INDONESIA
EDUCATION AND HUMAN RESOURCES SECTOR REVIEW
April 1986

CHAPTER FIVE
PREPRIMARY AND PRIMARY EDUCATION

IEES

IMPROVING THE EFFICIENCY OF EDUCATIONAL SYSTEMS

Coordinated for the Government of Indonesia by the
Ministry of Education and Culture with USAID

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For the Ministry of Education and Culture

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5.0 PRE-PRIMARY AND PRIMARY EDUCATION

5.1 Introduction

From its inception as an independent state, Indonesia has placed a priority on providing educational opportunity to all its people. Article 31 of The 1945 Constitution of the Republic of Indonesia states:

1. Citizens shall have the right to obtain an education;
2. The Government shall establish and conduct a national educational system which shall be regulated by statute.

Article 10 of Law No. 12 of 1954 made this goal explicit by stating that every child reaching the age of six has a right to enter primary school and that children of eight years of age are required to attend school for at least six years.

This mandate has been a focus of educational development efforts for each of the four five-year development plans since 1969. A target of 80% enrollment of the age cohort was set as an objective of the first five-year plan, Repelita I. This target was not realized as enrollment in primary schools (excluding or religious schools) expanded by only 770,000, a very small increase. For Repelita II, a much more modest projection was initially made: 55% of the 7-12 year-old age group enrolled by 1979. This target was subsequently revised, first to 65%, then 75%, and finally 85% as rapidly increasing oil revenues made such a goal seem feasible. By 1978/79, the year prior to the beginning of Repelita III, enrollment of the 7-12 year old age group had reached 79.3%. Universal primary education became a basic goal of the fourth five-year plan, which began in 1984/85, a target that seemed well within reach as estimates of enrollment in 1983/84 indicated 95-98% participation.

Primary education programs are now at a crossroads. A comparatively large proportion of funding is still allocated for primary education subsector development. (If SD Inpres funds are included, basic education expenditures would approximate half of the Ministry of Education and Culture budget for 1985/86.) Currently there is disagreement as to whether the goal of universal primary education can be fully attained in realistic terms and to what extent that last few percent of the population can be reached in an efficient manner. Debate has also begun as to whether some funding for primary education can (given political realities) be redirected to other educational sectors more in need, or to activities that better fulfill the other major objectives of past and current five-year plans--improvement of the quality of education and ensuring that the education provided adequately prepares learners for the workplace and for further education. It is hoped that this analysis will contribute to a productive resolution of these debates, to the identification of other issues that will foster new debates provide a dynamic for the development of the next five-year plan.

This introduction is followed by a status section which reviews the historical development of primary education in Indonesia since the Dutch colonial period and describes the current status of preprimary and primary education in the country. Preprimary education programs will be described first, followed by a description of primary education programs. Current goals and strategies, the structure of preprimary and primary education, and specific programmatic components of each will be examined. A discussion of the issues of external efficiency, internal

efficiency, access and equity, administration and supervision, and costs and financing will provide a framework for the analysis section that will follow. The third and final section of this chapter will present conclusions and recommendations for alternative policies and programmatic development, information system support, and/or further research. The information and recommendations presented herein are designed to reflect to the extent possible the ideas and insights of our Indonesian counterparts and other educators who graciously and openly shared their perspectives with us and found time in their heavy work schedules to assist in this effort.

5.2 Status

5.2.1 Historical Setting

The Dutch East-Indies Company forced the Portuguese out of the Moluccas and began to set up schools in the early seventeenth century. Portuguese priests were driven out and their schools closed. By 1645, there were 33 Dutch schools and 1300 students on the island of Amboina in the Moluccas and by 1708 there were 3966 students. The first school in Jakarta was established in 1617, and by 1779 there were three schools with 639 students in Jakarta.

When the Dutch, allied with Napoleon's France, lost the Napoleanic Wars to the British, control of the NetherlandsIndies reverted to the British under Governor General Raffles. British control lasted for only five years and the Dutch regained control in 1816, this time under the authority of the Government of the Netherlands.

After 1816, a dual education structure was established, creating

separate primary and secondary schools for Europeans and for natives. The native primary schools in turn were divided into first class primary schools for the children of local dignitaries and second class primary schools for everyone else; the former lasted seven years and the latter five years. In 1907, village elementary schools were opened consisting of a three-year course that could be followed by two years of "continuation school." "Link schools" were also established to follow village school with five years of instruction in Dutch.

This basic system lasted until the outbreak of World War II. The inequities in the system are demonstrated in Table 5.1. showing per pupil expenditures for primary education in 1937.

TABLE 5.1

EXPENSES PER STUDENT IN 1937

1.	European Schools	Nf 90	1.	Village Schools	Nf 5
2.	Dutch schools for Natives	Nf 45	2.	Continuation Schools	Nf 14.50
3.	Dutch School for Chinese	Nf 60	3.	Continuation School in Dutch	Nf 20

Source: MOEC (1983). Education in Indonesia Throughout the Centuries. Jakarta: Balitbang Dikbud.

In 1945, there were 21,256 primary schools in Indonesia with approximately 2,523,000 students. By 1950, five years after Indonesian independence, this number had almost doubled, to approximately 4,926,000 students in primary school. This was, however, only about 50% of the primary school age population. Expansion of the primary school system became focus of attention.

In 1951, it was determined that if all school aged children were to be enrolled, an additional 138,240 teachers would be needed. The KPKPKB Program (Kursus Pengajar untuk Kursus Pengantar Kewajiban Belajar or Teachers' Training for Introductory Training Toward Compulsory Education) was established to train primary school teachers. This consisted of 4 years of alternating study/teaching to train primary school teachers. In 1953, the KPKPKB program developed into the Sekolah Guru B (teacher training school B or SGB) then Sekolah Guru A (teacher training school A or SGA program). Many of the SGB certificate teachers are going through upgrading programs today.

The growth rate of primary school enrollments expanded progressively, if erratically, over the 25-year period from 1945 to 1970. Table 5.2. shows the growth rates during this period. Although educational expansion was clearly a goal, fiscal constraints did not allow the Government to implement the programs required for large scale expansion.

TABLE 5.2

PRIMARY SCHOOL ENROLLMENT GROWTH, 1945-85

Year	Enrollment	Average Growth Rate (%)
1945	2,523,000	-
1950	4,926,000	95%
1955	7,034,000	43%
1960	8,220,000	17%
1965	11,587,000	41%
1970	13,395,000	16%
1975	14,280,157	7%
1980	22,551,870	58%
1985	26,567,688	18%

Source: MOEC (1983). Education in Indonesia Throughout the Centuries. Jakarta: Balitbang Dikbud.

The new oil revenues that became available after pressure from the OPEC cartel for price rises in the period of 1972-73 provided the fiscal basis for educational expansion. In 1974, the SD Inpres program of primary school facilities expansion was initiated, and in 1977 primary school fees were abolished. Compulsory primary education became a realistic objective. From 1975 to 1980, enrollments increased by 8,271,713 students or 58%. Government routine expenditures for education rose from Rp.221.9 billion in 1974/75 to Rp.1,117.3 billion in 1980/81, a 400% increase, and are projected to rise to approximately Rp.3,071.3 billion by 1988/89, the end of Repelita IV. This tremendous increase in government expenditure for education has led to rapid increases in enrollments, but according to some observers it may also have led to loss of educational quality. We will examine this issue in the pages that follow.

5.2.2. Goals and Strategies

Quality and equity have been primary goals for Indonesian education for decades. In addition to being viewed as a goal in itself, expansion of quality education is seen as contributing to other overarching goals of maintaining national unity and stability and ensuring economic growth. This view is reflected in the current five-year plan, Repelita IV:

> "National education based on Pancasila aims to improve the devotion to the One and only God, the intelligence and skills, enhance good behavior and personality and strengthen the national consciousness and love for the country in order to produce development-oriented individuals who are able to develop themselves and be jointly responsible for nation building.

In the first Repelita (1969 to 1974), the formal objectives for educational development were as follows:

- expansion and equalization of educational opportunities; improvement and equalization of the quality of education;
- matching of education to development requirements;
- improved management of the school system;
- guidance of the younger generation;
- increased participation by society in educational development.

Source: Harvard Institute for International Development (December 1982). Development Program Implementation Study.

These same objectives have been pursued in the three Repelita which followed. The emphases shift from year to year, but the basic objectives remain the same, national unity, economic development, quality, and equal access.

In 1973 and 1983, the Guidelines for State Policy (GBHN) defined the national educational policies which underlie the objectives of the current five-year plan. Among those relating to primary education are the following:

Decree No. II/MPR/1983 on primary education states among other points that:

1. The stress of educational development is on the enhancement of the quality and expansion of primary education in the framework of realizing and making the implementation of compulsory education more effective and to expand opportunities to education up to secondary education;

2. In the framework of further expanding opportunities to education, facilities should be provided to enroll all school age children, including those of low-income families, the handicapped, or those who live in such remote areas that they cannot make use of available facilities, so that they too can get education and obtain skills.

Source: GOI (May 1984). Repelita IV: The Fourth Five Year Development Plan of Indonesia.

These policies provide the basis for primary education development targets in four major areas for Repelita IV: 1) expansion of enrollments to include 100% of the 7-12 age group; 2) primary school building and rehabilitation; 3) improvement of the quality of education by providing of textbooks and support materials, improving teacher training, and revising curriculum; and 4) expansion of programs to support preprimary education and education for children with learning disabilities. Among the targets specified in each of these areas are the following:

Primary school enrollments	- 100% of the 7-12 age group enrolled by 1989.
Primary school graduates	- from 3,134,000 yearly in 1983 to 3,835,800 in 1989.
Facilities	- 100,000 new primary classrooms; - 108,500 primary school buildings rehabilitated; - 7 new special schools for the learning disabled; - 30 government preschools rehabilitated; - 18 special schools rehabilitated; - 50 new houses for special school principals and teachers.

Learning materials for primary schools	- 96 million texts and 420 million sets of support materials; - 196.2 million library books; - 420 million sets of skill training materials.
Learning materials for preschools	- 5.9 million library books; - 10 million sets of support equipment.
Learning materials for special schools	- 1.4 million texts; - 1.4 million student guides; - 1.4 million teacher guides; - 2,800 sets of support equipment.

Source: Departemen Pendidikan dan Rebudayaan (1985). Ringkasan Rencana Pembangunan Lima Tahun 1984/85-1988/89. Jakarta: Bidang Pendidikan

These rather ambitious targets summarize the Government's strategy for fulfilling the twin goals of expanding primary education and improving educational quality. The former goal is to be met by building new schools, the expansion and rehabilitation of existing schools, and special programs for handicapped children, children in remote areas and children who have limited access to schools because of financial or other constraints. The strategy for improving educational quality includes upgrading teachers, improving texts and teaching/learning methodology, and providing of learning materials, library materials and equipment. These are to be achieved through the combined work of the Ministry of Internal Affairs, Ministry of National Planning and Development (BAPPENAS), the Ministry of Finance and the Ministry of Education and Culture (MOEC). This multi-ministerial approach to basic education will be further described in the following section.

