should aim to be more extended in time, and include follow-up, demonstration and monitoring of changed teacher behavior. School-based trainers should be used to provide this training.

Priority 4 Upgrade Staff of Teacher Training Colleges

As has been discussed earlier, there is a need for teachers to explicitly learn how to utilize textbooks in the classroom. It is not surprising that they do not effectively use textbooks given that they themselves during their teacher training have had no textbooks or workbooks. The ADB-supported Education Quality Improvement Project has been recently completed and will provide textbooks for TTCs. It is suggested that training in textbook use be a top priority for teacher training college staff.

Multigrade teaching is perhaps the most important tool for expanding educational access in rural Lao PDR. However, current approaches provide limited exposure to multigrade pedagogy with no attention paid to associated management issues. It is suggested that TTC staff receive upgrading in the nature, structure and function of multigrade teaching including a significant practical component. It is also suggested that existing demonstration schools (or practicum schools if no demonstration schools exist) at all TTCs be restructured so that at least one multigrade class is available for practical teaching experience in multigrade teaching pedagogy and management.