5.2.3 Structure of the Pre-Primary and Primary School System

5.2.3.1 Pre-Primary and Primary Schooling Structure

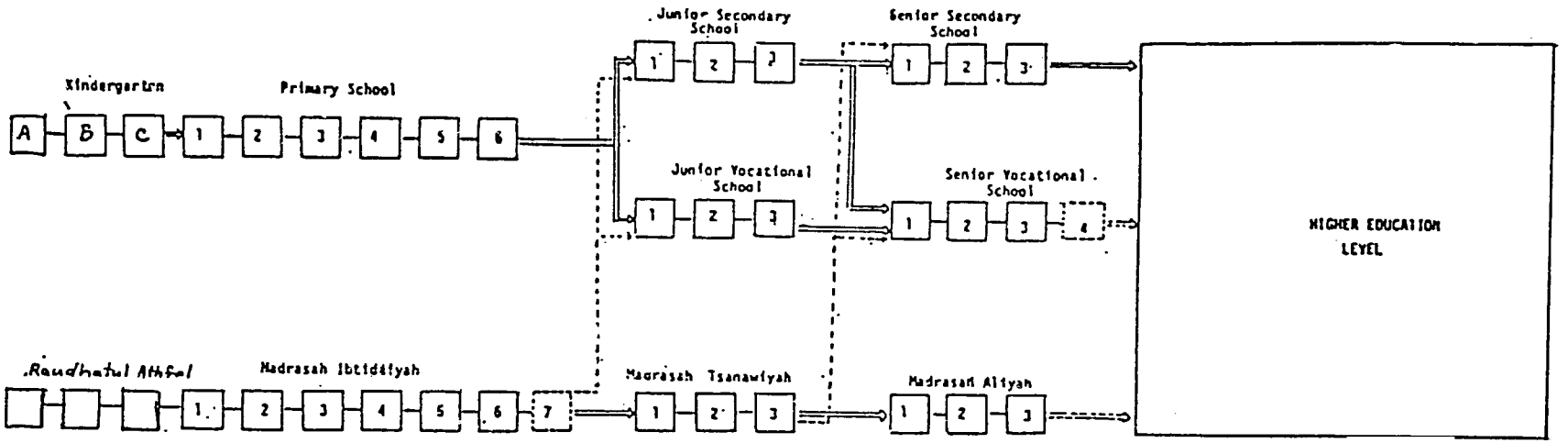
The structure of the formal preprimary and primary education system is depicted in Figure 5.1. Preschool programs begin for children at the age of three or four and last for three years until the age of six or seven, when children enter primary school for six years of compulsory primary education. However, the official age range for primary schooling is seven to twelve; enrollment is compulsory for this age group. The typical age corresponding to each year of schooling is presented in Figure 5.1. As will be seen later in the discussion of enrollments, these ages are usually the modal ages for each of the grade levels, but a substantial proportion of primary school students fall outside the seven to twelve compulsory education range. Overage and underage students are readily accepted into schools. In some countries this might put undue pressure on the educational system, but this is not generally the case in Indonesia where school capacity is not currently a major concern at the primary level.

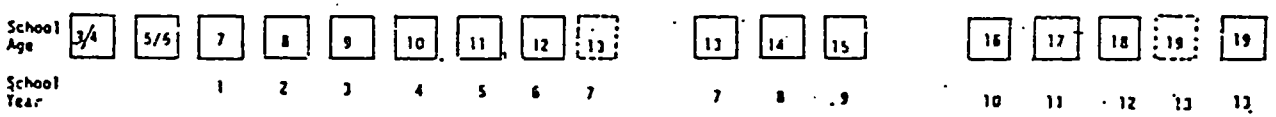
Preprimary and primary students have three schooling options: public (government sponsored), private, (sponsored by nongovernment groups*) or Madrasah Ibtidaiyah (sponsored by Islamic religious groups). The great majority of preprimary students are in private schools (swasta) whereas most primary school students are in public primary schools. All public and most (although not all) private schools receive Government funding. Government support to both preprimary and primary

*Private nongovernmental groups may be religious or nonreligious, profit-making or nonprofit-making.

FIGURE 5.1

FORMAL SCHOOL SYSTEM IN INDONESIA





private schools is in the form of a subsidy which can cover a substantial proportion of operating costs. To receive this subsidy, schools must conform to a set of standards specified by the MOEC. The schools are evaluated periodically to ensure that they continue to maintain these standards. The remainder of private school operating costs must be made up by school fees. Parental contributions to public primary schools through parent-teacher organizations make up a small, but significant, portion of a school's operating costs. The third type of schooling, Madrasah Ibtidaiyah, is supported primarily by private Islamic organizations, but under the guidance of (and with some financial support from) the Ministry of Religion.

All three types of schools provide education in the basic academic subject areas of Bahasa Indonesia, mathematics, social science, science, Pancasila or PMP (training in the national ideology, similar to civics training in the United States) and a new subject area, PSPB (Indonesian Political History). Depending on the type of school, varying emphasis is given to the nonacademic subjects: religion, local language, sports and health, skill training, art. In the Madrasah schools much more emphasis is given to religious training.

Basic education is also provided for students age seven and above in several out-of-school programs. The largest of these efforts, reaching as many as 2,000,000, students is administered by the community education section (Dikmas) of the Directorate General of Nonformal Education, Youth and Sports. These programs will be discussed in Chapter 10. A second type of out-of-school program reaches fewer students but is seen as an important implementation strategy for

attaining the goal of universal primary education for the seven to twelve year-old age group. These programs, called SD PAMONG Patjar (See Section 5.2.5.7), are designed to provide an optional formal education in nonclassroom settings for students unable to attend formal schools or for dropouts who still want to obtain an elementary school diploma. These programs are administered by the Universal Compulsory Education Section (PU Wajar) of the Directorate General of Primary and Secondary Education. Special programs also exist for students in remote areas and for handicapped students. They will be discussed below.

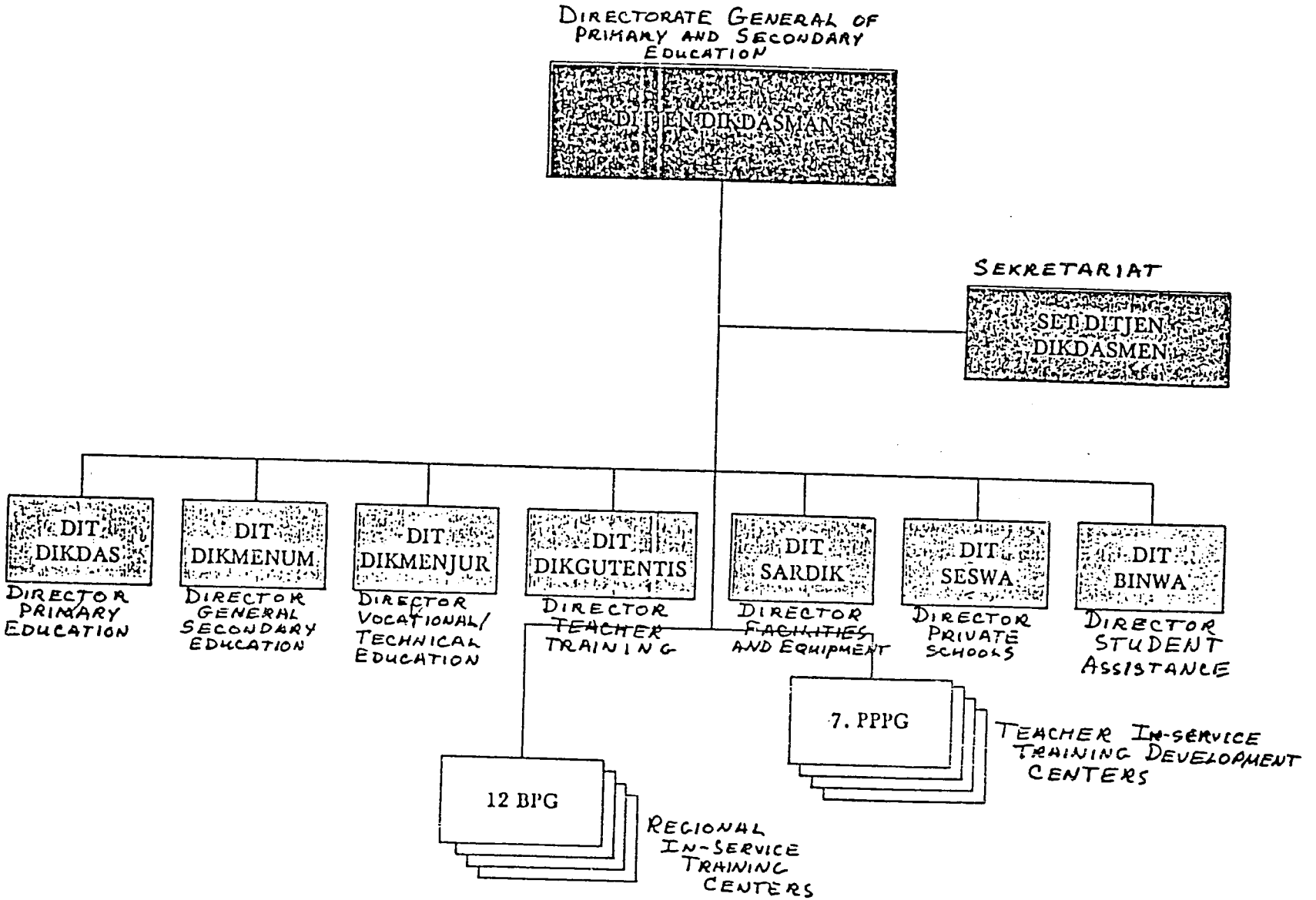
Figure 5.2 shows the administrative structure of the Directorate General of Primary and Secondary Education (Dikdasmen). Within this structure, the Directorate of Primary Education (Dikmas) has units for preschool programs, for primary programs, for schools for handicapped children, for monitoring and evaluation, and for universal compulsory primary education. It should also be noted that curriculum-related activities are conducted by the Center for Curriculum Development of Balitbang Dikbud and that a special project within Dikdasmen, Proyek Buku Terpadu, is in charge of preparing new texts and textbook distribution.

5.2.3.2 Administration and Supervision

Primary education in Indonesia in administered through a basically dualistic system. The Department of Home Affairs through its provincial and district level Dinas offices is responsible for the administrative aspects of the primary schools and the Department of Education and Culture is responsible for the professional/technical aspects. The Department of Religion is responsible for activities in religious

FIGURE 5.2

ORGANIZATIONAL CHART OF THE DIRECTORTE GENERAL
OF PRIMARY AND SECONDARY EDUCATION



Source: Directorate General Of Primary and Secondary Education, Office of Planning, 1985

schools (Madrasah Ibtidaiyah) and the training and supervision of religion teachers in all SD, both public and private. The Department of Finance handles the allocation of funds to schools (such as teacher salaries) through its local offices (Kas Negara), and the Department of National Planning and Development (BAPPENAS) is responsible for approval of educational development plans. Local or national institutes (Yayasan) are responsible for support of the preschools or primary schools they operate.

Appendices A through D show the organization of the Depdikbud at the national, provincial (two of three options depicted), district (kabupaten) and subdistrict (kecamatan) levels, respectively. The structure of the provincial (Kanwil) and district MOEC (Kandep) offices generally reflect the organization of the MOEC. Within each of the major divisions, the subdivisions also reflect the central organization. For example, the Directorate General for Primary and Secondary Education (Dikdasmen) has directorates for primary education, secondary education, vocational/ technical education, teacher training, student affairs, administration (sekretaris), and private schools, with subunits for preschools (Taman Kanak-Kanak or TK), primary schools (SD), compulsory education (PU Wajar), special schools (SLB, SLB Terbuka, SDLB), and monitoring and evaluation. Most of these offices are likely to be found at the provincial level as well.

Supervision of schools in the kecamatan, or subdistrict, is the responsibility of the penilik (or supervisor) who reports to the head (Kepala Kantor) of the kecamatan MOEC office. Usually there is a Penilik TK/SD who oversees preschools and primary schools, a Penilik

PENMAS who supervises community education programs, a Penilik Pemuda supervising youth and sports activities, and a Penilik Kebudayaan overseeing cultural activities. These supervisor's duties can vary depending on the size of the kecamatan. The Penilik TK/SD is supposed to supervise not more than 15 schools, but often penilik supervise many more (Table 5.3 shows the provincial variation and a national average of 19.66), but in some large Kecamatan more than one Penilik TK/SD can be assigned. Penilik TK/SD are often ex-principals of primary schools and they tend to be older. The mandatory retirement age for penilik is 60 (the retirement age for teachers has just recently been raised from 56 to 60). Ability to fulfill the physically taxing duty of visiting remote schools has been a problem for some older Penilik. Other problems have been a relative lack of training and experience in preschool education which constrains effective supervision of TK.

At the provincial level, the government offices responsible for the management and supervision of primary education (primary school and Madrasah Ibtidaiyah) are:

a. Within the Provincial Office of Education and Culture, (Kantor Wilayah), the Primary Education and Teacher Training Sections are in charge of arrangement and supervision of primary school planning, management, control, and the technical aspects of education, which means the curriculum, the teaching/learning methods, choice of textbooks, modification of teachers, standardization of teaching-learning materials, and technical considerations for the provision of subsidy to private primary schools.

TABLE 5.3

TOTAL TK/SD SUPERVISORS AND SCHOOL/SUPERVISOR RATIO
68% OF SAMPLE, 1982

NO	P R O P I N S I	PENILIK SD	SD YANG DIBINA # OF SCHOOLS	RATIO SCHOOLS/PENILIK RASIO SD TERHADAP PENILIK
01.	DKI Jakarta	144	2.179	15,13
02.	Jawa Barat	857	9.072	10,59
03.	Jawa Tengah	774	14.383	18,58
04.	DI Yogyakarta *)	...	...	...
05.	Jawa Timur	442	13.182	29,82
06.	DI A c e h	126	2.050	16,27
07.	Sumatera Utara	329	7.686	23,36
08.	Sumatera Barat	136	3.062	22,51
09.	R i a u	74	1.723	23,28
10.	J a m b i	31	1.082	34,90
11.	Sumatera Selatan	109	2.866	26,29
26.	Bengkulu	41	890	21,71
12.	Lampung	37	980	26,49
13.	Kalimantan Barat	22	571	25,95
14.	Kalimantan Tengah	48	1.300	27,08
15.	Kalimantan Selatan	109	1.912	17,54
16.	Kalimantan Timur	...	...	...
17.	Sulawesi Utara	42	1.004	23,90
18.	Sulawesi Tengah	42	923	21,98
19.	Sulawesi Selatan	139	2.773	19,94
20.	Sulawesi Tenggara	...	...	...
21.	Maluku	...	...	...
22.	B a l i	55	1.542	28,04
23.	Nusa Tenggara Barat	74	1.974	26,68
24.	Nusa Tenggara Timur	123	2.566	20,86
25.	Irian Jaya	35	768	21,94
27.	Timor Timur	...	...	...
	I N D O N E S I A	3.789	74.488	19,66

Sumber Data : Pusat Informatik - BP3K

*) Ditangani oleh Dinas Pendidikan dan Kebudayaan

... Belum ada data

Source: Dikdasmen, Direktorate Taman Kanak-Kanak

b. The Provincial Office of Education (Kantor Dinas) is in charge of organizing primary schools. This includes their construction, the rehabilitation and maintenance of the buildings, provision of school furniture and other school equipment, management, and supplying textbooks, teachers and subsidy to private primary school teachers.

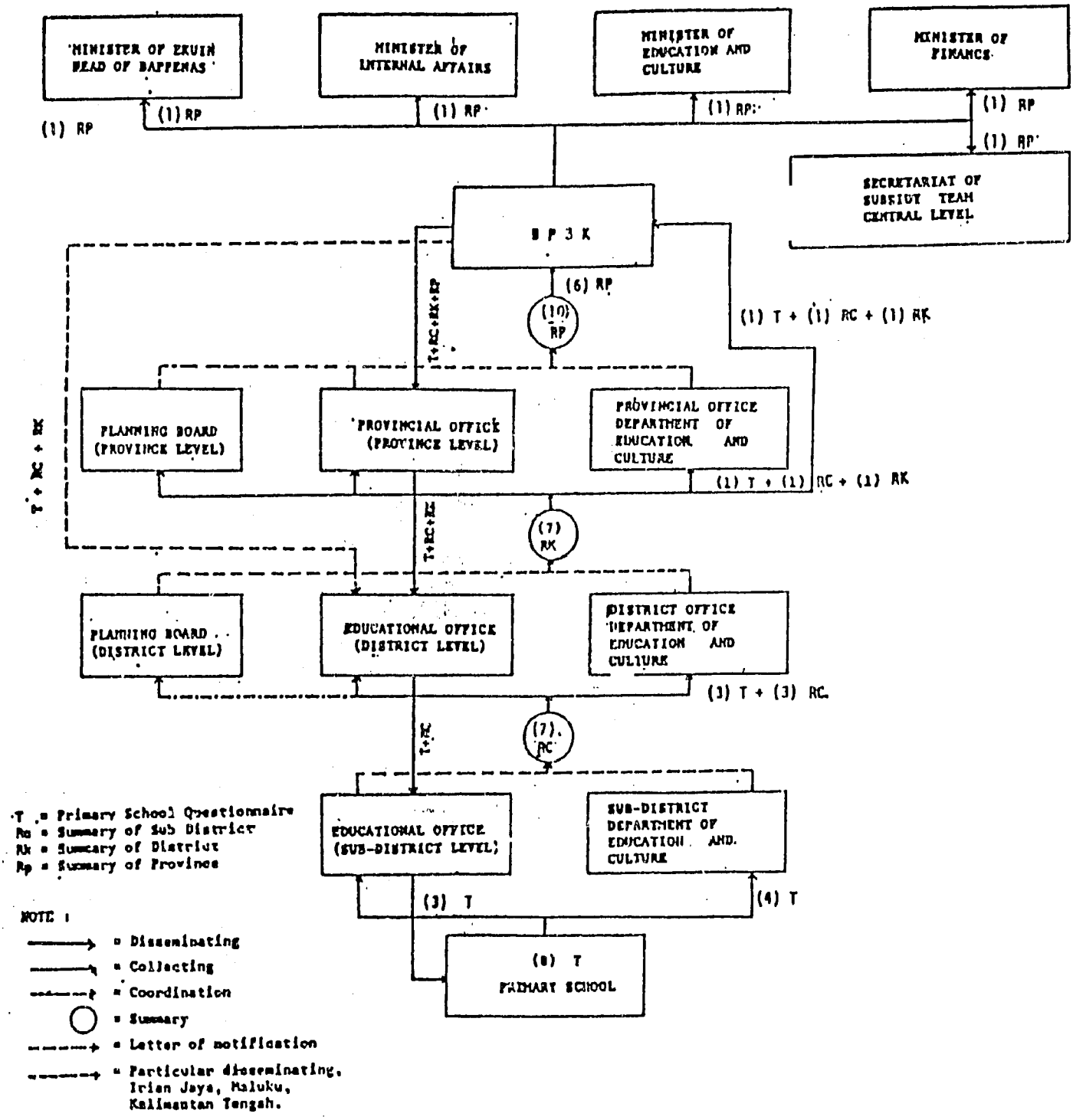
c. The Provincial Office of the Ministry of Religion, in this case the Section of the Moslem Religion Teachers School is in charge of supervising and managing education at Moslem schools, especially Madrasah Ibtidaiyah.

In addition to having their own offices, the Ministries also have their own reporting structures. The principal of an SD must therefore prepare reports for two separate offices. Figure 5.3 illustrates the complexity of this reporting structure. Keeping financial records can be even more complex, as records must be kept on Inpres expenditures, routine and development Depdikbud and Dinas expenditures, SBPP expenditures and BP3 expenditures (see Chapter 2). As many as seven or eight sets of books must often be kept. At the national level, three sets of data on primary schools can exist - educational data are sent through the kabupaten and provincial Dinas offices to the Department of Internal Affairs, through the Kandep and Kanwil offices to Balitbang Dikbud, and directly from schools (secondary) to Dikdasmen.

Assignment and promotion of primary teachers is the responsibility of the Department of Internal Affairs. The Penilik are to provide evaluative information for teacher and principal promotions and to coordinate with the DINAS office on teacher assignment. This

FIGURE 5.3

FLOW OF DISSEMINATING, COLLECTING AND PROCESSING
OF PRIMARY SCHOOL DATA
1981



coordination is often difficult and delays of more than a year in assigning new teachers have been reported.

5.2.4. Preprimary Education Programs

This section presents a description of the preprimary education programs in Indonesia in terms of enrollment in the system, instructional staff, curriculum and materials, facilities and equipment, and evaluation and supervision. Within each of these areas an attempt will be made to identify some important issues and needs that appear as yet to be unfulfilled.

5.2.4.1 Enrollments

In the 1984/85 school year (July 19, 1984 to June 19, 1985), there were 25,284 preprimary schools (Taman Kanak-Kanak or TK) in Indonesia serving 1,233,793 students of ages three to six. Only 52 of these were government schools (Table 5.4.). Thus the vast majority of TK students are in private schools. Table 5.5. shows the change of TK enrollments in both public and private schools over the last 15 years at the national level.

TABLE 5.4

PRESCHOOLS AND ENROLLMENTS

NO.	Propinsi	Jumlah TK Negeri (Public)	Jumlah TK Swasta (Private)	Tahun 1984 / 1985 Jumlah Kelas (Total Classes)	Jumlah anak (LK + Pr) (Total Students)
1.	DI. Aceh	1	209	384	11.609
2.	Sumatra Utara	2	330	808	30.215
3.	Sumatra Barat	3	549	904	25.219
4.	Riau	1	204	446	13.955
5.	Jambi	1	118	218	6.428
6.	Sumatra Selatan	1	278	585	19.594
7.	Bengkulu	1	99	236	6.811
8.	Lampung	1	379	744	15.301
9.	DKI Jakarta	8	1.269	1.969	76.891
10.	Jawa Barat	4	1.726	2.738	88.986
11.	Jawa Tengah	5	7.663	11.477	340.908
12.	DI Yogyakarta	1	1.154	1.360	42.177
13.	Jawa Timur	2	6.973	24.976	939.667
14.	Kalimantan Barat	2	141	266	7.681
15.	Kalimantan Tengah	2	189	361	7.968
16.	Kalimantan Selatan	2	573	739	22.656
17.	Kalimantan Timur	1	208	362	16.225
18.	Sulawesi Utara	1	789	1.419	39.603
19.	Sulawesi Tengah	1	287	432	12.834
20.	Sulawesi Selatan	2	555	856	30.160
21.	Sulawesi Tenggara	1	203	529	10.106
22.	Bali	2	473	902	21.549
23.	Nusa Tenggara Barat	2	319	479	12.953
24.	Nusa Tenggara Timur	1	348	493	14.422
25.	Maluku	1	175	274	8.676
26.	Irian Jaya	2	110	336	7.613
27.	Timor Timur	1	11	19	1.566
	Jumlah	52	25.232	54.324	1.233.793

Source: Dikadasmen, Direktorate Taman Kanak-Kanak, 1985

TABLE 5.5.

PRESCHOOL ENROLLMENT, 1969 to 1985

Year	No. Students	No. Schools	Total Cohort (3-6 yrs age)	% of Cohort
1969	343,466	6,072	Data not available	
1970	391,222	9,540	"	
1971	387,490	9,779	"	
1972	410,409	10,345	"	
1973	392,016	10,482	"	
1974	506,913	12,249	"	
1975	525,775	12,795	"	
1976	579,876	13,575	"	
1977	674,292	14,840	"	
1978	754,497	16,026	"	
1979	894,915	17,688	"	
1980	983,307	18,986	17,184,491	5.7%
1981	984,406	20,259	-	
1982	1,141,215	22,056	-	
1983	1,220,686	23,836	16,799,662	6.7%
1984	1,233,793	25,232	-	

This steady increase in enrollments at the national level over the last fifteen years is reflected in consistent regional increases over the same period of time. Nationally this enrollment of 1,233,793 represents only about 7% of the children ages three to six. It is clear, therefore, that large proportion of the children in this age group are not being reached by preschool programs at the present time. Because the vast majority of TK are private, most are located in the more affluent urban areas of Indonesia. It is estimated that 75% of the TK are in cities. Thus is likely that many of these unserved students are in poorer rural areas where a private preschool is less financially viable. Furthermore, 18,802, or 74.4%, of all TK were on the island of Java where approximately 28 % of the three to six year age cohort

resided in 1983. Preschools are a relatively uncommon phenomenon elsewhere in Indonesia.

5.2.4.2 Instructional Staff

There are 56,439 teachers in TK in Indonesia (Table 5.6.); of this total, 99.95% are women. In 1984/85, 9,263 of the preprimary teachers, or approximately 16.4%, were government employees. A TK teacher can become a civil service employee by requesting such status by letter to the Kanwil. A more likely route is through a request from a TK itself for a subsidized teacher. In such a case, if approved, an experienced teacher not presently in the civil service would be identified and reassigned.

All teachers in TK should have a degree in teaching at the preschool level. These degrees are of three types: SGTK (lower secondary education plus passing TK examination), SPGTK (senior secondary teacher training in preschool education), or KPGTK (regular senior secondary with additional preschool training). The ideal is for each teacher to have SPG training plus special training in TK programs, but some TK teachers have degrees below that level. For these less qualified teachers there are special upgrading programs (KPUA, KPUB, KPUC and a special A+B program for first, second and third level students respectively). These special inservice training programs are sponsored by Depdikbud. The following inservice programs have been conducted over the last several years:

1.	Team Pematar Keliling (TPTK)	1979/80	1980/81	
2.	KPUA	1981/82	1982/83	1983/84
3.	KPUB	"	"	"
4.	KPUC	"	"	"
5.	PSPB (training in new political history subject area)	1983/84	1984/85	

TABLE 5.6

TK TEACHING STAFF, 1984/85

No.	Province	Status		Total
		Public	Private	
1.	D.I. Aceh	229	385	614
2.	Sumatra Utara	141	941	1,082
3.	Sumatra Barat	529	711	1,240
4.	Riau	137	415	552
5.	Jambi	54	199	253
6.	Sumatra Selatan	256	591	847
7.	Bengkulu	23	260	283
8.	Lampung	208	819	1.027
9.	DKI Jakarta	387	3.554	3.941
10.	Jawa Barat	1.024	2.842	3.866
11.	Jawa Tengah	2.576	14.371	16.947
12.	D.I. Yogyakarta	567	683	2.250
13.	Jawa Timur	628	13.768	14.396
14.	Kalimantan Barat	174	249	423
15.	Kalimantan Tengah	174	252	426
16.	Kalimantan Selatan	231	1.321	1.552
17.	Kalimantan Timur	59	501	560
18.	Sulawesi Utara	784	394	1.178
19.	Sulawesi Tengah	4	400	404
20.	Sulawesi Selatan	249	869	1.118
21.	Sulawesi Tenggara	15	320	335
22.	Bali	97	1.231	1.328
23.	Nusa Tanggara Barat	88	509	597
24.	Nusa Tenggara Timur	409	257	666
25.	Maluku	66	177	243
26.	Irian Jaya	133	195	328
27.	Timor Timur	21	12	33
	T O T A L	9.263	47.226	56.489

Source: Dikdasmen, Direktorate Taman Kanak-Kanak, 1985

The student/teacher ratio for TK in 1984/85 nationally is approximately 22 to 1. Table 5.7 summarizes the data on schools, classes, and teachers along with enrollment data for 1983/84. The student/teacher ratio by province is presented in the last column. It can be seen from these data that there is wide variation in the ratio, from 36 students per teacher in DI Yogyakarta to 101 students per teacher in Timor Timur. A student teacher ratio of 15 to 1 or better is generally accepted as a desirable standard in other countries because of the need of younger students for close contact with teachers. Therefore, even if children have access to TK in their areas, the question remains whether a high ratio school can present an effective learning environment for its students. It should be remembered, however, that it is not only teacher contact that is valuable to students at this age, but also the opportunity to play with children in their own age group in organized settings to help learn appropriate social skills as well as to have an opportunity to manipulate toys and other stimuli to develop motor skills that are nurtured during this age span. Materials available in the preschools are also extremely important and in this area the Government is providing support.

5.2.4.3 Curriculum and Materials

A national curriculum for TK was specified in 1976 and put into effect by regulation in 1977 (Keputusan Mendikbud No. 54/U/1977 of March 8, 1977). To receive Government support the TK must provide training to students in compliance with this curriculum outline. The curriculum of TK should cover seven basic areas: 1) personality, 2) language, 3) thinking skills, 4) motor/physical skills, 5) social skills, 6)

emotional skills and 7) moral/religious training. Religious training receives additional emphasis in the TK sponsored by religious Yayasan or in Raudhatul Athfal (Islamis Preschools).

All TK are divided into three grade levels: Kelas A for 3 and 4 year olds, Kelas B and 4 and 5 year olds and Kelas C for 5 and 6 year olds. At six years of age a child is allowed to enter primary school.

A typical TK will conduct 2 hours of school per day, 12 hours per week for Kelas A students; 2.5 hours per day or 15 hours per week for Kelas B; and 2.75 hours per day or 16 hours per week for Kelas C students.

If a TK can meet the criteria for subsidies in the seven basic areas (qualified staff, adequate facilities, certified enrollment, financial soundness, administration and management, curriculum, and general environment [neatness, cleanliness, etc.], in addition to the salaries of civil service teachers), they can receive training, learning support materials and library materials from the Government either Depdikbud or Dept. Agama. In 1985/86, Government development budget support for TK programs was Rp.785,162,000. An increase of 50% to 1,177,743,000 has been requested by Dikdasmen for 1986/87. This allocation covers administrative materials, teacher training (700 persons), texts (500,000), curriculum books (2,945 sets), and data gathering activities in addition to the support mentioned above.

5.2.4.4 Facilities and Equipment

Nationally the ratio of classrooms to TK is slightly below 2 to 1, or two classrooms per school. The ratio of students to classrooms is

TABLE 5.7

PRESCHOOL STATISTICS, SCHOOL CLASSROOMS, TEACHERS AND STUDENTS
1983/1984

No	Propinsi	Status TK				Gedung Buildings	Kelas Classes	Guru			Murid Students
		Pem. Pusat Model TK	Pemda Gov't TK	Swasta Private TK	Jumlah Total			Civil Servants Negeri	Non-Civil Servants Swasta	Total Jumlah	
1	2				6	7	8	9	10	11	12
1	D.I. Aceh	1	–	195	196	196	450	28	563	521	11.998
2	Sumatera Utara	2	–	316	318	318	735	85	861	946	29.407
3	Sumatera Barat	2	1	457	460	460	907	377	646	1.023	27/453 22.458
4	R i a u	1	–	183	184	184	363	62	465	527	14.383
5	J a m b i	–	–	111	111	111	182	33	191	224	6.826
6	Sumatera Selatan	1	–	275	276	276	590	255	608	863	19.365
7	Bengkulu	–	1	86	87	87	166	14	217	231	4.823
8	Lampung	–	–	284	284	284	614	244	452	696	15.201
9	DKI Jakarta	7	–	1.068	1.075	1.075	1.969	1.207	2.366	3.573	75.133
10	Jawa Barat	4	1	1.782	1.787	1.787	2.553	918	3.050	3.968	93.439
11	Jawa Tengah	4	–	7.265	7.269	7.269	10.293	674	11.587	12.261	338.338
12	DI Yogyakarta	–	8	1.040	1.048	1.048	1.303	246	1.569	1.815	38.015
13	Jawa Timur	1	–	6.573	6.574	6.574	10.661	546	10.910	11.456	333.216
14	Kalimantan Barat	1	–	126	127	127	268	124	180	304	7.415
15	Kalimantan Tengah	1	–	168	169	169	206	130	228	358	7.262
16	Kalimantan Selatan	1	–	522	523	523	1.046	161	965	1.126	20.536
17	Kalimantan Timur	1	–	196	197	197	357	59	475	534	14.770
18	Sulawesi Utara	1	–	851	852	852	1.520	428	559	987	4/312/43.242
19	Sulawesi Tengah	1	–	229	230	230	367	4	373	377	10.982
20	Sulawesi Selatan	1	–	564	565	565	1.491	249	1.054	1.303	34.099
21	Sulawesi Tenggara	1	–	172	173	173	396	12	254	266	8.519
22	Maluku	1	–	168	169	169	237	45	271	316	7.712
23	B a l i	2	–	488	490	490	667	39	1.064	1.103	23.551
24	N T B	1	–	286	287	287	495	298	181	479	11.214
25	N T T	1	–	251	252	252	438	280	245	525	13.735
26	Irian Jaya	4	–	113	114	114	336	–	325	325	8.350
27	Timor Timur	–	–	19	19	19	–	2	49	51	1.918
	J u m l a h	37	11	23.788	23.836	23.836	38.670	6.520	39.708	46.228	1.220.686

Source: Dikdasmen, Statistic Sekolahan, 1985

approximately 22.7 to 1. This is very near the average of 21.8 students per teacher, indicating a near one-to-one ratio of classrooms to teachers in most schools. Government guidelines call for a TK to have enough room for approximately 70 students, allocating six square meters per student. Each school should have three classrooms, one each for levels A, B and C, at least eight meters square. Given the 2 to 1 ratio of classrooms to schools it appears that this criterion is not often met. A TK with a lavatory should be approximately 1,474 meters square.

Some TK use the facilities of local primary schools; others use public buildings or their own private facilities. Thirty of the 52 government TK are scheduled for rehabilitation during Repelita IV. The five-year plan also calls for the development of 27 new Depdikbud TK Pembina (or model TK), one in each province.

5.2.4.5 Evaluation and Supervision

A basic information and reporting form is used by TK. Children's attitudes are assessed, teacher's contacts with parents are recorded, the child's progress in various skills is recorded, health is monitored and an "anecdotal record" (like a report card) is filled out.

Supervision of TK is the responsibility of the Penilik TK/SD in each kecamatan. The ideal ratio of Penilik to SD and TK is 15 schools to one penilik - a ratio which is seldom achieved. Supervision is thus a problem area. The penilik does receive training in TK teaching methodology, but most Penilik come from a background in primary schools. Their experience with TK is often minimal.

5.2.4.6 Costs and Financing

Government plans for Repelita IV involve the establishment of 27 model preschools, one in each province, and rehabilitation assistance to 30 government preschools. No funding for increasing the number of preschools is planned. Preschool education will thus remain the primary responsibility of the private sector for the near future. The Government currently provides funding to registered TK for learning support materials (exhibit materials), library materials, and salaries of civil service teachers. A yearly subsidy of up to Rp.200,000 can be provided. Repelita IV calls for the production of 5.9 million library books and 10 million sets of exhibit materials. The Government's emphasis thus seems to be on improving in the quality of existing schools, rather than expansion. The bulk of the funding will continue to come from the individual Yayasan (institutes) sponsoring the TK. The Ministry of Religion also provides assistance to the approximately 5,000 TK registered as Raudhatul Athfal (or Islamic preschools) through the country. In 1983/84, these schools had 7,530 classes enrolling 191,213 children.

5.2.5 Primary School Programs

This section will provide description of the primary school program in the areas of enrollments, instructional staff, curriculum and materials, facilities and equipment, examinations/evaluation, costs and financing and special programs. Needs and issues will be identified which will be addressed in depth in the analysis section.

5.2.5.1 Enrollments

Tables 5.8 and 5.9 provide a summary of the national enrollment trends over the last five years as well as information on specific subgroups of students. (Enrollment projections for primary education through 1994/1995 are presented in Chapter 2.) Enrollments have been increasing rapidly for the last five years to a point where 26,576,688 students are now in primary school. Of this total, 13,884,235 are boys (52%) and 12,683,453 are girls (48%). Unlike preschools and secondary schools, the great majority of the primary school students are in public schools -- 92.4 per cent. Table 5.9 shows how private enrollments decreased over the last several years. This decrease is probably the result of a combination of factors including increased availability of public SD, improved quality of public schools, and various other factors not the least of which is cost--fees are not required in public SD. New enrollments in private schools have also been decreasing while new enrollments in public schools have increased by 5.5% over the last three years. (The exception to this decrease in private school enrollment is some urban areas where private schools do indeed provide much higher quality educational services, both academic and nonacademic.)

Table 5.10 presents the enrollment data for the 7-12 age group by province for the 1984/85 school year. This age group has been the focus of the kewajiban belajar (universal compulsory primary education) program over the last several years, and therefore is the age cohort whose progress is the most closely monitored. As indicated in Table 5.10, the goal of 100 per cent enrollment is being approached, although there is still some important variation by province. Indonesian

TABLE 5.8

1984/85 PRIMARY SCHOOL BASIC DATA SUMMARY

PROVINCE	NUMBER SCHOOLS	NUMBER CLASSRMS	AVERAGE CLASSRMS	MALE STUDENTS	FEMALE STUDENTS	% FEMALE	TOTAL ENROLLMENT	NUMBER ADMINSTRS	TOTAL TCHERS	CIVSRV TEACHERS	% CIVSRV TEACHERS	STDNT/TCHR RATIO	AVERAGE SCH SIZE	AVERAGE CLASS SIZE
1. DKI Jakarta	3300	26874	8.1	545500	497938	0.4772	1043438	853	34049	21815	0.6407	30.65	316.19	38.83
2. Jawa Barat	22667	151793	6.7	2515312	2314740	0.4792	4830052	204	150758	146965	0.9744	32.04	213.09	31.82
3. Jawa Tengah	21759	133447	6.1	2171215	2022929	0.4823	4194144	235	173726	163529	0.9413	24.14	192.75	31.43
4. DI Yogyakarta	2276	15631	6.9	225644	212484	0.4850	438128	44	20837	20155	0.9673	21.03	192.50	28.03
5. Jawa Timur	21488	134969	6.3	2314809	2066795	0.4717	4381604	844	165522	158362	0.9567	26.47	203.91	32.46
6. DI Aceh	2698	16801	6.2	264431	240009	0.4758	504440	16	19910	19133	0.9610	25.34	186.97	30.02
7. Sumatera Utara	8885	58773	6.6	928171	844118	0.4763	1772289	333	70451	63079	0.8954	25.16	199.47	30.15
8. Sumatera Barat	3952	24456	6.2	364945	343144	0.4846	708089	46	27352	26664	0.9748	25.89	179.17	28.95
9. Riau	2382	14965	6.3	234537	210283	0.4727	444820	56	15296	13653	0.8926	29.08	186.74	29.72
10.Jambi	1938	11278	5.8	169601	150791	0.4706	320392	56	13177	12792	0.9708	24.31	165.32	28.41
11.Sumatera Selatan	4352	31316	7.2	525332	481492	0.4782	1006824	147	31304	26008	0.8308	32.16	231.35	32.15
26.Bengkulu	1125	6246	5.6	93510	86372	0.4802	179882	1	7311	7013	0.9592	24.60	159.90	28.80
12.Lampung	3442	27239	7.9	480945	433749	0.4742	914694	6	28885	28510	0.9870	31.67	265.74	33.59
13.Kalimantan Barat	3144	18540	5.9	270775	237931	0.4677	508706	32	18520	17699	0.9557	27.47	161.80	27.44
14.Kalimantan Tengah	2324	11237	4.8	125785	122729	0.4939	248514	58	9765	9615	0.9846	25.45	106.93	22.12
15.Kalimantan Selatan	2791	15489	5.5	200088	181039	0.4750	381127	31	17412	17115	0.9829	21.89	136.56	24.61
16.Kalimantan Timur	1830	11628	6.4	149336	138062	0.4804	287398	42	12092	11132	0.9206	23.77	157.05	24.72
17.Sulawesi Utara	2818	18146	6.4	234875	219705	0.4833	454580	61	23154	22739	0.9787	19.63	161.31	25.05
18.Sulawesi Tengah	2202	12038	5.5	156579	142097	0.4758	298676	0	12426	12161	0.9772	24.04	135.64	24.81
19.Sulawesi Selatan	6620	45996	6.9	632266	588976	0.4823	1221242	120	42775	41798	0.9874	28.55	184.48	26.55
20.Sulawesi Tenggara	1559	8551	5.5	122455	113422	0.4809	235877	0	9258	9141	0.9930	25.48	151.30	27.58
21.Maluku	2168	13029	6.0	158828	144267	0.4760	303095	14	12741	12652	0.9930	23.79	139.80	23.26
22.Bali	2650	15586	5.9	240697	220746	0.4784	461443	27	20456	19884	0.9720	22.56	174.13	29.61
23.Nusa Tengg.Barat	2673	16367	6.1	291409	262616	0.4740	554025	6	18917	18608	0.9837	29.29	207.27	33.85
24.Nusa Tengg.Timur	3520	20141	5.7	302022	274970	0.4766	576992	22	21129	20036	0.9483	27.31	163.92	28.65
25.Irian Jaya	1731	9458	5.5	106880	91048	0.4600	197928	0	6794	6466	0.9517	29.13	114.34	20.93
27.Timor Timur	412	2691	6.5	58288	41001	0.4129	99289	103	2621	2411	0.9199	37.88	240.99	36.90
INDONESIA	134706	872685	6.4	13884235	12683453	0.4774	26567688	3355	986638	929065	0.9416	26.93	194.34	30.44

TABLE 5.9

BASIC DATA: PRIMARY EDUCATION
1980/81 - 1984/85

YEAR Public/Private	(A) Enrollment	(B) Teachers	(C) Classes	(D) Schools	(E) Student/ Teacher	(F) Student/ Class	(G) Student/ School
1980/81							
TOTAL	22,487,053	665,264	698,071	105,485	34	32	213
-Public	20,164,940	593,544	622,557	94,303	34	32	214
-Private	2,322,113	71,720	75,514	11,182	32	31	208
1981/82							
TOTAL	23,862,488	713,222	749,699	110,050	33	32	217
-Public	21,648,867	641,017	673,831	99,359	34	32	218
-Private	2,213,621	72,205	75,868	10,691	31	29	207
1982/83							
TOTAL	24,700,075	841,833	786,133	120,162	29	31	206
-Public	22,506,935	766,234	712,193	109,574	29	32	205
-Private	2,193,140	75,599	73,940	10,588	29	30	207
1983/84							
TOTAL	25,804,380	925,834	828,012	129,368	28	31	199
-Public	23,708,399	851,447	758,182	119,269	28	31	199
-Private	2,095,981	74,387	69,836	10,099	28	30	206
1984/85							
TOTAL	26,567,685	986,638	872,685	136,706	27	30	194
-Public	24,556,810	911,341	803,666	126,705	27	30	194
-Private	2,010,875	75,297	69,019	10,001	27	29	201

TABLE 5.10

TOTAL CHILDREN AGE 7 - 12 YEARS
1984/1985

No.	Propinsi	Population Penduduk Usia 7-12 th	Already In School Sudah Bersekolah	Not Yet In School Belum Bersekolah	% In School % Sudah Bersekolah	% Not In School % Belum Bersekolah
1.	D.I. Aceh	554.233	513.523	40.710	92,65	7,35
2.	Sumatera Utara	1.611.406	1.519.959	91.447	94,32	5,68
3.	Sumatera Barat	647.502	598.887	49.119	92,49	7,51
4.	R i a u	417.189	377.492	39.697	90,48	9,52
5.	J a m b i	285.077	275.449	9.628	96,62	3,38
6.	Sumatera Selatan	891.560	852.992	38.568	95,67	4,33
7.	Bengkulu	165.060	155.793	9.267	94,38	5,62
8.	Lampung	921.699	862.454	59.245	93,57	6,43
9.	DKI Jakarta	1.061.789	996.960	6.429	93,89	6,11
10.	Jawa Barat	4.809.064	4.665.783	143.281	98,42	1,58
11.	Jawa Tengah	4.104.116	3.975.582	128.534	96,86	3,14
12.	D.I. Yogyakarta	300.535	288.286	12.249	95,92	4,08
13.	Jawa Timur	4.438.273	4.292.512	145.761	96,72	3,28
14.	Kalimantan Barat	475.959	424.881	51.078	89,26	10,74
15.	Kalimantan Tengah	182.619	170.868	11.751	93,56	6,44
16.	Kalimantan Selatan	371.180	349.312	21.868	94,10	5,90
17.	Kalimantan Timur	209.005	202.519	6.486	96,89	3,11
18.	Sulawesi Utara	359.457	354.321	5.136	98,57	1,43
19.	Sulawesi Tengah	259.247	236.243	23.004	91,12	8,88
20.	Sulawesi Selatan	1.106.931	1.059.230	47.701	95,69	4,31
21.	Sulawesi Tenggara	237.763	231.495	6.268	97,36	2,64
22.	B a l i	422.653	392.461	30.192	95,47	4,53
23.	Nusa Tenggara Barat	521.344	516.893	4.451	99,14	0,86
24.	Nusa Tenggara Timur	472.643	436.054	36.589	92,25	7,75
25.	Timor Timur	130.397	68.053	62.344	52,18	47,82
26.	Maluku	214.750	203.941	10.809	94,96	5,04
27.	Irian Jaya	218.612	172.171	46.441	78,75	21,25
	J U M L A H	25.390.063	24.194.114	1.196.453	95,88	4,12

Source: Dikdasmen, P U Wajar, 1985

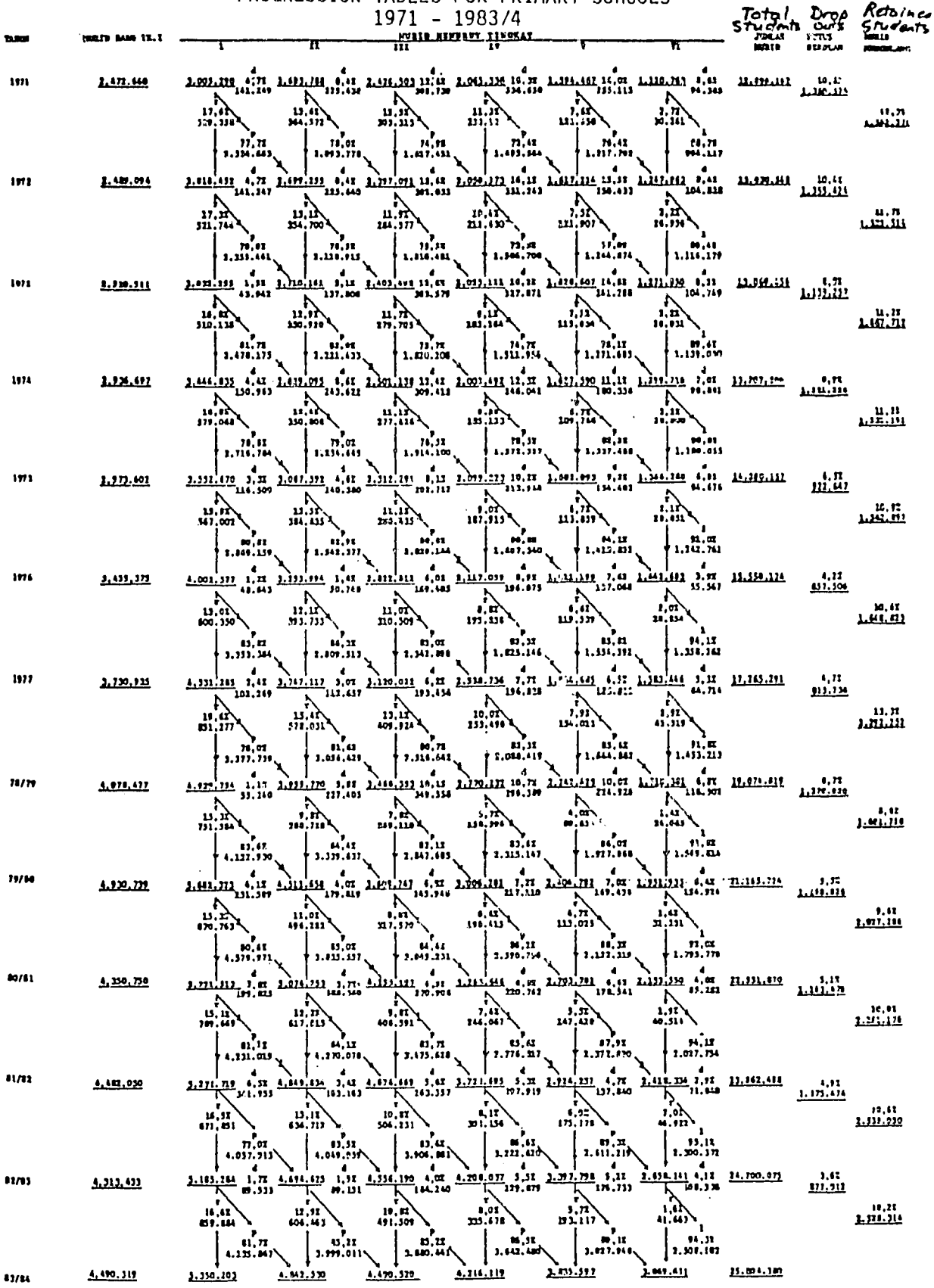
educational planners acknowledge that the last 5% to 10% of the cohort, not in school, will be much harder to enroll. This group is composed of children who have never been to school, as well as recent dropouts, children from semi-nomadic groups of slash and burn farmers and others in areas such as Central Kalimantan or Irian Jaya, groups (like the Samir community in Java) who do not value education, and about .5 million students who are blind or have other learning handicaps.

The task of reaching these potential students is not an easy one. Imaginative and flexible programs are necessary to overcome the constraints on their attendance. Several such programs are in operation, and they will be discussed further in the special issues section. Among the more prominent programs are the Small Schools Program, which is designed to allow teachers to handle several small classes of students at varying grade levels, a situation common in areas with very low population densities. Other such programs are the Kejar Paket A Program and the SD PAMONG Patjar Program, both aimed at dropouts or children who are held back from entering primary schools by social or economic factors. The former program can lead to receipt of a "Ujian Persamaan" primary school equivalency degree. Completion of the SD PAMONG Program allows an out-of-school student to take the EBTA examination (Evaluasi Belajar Tahap Akhir or final level evaluation of learning); successful students receive a regular primary school diploma.

Table 5.11 presents the progression, drop-out and repeater rates for primary school from 1971 to 1984. The drop-out rate has been decreasing over the last 15 years; it now stands at 3.0%.

TABLE 5.11

PROGRESSION TABLES FOR PRIMARY SCHOOLS
1971 - 1983/4



Keterangan :

p = naik tingkat
r = mengulang
d = putus sekolah
l = lulusan
p + r + d = 100%

Jakarta, 3 Februari 1985
Pusat Informatika

Between the 1983/84 to 1984/85 school year, 783,496 of the 25,804,380 students in 1983/84 dropped out of school (Table 5.12). The highest drop-out rates were in grades 4, 5 and 6 in 1982/83 - 5.5%, 5.2% and 4.1% respectively. This represented 514,988 of the total 877,912 drop-outs that year or 59% of the total. Table 5.12 also presents the provincial drop-out rates. It can be seen from the 1984/85 data that the provincial rates vary widely from a low of .4 in Kalimantan Timur to a high of 19.5 in Timor Timur.

Variation is also evident between the drop-out rates of public and private schools. Table 5.12 (summarized from estimations presented in Chapter 2) show these variations. Drop-out rates in public SD are generally lower than those of private sector schools across grade levels.

TABLE 5.12

ESTIMATED DROP-OUT RATES*
1983/84

	Gr.1	Gr.2	Gr.3	Gr.4	Gr.5	Gr.6
Public	.09%	2.4%	2.6%	3.2%	3.6%	2.7%
Private	4.9%	6.0%	6.1%	5.8%	2.3%	7.2%

*It should be noted that these estimates are based on a different data set than that used for Table 5.4. The figures are presented for comparative purposes and should not be used as exact measures. The issue of data consistency and reliability will be addressed in the analysis section.

This is not the case for repetition in public and private SD Repetition rates by province are presented in Table 5.13 for the 1984/85 school year. The average of 10.0% repetition for 1984/85 in public

TABLE 5.13

TOTAL REPEATERS AS A PERCENT OF TOTAL ENROLLMENT
BY PROVINCE AND PUBLIC/PRIVATE SCHOOLS
1984/85

PROVINCE	PUBLIC			PRIVATE		
	ENROLL	REPEAT	% REPEAT	ENROLL	REPEAT	% REPEAT
DKI Jakarta	781,336	52,009	6.7%	262,102	10,148	3.9%
(TOTAL)	3.2%	2.1%		13.0%	5.8%	
Jawa Barat	4,722,626	311,581	6.6%	107,426	4,149	3.9%
Jawa Tengah	4,038,737	417,537	10.3%	155,407	11,253	7.2%
DI Yogyakarta	369,294	38,804	10.5%	68,834	5,689	8.3%
Jawa Timur	4,168,687	404,850	9.7%	212,917	10,382	4.9%
Bali	452,961	27,837	6.1%	8,482	172	2.0%
TOTAL	13,752,305	1,200,611	8.7%	553,066	31,645	5.7%
(TOTAL)	56.0%	48.9%		27.5%	18.1%	
DI Aceh	488,529	54,347	11.1%	15,912	1,028	6.5%
Sumatera Utara	1,537,499	145,229	9.4%	234,790	10,444	4.4%
Sumatera Barat	687,961	77,163	11.2%	20,128	1,428	7.1%
Riau	408,418	47,034	11.5%	36,402	2,851	7.8%
Jambi	308,651	35,290	11.4%	11,741	797	6.8%
Sumatera Selatan	920,013	108,332	11.8%	86,806	7,255	8.4%
Bengkulu	173,954	22,786	13.1%	5,928	502	8.5%
Lampung	908,111	104,013	11.5%	6,552	251	3.8%
Kalimantan Barat	464,330	66,377	14.3%	44,376	3,955	8.9%
Kalimantan Tengah	243,689	21,100	8.7%	4,825	230	4.8%
Kalimantan Selatan	370,360	52,181	14.1%	10,767	670	6.2%
Kalimantan Timur	263,580	27,325	10.4%	23,418	1,416	6.1%
Sulawesi Utara	324,723	40,765	12.6%	129,857	12,284	9.5%
Sulawesi Tengah	278,494	43,285	15.5%	20,182	2,660	13.2%
Sulawesi Selatan	1,189,328	165,202	13.9%	31,914	2,001	6.3%
Sulawesi Tenggara	231,557	23,975	10.3%	4,320	480	11.1%
Maluku	218,209	32,458	14.9%	84,886	13,301	15.7%
Nusa Tengg.Barat	552,614	57,974	10.5%	1,411	51	3.6%
Nusa Tengg.Timur	280,755	53,717	19.1%	296,237	54,318	18.3%
Irian Jaya	87,070	9,770	11.2%	110,858	14,550	13.1%
Timor Timur	84,889	14,364	16.9%	14,400	2,852	19.8%
TOTAL	10,023,167	1,202,589	12.5%	1,195,710	133,326	9.0%
(TOTAL)	40.8%	49.0%		59.5%	76.1%	
INDONESIA	24,556,810	2,455,209	10.0%	2,010,678	175,119	8.0%

schools is above that of the private schools at 8%. Across provinces the same relationship holds with only four exceptions: Sulawesi Tenggara, Maluku, Irian Jaya and Timor Timur. As with the drop-out rate, there has been a decrease in the national repetition rates over the last several years, from 10.64% in 1982/83 to 10.24% in 1983/84 to 10.19% in 1984/85, but these rates are still relatively high. Sizable variations between provinces are again in evidence, ranging from 5.96% in Jakarta in 1984/85 to 19.87% in Nusa Tenggara Timur. These rates show some systematic variation when an attempt is made to categorize provinces according to population density and population growth rates. Generally they indicate higher repetition rates in areas which are less densely populated, have a higher growth rate and, (it is assumed) more rural.

Repetition rates in both public and private schools tend to be higher at lower grade levels with the highest rates of repetition at the grade one level.

On the basis of national data, there appear to be few disparities between male and female students. In 1980, age-group data from the census indicates that 48.9% of the 0-4 age group and 49.0% of the 5-9 age group were female. In 1984/85, 52% of all primary school students were male and 48% female, close to the presumptive sex division of the cohort. Also no major disparities across grade levels are evident. Drop-out and repetition rates for males and females were not available at the time of this writing, but the fact that the relationship of the enrollment of male and female students (52% to 48%) is maintained through each grade level indicates that there are no major disparities by gender.

There is a group of schools that are designed to serve the needs of students with learning handicaps. In the 1984/85 school year there were 590 of these special schools (government supported and private) of three types - SLB, SD Terpadu and SDLB. These schools enrolled 19,856 students. The majority are designed to serve students with the same type of impairment, but a few serve a variety of handicapped students. These schools will be discussed further in section 5.2.7.

5.2.5.2. Instructional Staff

There were 986,638 teachers at the primary level teaching in public and private schools throughout Indonesia in the 1984/85 school year. Of this total, 92.4% were public school teachers and 7.6% private school teachers. Headmasters composed 12% of the total, regular classroom teachers 72%, religion teachers 13%, and sports teachers 3%. In 1983, approximately 33% of the total number of teachers were women.

Preservice teacher training for primary school teachers is conducted in senior secondary schools called SPG (Sekolah Pendidikan Guru or Teacher Training Schools). This program provides three years of specialized training after junior secondary school and results in an SPG diploma. Specialized teacher training programs are also available for preprimary and special school teachers. Three years of training at the senior secondary level is considered the basic qualification for primary school teachers. Those with less training than this are considered underqualified and are encouraged to attend special upgrading programs which can result in an equivalency credential, a D1 certificate, upon completion of the program (see Chapter 8). As Table 5.14 indicates, there were 95,356 teachers in 1984/85 with degrees below the SPG level.

TABLE 5.14

NUMBER OF TEACHERS BY LEVEL OF EDUCATION AND PROVINCE
1984/1985

NO	PROVINSI Province	S D Primary	SMTP KEG. TchTrnJSS	SMTP BKEG NnTT.JSS	SMTA KEG. TchTrSSS	SMTA BKEG NnTT.SSS	PGSLP TT.forJSS	SARMUD TT.forSSS	SARJANA Master	JUMLAH Total
1	DKI Jakarta	0	3,810	206	26,977	720	697	1,350	289	34,04
2	Jawa Barat	93	14,520	191	132,547	411	1,109	1,609	278	150,75
3	Jawa Tengah	264	12,791	321	151,754	1,166	3,300	3,920	210	173,72
4	DI Yogyakarta	13	2,139	18	16,564	70	619	1,272	142	20,83
5	Jawa Timur	288	12,390	442	143,168	903	3,126	4,808	317	165,52
6	DI Aceh	23	1,640	80	17,793	70	179	95	30	19,91
7	Sumatera Utara	233	8,188	292	58,456	717	1,286	1,148	131	70,45
8	Sumatera Barat	59	4,515	55	22,044	270	32	335	44	27,35
9	R i a u	38	1,730	155	12,616	182	247	290	38	15,29
10	Jambi	98	1,351	83	11,152	88	322	81	2	13,17
11	Sumatera Selatan	518	3,610	1,069	24,393	823	454	373	64	31,30
26	Bengkulu	61	1,071	71	5,950	90	15	53	0	7,311
12	Lampung	39	2,274	113	25,514	95	483	322	45	28,88
13	Kalimantan Barat	82	2,155	115	15,799	76	135	125	33	18,52
14	Kalimantan Tengah	46	609	21	8,889	89	54	35	22	9,76
15	Kalimantan Selatan	8	1,676	10	14,865	78	573	103	19	17,41
16	Kalimantan Timur	31	619	46	10,068	114	1,001	195	18	12,09
17	Sulawesi Utara	22	1,281	143	20,744	133	279	355	197	23,154
18	Sulawesi Tengah	80	1,705	209	10,078	94	50	178	32	12,426
19	Sulawesi Selatan	8	4,297	37	35,805	184	603	1,631	210	42,775
20	Sulawesi Tenggara	8	952	27	8,016	25	157	60	13	9,258
21	Maluku	0	1,284	14	10,820	28	508	60	27	12,741
22	B a l i	0	390	1	18,719	28	1,000	281	37	20,456
23	Nusa Tengg.Barat	1	1,093	4	16,905	32	488	373	21	18,917
24	Nusa Tengg.Timur	0	1,331	11	18,562	37	687	474	27	21,129
25	Irian Jaya	147	422	4	5,886	21	202	105	7	6,794
27	Timor Timur	1,215	75	325	942	51	13	0	0	2,621
**	INDONESIA	3,375	87,918	4,063	845,026	6,675	17,619	19,709	2,253	986,638

95.356
9.7%

Source: Balitbang Dikbud, Statistic Sekolahan, 1985

These underqualified teachers represent 9.7% of the total number of teachers. Among private school teachers 14.4% were underqualified; 9.3% of the public school teachers were underqualified. Only 2.2% of all primary teachers had higher education degrees and the great majority of these teachers with higher education degrees were in public schools.

In 1984/35, the teacher training schools (SPG) graduated approximately 57,000 new teachers. Fifty-one per cent of these graduates in 1984/85 were from SPG in Java. In 1984/85 there were 44,408 new entrants into public SPG and 40,743 into private SPG, for a total of 85,151 new entrants. The total number of SPG students was 246,623 of which 158,958 (64.4%) were women. There is a total of 632 SPG throughout the country, 208 public and 424 private. Conservative projections (Tables 5.15a and 5.15b) indicate that with currently projected growth in student enrollments, a 5% decrease each year in SPG enrollments and a 90% graduation rate for third year SPG students, there would be an oversupply of over 200,000 primary teachers by 1995 calculated at a 30 to 1 student to teacher ratio and an oversupply of more than 100,000 teachers calculated at the current ratio of 27 to 1. (For a description of the technique used to calculate these tables see Appendix E.) Thus, there is no real shortage nationwide of primary school teachers. In fact, given current enrollment levels, it appears that there is likely be a national oversupply in the near future.

Serious regional shortages are evident, however. Appendices F, G and H show a sampling of interprovincial ratios by Kabupaten, and at this level much larger disparities are evident. The problem of teacher shortages in remote areas can be especially severe. It is a problem

TABLE 5.15a

PROJECTED TEACHER SUPPLY (RATIO 30:1)

TOTAL PUBLIC/PRIVATE: ENROLLMENT PROJECTIONS FOR TOTAL PRIMARY

YEAR	growth in New Intake ave.pr.* ave.rep.*	Grade 1 0.139	Grade 2 0.832 0.099	Grade 3 0.859 0.086	Grade 4 0.871 0.068	Grade 5 0.888 0.049	Grade 6 0.922 0.012	Graduates 0.939	TOTAL	TEACHER DEMAND 30
1983/84	4,626,386	5,350,203	4,842,320	4,490,526	4,218,117	3,835,597	3,069,611	2,924,271	25,804,380	860146
1984/85	4,470,807	5,382,689	4,940,215	4,612,349	4,209,870	3,920,907	3,501,658	3,321,488	26,567,688	885590
1985/86	4,518,741	5,414,841	4,978,069	4,709,856	4,309,074	3,896,164	3,586,403	3,401,220	26,896,408	896480
1986/87	4,567,855	5,471,110	5,014,646	4,749,741	4,401,740	3,981,415	3,564,162	3,380,334	27,182,615	906087
1987/88	4,618,179	5,532,485	5,066,318	4,786,944	4,440,943	4,066,967	3,639,233	3,452,643	27,532,889	917763
1988/89	4,669,740	5,595,965	5,123,744	4,835,200	4,476,993	4,103,831	3,716,040	3,525,968	27,851,773	928392
1989/90	4,722,568	5,661,097	5,183,516	4,888,847	4,521,455	4,137,502	3,747,252	3,555,[illegible]	28,139,669	937989
1990/91	4,780,883	5,732,029	5,244,934	4,944,951	4,570,831	4,178,127	3,777,280	3,583,[illegible]	28,448,151	948272
1991/92	4,849,056	5,803,961	5,311,163	5,002,689	4,622,605	4,223,220	3,813,912	3,618,275	28,777,550	959252
1992/93	4,909,095	5,876,804	5,378,478	5,065,213	4,675,947	4,270,587	3,854,691	3,656,647	29,121,720	970724
1993/94	4,961,019	5,950,673	5,446,580	5,129,111	4,733,890	4,319,428	3,897,577	3,696,977	29,477,259	982575
1994/95	5,022,843	6,025,625	5,515,643	5,193,764	4,793,383	4,372,598	3,941,818	3,738,575	29,842,792	994760

ENROLLMENT PROJECTIONS FOR SPG PUB+PRI/TOTAL

YEAR	New Enroll. 0.95	Grade I	Grade II	Grade III	Graduates	CURRENT TEACHERS Attrition 0.975	TEACHER SUPPLY LESS DEMAND
Proq. Rep.		0.012	0.85 0.011	0.85 0.034	0.9		
1983/84	85,547	86,705	77,583	62,103	61,127	925834	65688
1984/85	85,151	86,191	74,553	68,057	57,531	984961	101371
1985/86	80,893	81,928	74,083	65,684	59,115	1019818	123338
1986/87	76,849	77,832	70,453	65,204	58,683	1053438	147351
1987/88	73,006	73,940	66,932	62,102	55,892	1085785	168022
1988/89	69,356	70,243	63,586	59,004	53,103	11:4533	186140
1989/90	65,888	66,731	60,406	56,054	50,448	1:39773	201784
1990/91	62,594	63,395	57,386	53,251	47,926	1161727	213455
1991/92	59,464	60,225	54,517	50,589	45,530	1180610	221358
1992/93	56,491	57,214	51,791	48,059	43,253	1196626	225900
1993/94	53,666	54,353	49,201	45,656	41,091	1209962	227307
1994/95	50,983	51,635	46,741	43,373	39,036	1220803	226044

TABLE 5.15b

PROJECTED TEACHER SUPPLY (RATIO 27:1)

TOTAL PUBLIC/PRIVATE:
ENROLLMENT PROJECTIONS FOR TOTAL PRIMARY

YEAR	Growth in New Intake ave.pr.= ave.rep.=	Grade I 0.139	Grade 2 0.832 0.099	Grade 3 0.859 0.086	Grade 4 0.871 0.068	Grade 5 0.888 0.049	Grade 6 0.922 0.012	Graduates 0.939	TOTAL
1983/84	4,626,386	5,350,203	4,842,330	4,490,520	4,216,119	3,835,597	3,069,611	2,924,271	25,804,380
1984/85	4,470,807	5,382,689	4,940,215	4,612,349	4,209,870	3,920,907	3,501,658	3,321,488	26,567,688
1985/86	4,518,741	5,414,841	4,978,069	4,709,856	4,309,074	3,896,1[illegible]	3,586,403	3,401,220	26,894,408
1986/87	4,567,855	5,471,119	5,014,446	4,749,741	4,401,740	3,981,415	3,564,162	3,380,336	27,182,615
1987/88	4,618,179	5,532,485	5,066,318	4,786,944	4,440,943	4,066,967	3,639,233	3,452,463	27,532,889
1988/89	4,669,740	5,595,965	5,123,744	4,835,200	4,476,993	4,103,831	3,716,040	3,525,968	27,851,773
1989/90	4,722,568	5,661,097	5,183,516	4,888,847	4,521,455	4,137,502	3,747,252	3,555,384	28,139,669
1990/91	4,780,883	5,732,029	5,244,934	4,944,951	4,570,831	4,178,127	3,777,280	3,583,749	28,448,151
1991/92	4,840,954	5,803,961	5,311,163	5,002,689	4,622,605	4,223,220	3,813,912	3,618,275	28,777,550
1992/93	4,900,695	5,876,804	5,378,478	5,065,213	4,675,947	4,270,587	3,854,691	3,656,647	29,121,720
1993/94	4,961,619	5,950,673	5,446,580	5,129,111	4,733,890	4,319,428	3,897,577	3,696,977	29,472,259
1994/95	5,022,843	6,025,625	5,515,603	5,193,764	4,793,383	4,372,598	3,941,818	3,738,575	29,842,792

TEACHER DEMAND 27	YEAR	ENROLLMENT PROJECTIONS FOR SPG PUB+PRI/TOTAL New Enroll. 0.95	Grade I	Grade II	Grade III	Graduates	CURRENT TEACHERS Attrition 0.975	TEACHER SUPPLY LESS DEMAND
	Proj. Rep.		0.012	0.011	0.034	0.9		
955718	1983/84	85,547	86,705	77,583	62,103	61,127	925834	[illegible]884
983988	1984/85	85,151	84,191	74,553	68,057	57,531	984961	2973
996089	1985/86	80,893	81,928	74,083	65,684	59,115	1019818	23729
1006764	1986/87	76,849	77,852	70,453	65,204	58,683	1053438	46674
1019737	1987/88	73,006	73,940	66,932	62,102	55,892	1085785	66049
1031547	1988/89	69,356	70,243	63,586	59,604	53,103	1114533	82986
1042210	1989/90	65,888	66,731	60,406	56,054	50,448	1139773	97563
1053635	1990/91	62,594	63,395	57,386	53,251	47,926	1161727	108092
1065835	1991/92	59,464	60,225	54,517	50,589	45,530	1180618	114775
1078582	1992/93	56,491	57,214	51,791	48,059	43,253	1196424	118042
1091750	1993/94	53,666	54,353	49,201	45,656	41,091	1209962	118212
1105289	1994/95	50,983	51,635	46,741	43,373	39,036	1220903	115515

that is known by educational planners in Indonesia, and one for which effective solutions are being sought. Also, as the data in Table 5.16. indicate, the student to teacher ratio does not vary much by region. (The national ratio is 27 to 1 and the provincial ratios are close to that mark.)

Teacher inservice training programs are conducted each year by the Depdikbud under the supervision of the Directorate of Teacher Training of Dikdasmen. Primary school teacher inservice training is conducted by a team of about 900 trainers (Tim Penatar Keliling) who conduct training in specific subject areas. In 1984/85 approximately 200,000 teachers throughout Indonesia received training in PSPB (new political history curriculum) from 888 trainers. The plan for next year calls for training of 130,480 teachers in sports and health, art and skill training. Training in the five academic subject areas was completed in 1981/82, and only PMP inservice training was conducted between 1982 and 1984. The Directorate of Teacher Training within Dikdasmen has also established seven PPPG (Pusat Pembangunan Pendidikan Guru, or Teacher Education Development Centers) for development of subject-specific teacher inservice training materials and methodologies. These centers serve 27 BPG (Balai Pendidikan Guru or Teacher Education Hall), 15 of which are in operation for secondary teacher training. Whether they will be used for upgrading or inservice training for primary school teachers is not yet clear.

Each province has a certain proportion of its total number of teachers assigned to training. Once an allocation is made, schools are assigned the number of teachers they are to send for inservice training.

TABLE 5.16

TREND OF RATIOS OF PUPILS TO TEACHERS AND
CLASSES TO SCHOOLS BY PROVINCE
1981/1982 - 1984/1985

NO	PROVINSI Pro vince	RASIO MURID PER GURU Ratio of Pupils to Teachers				RASIO KELAS PER SEKOLAH Ratio of Classes to Schools			
		1981/1982	1982/1983	1983/1984	1984/1985	1981/1982	1982/1983	1983/1984	1984/1985
1	DKI Jakarta	36	34	33	31	8.2	8.4	8.5	8.1
2	Jawa Barat	43	34	33	32	7.5	7.3	7.0	6.7
3	Jawa Tengah	29	27	25	24	6.7	6.2	6.1	6.1
4	DI Yogyakarta	25	23	22	21	7.0	6.9	7.0	6.9
5	Jawa Timur	33	29	27	26	6.7	6.5	6.3	6.3
6	DI Aceh	31	28	26	25	7.0	6.3	5.9	6.2
7	Sumatera Utara	30	27	26	25	7.1	6.8	6.6	6.6
8	Sumatera Barat	32	29	27	26	6.9	6.3	6.1	6.2
9	R i a u	34	33	30	29	6.7	6.9	6.5	6.3
10	Jambi	29	24	26	24	6.0	6.3	5.7	5.8
11	Sumatera Selatan	38	33	31	32	7.6	7.4	7.2	7.2
26	Bengkulu	33	30	25	25	5.2	5.5	5.2	5.6
12	Lampung	42	36	37	32	8.6	8.0	8.3	7.9
13	Kalimantan Barat	32	29	27	27	5.5	5.6	5.4	5.9
14	Kalimantan Tengah	27	24	27	25	4.7	4.5	4.6	4.8
15	Kalimantan Selatan	25	23	22	22	5.8	5.7	5.4	5.5
16	Kalimantan Timur	31	33	30	24	6.6	5.7	6.1	6.4
17	Sulawesi Utara	25	21	20	20	6.7	6.7	6.3	6.4
18	Sulawesi Tengah	36	29	25	24	5.4	5.4	5.5	5.5
19	Sulawesi Selatan	36	32	29	29	7.0	6.6	6.5	6.9
20	Sulawesi Tenggara	34	32	26	25	5.5	5.5	5.5	5.5
21	Maluku	30	28	24	24	6.0	5.7	5.7	5.7
22	B a l i	39	27	24	23	6.8	6.4	5.8	5.9
23	Nusa Tengg.Barat	34	31	31	29	6.2	6.2	6.2	6.1
24	Nusa Tengg.Timur	30	28	27	27	6.0	5.7	5.7	5.7
25	Irian Jaya	28	29	29	29	5.5	5.4	5.2	5.5
27	Timor Timur	45	44	38	38 H	4.2	4.9	6.7	6.5
	INDONESIA	33	29	28	27	6.8	6.5	6.4	6.4

Source: Balitbang Dikbud, Statistic Sekolahan, 1985

It is up to the school to decide which teachers assigned to which subject area will receive training for that year. Most SD teachers are classroom teachers (i.e., teaching all subjects), rather than teachers of specific subjects. The exceptions are teachers of religion, and sports and health. The decision (usually made by the principal and/or supervisor) as to who is assigned for training is usually based upon previous training and special competence in the subject area. If at all possible, each teacher is given an opportunity to receive training.

Inservice training usually covers a 10-day period (90 total hours) and is conducted by a team of three to five tutors. Depending upon the subject and size of of the training group, there can be up to 10 tutors. The Penilik TK/SD also attend training. After the inservice training, teachers are encouraged to form discussion groups that meet periodically to follow up their training. This system of "Pemantapan Guru" is encouraged under the authority of the penilik, but no special funding is provided from Depdikbud. In the Kabupaten of Cianjur, where the new primary school curriculum is being tried out, this follow-up system is formally established. In Cianjur, Kelompok Kerja Guru (KKG or Teacher Work Groups) meet as often as weekly in the school, and in the Pusat Kegiatan Guru (PKG or Teacher Activity Center), teachers from a kecamatan meet once a month. Some of these groups have been extremely successful and have fostered the dissemination of educational innovation, as will be seen below.

5.2.5.3 Curriculum and Materials

The primary school curriculum in use today was prepared in 1975, and consists of 10 subject areas. The nine original subject areas are:

religion, PMP (Pendidikan Moral Pancasila - moral and civics education), Indonesian language, social studies (IPS), mathematics, science (IPA), sports and health, art and skills training. A new subject area introduced in 1984 is PSPB (Pendidikan Sejarah Perjuangan Bangsa) and covers Indonesian history and politics. Each day children receive instruction in most subject areas. The total amount of instructional time per week varies from 26 hours for grades one and two to 36 hours per week for grades four to six. There are 245 official school days per year. The actual number of study days is less. Figure 5.4 shows how weekly hours are allocated for each subject area. A class period lasts 30 minutes for grades one and two and 40 minutes for grades three through six.

The curriculum objectives for each subject area are related to the hierarchy of educational objectives as laid out by Benjamin Bloom, (i.e., in three overall "aspects" - knowledge, skills or attitudes.) Each of these three aspects also addresses institutional objectives. The curriculum is then broken down into curricular objectives, instructional objectives, fundamental studies (pokok bahasan), sub-fundamental studies and finally teaching material. All texts must be written to fulfill these curriculum guidelines. As mentioned, this curriculum has not been revised since 1975, but new textbooks are developed periodically.

The most recent texts in Bahasa Indonesia, IPS (social studies) and PMP (civics) were completed in 1982 and are projected to have a five-year life span. Production and distribution of the texts was partially funded under the World Bank Textbook Project 1. The World Bank Textbook

FIGURE 5.4

ELEMENTARY SCHOOL CURRICULUM

Mata Pelajaran	GRADE LEVEL T i n g k a t					
	I	II	III	IV	V	VI
Agama (Religion)	2	2	2	3	3	3
Pendidikan Moral Pancasila (Civics)	2	2	2	2	2	2
Bahasa Indonesia (Indonesian Language)	8	8	8	8	8	8
Ilmu Pengetahuan Sosial (Social Studies)	-	-	2	2	2	2
Matematika (Math)	6	6	6	6	6	6
Ilmu Pengetahuan Alam (Science)	2	2	3	4	4	4
Olah Raga dan Kesehatan (Sports and Health)	2	2	3	3	3	3
Kesenian (Art)	2	2	3	4	4	4
Ketrampilan Khusus (Skills Training)	2	2	4	4	4	4
Jumlah Jam Pelajaran	26	26	33	36	36	36

1 Jam pelajaran = 30 menit untuk tingkat I dan II

= 40 menit untuk tingkat III sampai VI

Sumber Data : Buku kurikulum SD tahun 1975

Project 2 (to be completed in June 1987) is assisting in preparation and distribution of new mathematics and science texts. This effort is conducted by Proyek Buku Terpadu (Integrated Textbook Project) in coordination with Pusat Curriculum of Balitbang Dikbud. The current World Bank loan calls for production of 128 million texts in math, science and English language for SD, SMP and SMA. Production will be based upon a one book per student projection using data supplied by Balitbang Dikbud's Pusat Informatika (Office of Information). It is hoped that a third World Bank loan will be obtained for revision of the old Bahasa Indonesia, IPS and PMP texts upon completion of the present project.

The process to develop a new text takes approximately three years and involves six stages:

1. A writer and two reviewer/evaluators are recruited;
2. An outline for the text and manuscript are prepared based upon the curriculum. This takes six to eight months;
3. A small amount of texts are prepared for try-out in five areas, remote to urban, in one good, one fair and one poor school - a total of 15 schools;
4. After the try-out period of one calendar year, the text is revised on the basis of feedback from teachers and evaluators. This takes about three months.
5. After the revised draft is completed, a team of five persons, two from universities and five experts in the field, review and edit the manuscript.
6. This revised manuscript is then submitted for approval to a

steering committee composed of the Minister of Education, Directors' General, the Secretary General, and Directors of relevant units for approval. Most manuscripts are rejected initially and sent back for another revision at this stage.

The completed text is printed (an overprint is done by Balai Pustaka for commercial sale) and distributed to each Kanwil and Kabupaten through 285 depots run by Proyek Buku Terpadu. Money is provided to the Kandep office to arrange for distribution to the schools, but the distribution is not reported or monitored. Principals sign that they have received materials, but no other information is required. In the upcoming year, printing of texts will be decentralized for easier and more cost effective distribution. The new printing centers will be in Jakarta, Medan, Surabaya, Semarang and Ujung Pandang. At present, each text costs approximately Rp.800 to Rp.900 for primary texts. Approximately three-quarters of this cost is in the paper, which is paid for by the Government.

A new set of curriculum materials in all academic subject areas has been developed by Pusat Curriculum of Balitbang Dikbud and tried out in the Kabupaten of Cianjur, West Java over the last four years. These materials focus upon improvement of the process and methodology of teaching; basically they enhance the existing texts. Only critical curriculum objectives are covered and thought must eventually be given as to whether all the current objectives can be covered in the time available. The new teaching/learning processes are based upon interaction among students in small learning groups of three to seven or eight under the guidance of the teachers. This basic methodology has

been tried out with some success in earlier projects in Indonesia, such as the Developmental School Project (PPSP) and SD PAMONG, and subsequently refined.

The new materials relate closely to and draw upon the existing textbooks, referencing the appropriate pages for study. The new materials provide direction to the teacher on how the learning groups will study the lesson and suggest exercises or materials that can be used. Such materials are to be readily available in the local environment. To keep costs low new and expensive learning support equipment is not required.

Sixty schools in Kabupaten Cianjur were identified for the initial try-out effort. The materials have been extremely successful. Through word of mouth in the teacher groups (PKG and KKG), demonstration and observation in the try-out schools, the program is now in operation in over a thousand schools throughout the Kabupaten. This dissemination occurred with no outside support, through the initiative and interest of the teachers and administrators in the area. It is planned that this new curriculum be implemented throughout the country in 1986/87. The Curriculum Office has also been developing a second, less academic curriculum track for upper level primary school students. This "functional" curriculum was intended to better prepare terminal students for their work and living environment. It is very debatable whether "functional" curricula prepare students for work any better than an academic curricula. A similar approach attempted at the secondary level had very poor results and was cancelled. This primary level sister program will probably encounter the same fate.

5.2.5.4 Facilities and Equipment

A typical primary school in Indonesia consists of six classrooms in two separate units of three classrooms each designed to hold 30 to 50 students. A teacher's room or principal's office is attached to one of the units; lavatories are attached to both units. Variations on this design include six-classroom schools of two stories (three on three) in urban areas where land is expensive and three classroom units only in sparsely populated areas. These are often "small schools" which sometimes use a different teaching approach and materials (see section 5.2.5.7). Each classroom should have a blackboard, tables and chairs for each student, a lockable cupboard and bookshelves. A library should also be available in each school, but in many schools this is simply a lockable cupboard with a glass front.

Since the beginning of the SD Inpres program in 1973/74 to 1983/84, approximately 73,000 Unit One's, 62,550 Unit Two's and 570 multistoried buildings have been built. It is a common view that there are now enough SD in Indonesia (although they may not be located in the most appropriate places), and in some cases schools may even be underutilized. The data from Table 5.9 show total schools, classrooms, student to school and student to classroom ratios for 1984/85. Although there is some variation by province, most provincial ratios are close to the national average of about 200 students per school and 30 students per class. In a few provinces, however, the ratio is well below the average.

There has recently been a shift in SD Inpres funding away from new school building toward heavy or light rehabilitation of existing schools; provision of personnel, texts, and support materials for SD

Inpres schools; and for building of principals' and teachers' homes in the more remote areas to serve as an incentive to attract and retain teachers in these less desirable areas. Appendix 5.6 shows trends in SD Inpres funding over the last ten years. SD Inpres funds are currently at a level of about Rp.600 billion per year and are likely to remain near that level for the next few years unless there is a major drop in government revenues. Because SD Inpres funds are specified by presidential order (Inpres or Instruksi President) to be used for primary school expansion activities, an important issue has become the allocation of this funding to areas of greatest need while staying within the mandate of SD Inpres.

5.2.5.5 Examination/Evaluation

Primary school students are tested at the end of each of three terms (Catur Wulan or CW) with a test developed in the school. At the end of the year they are tested using an examination developed either by the Kabupaten P dan K (Kandep) office or by the school, usually the former. At the end of the sixth grade a finishing examination or ETBA is given. Until recently this test was developed at the Kanwil (Provincial) or Kabupaten level with the exception of the test for PMP, which was a national test. In 1984/85 a national examination was initiated for all academic subject areas, i.e. Bahasa Indonesia, IPS, mathematics, IPA, PSPB and PMP. This test is called the EBTANAS. It is given at the end of May over a one-week period. The test serves the three purposes of: 1) certification, 2) selection and 3) quality control.

For certification the student must receive a passing score based upon the formula:

$$\frac{P + Q + nR}{2+n}$$

where: P = the grade report from semester 5 (teacher's score)
Q = the end of year exam by the school
R = EBTANAS score
n = the appropriate weight for primary school; the usual weight is 2, indicating that the the EBTANAS score is given twice the importance of the other two scores. (These weights can vary by level of schooling (primary, junior secondary, senior secondary), and may also vary by region.

This formula is used for the grades (on a scale of 1 to 10) that are found on the back of the graduation certificate (STTB).

The EBTANAS alone is often the criterion for selection into most public secondary schools and some private schools, primarily the schools where enrollments are limited by available space. A student's score puts him/her in a queue from which the SMP entrants are drawn. Students with higher scores are enrolled first until the quota of new entrants is filled.

A third function of quality control is also to be served by the EBTANAS. It is ideally an instrument to determine the comparative levels of achievement in schools, kecamatan, kabupaten and provinces as well as differences among certain subgroups of students. It is potentially a powerful instrument for determining improvements in the quality of education - - a prime goal for Depdikbud. The test was developed rapidly over a one-year period in 1983-84 and sufficient time was not available for pretesting and try-out. Like all new instruments, it has flaws. Some experts believe that many of the test items are invalid and that the instrument has not yet gone through sufficient development. Partially because of this observation, the results of the

test are not widely trusted (or distributed). A serious effort is underway to improve the test that hopefully will result in a much more refined instrument next year.

Other efforts to help evaluate progress in improving the quality of primary education are also underway. A quality study is being conducted by the Testing Center (Pusat Pengujian) of Balitbang Dikbud. Testing was conducted in a national stratified sample of sixth graders in five subject areas: PMP, Bahasa Indonesia, IPS, Mathematics, and IPA. The results of this test will be compared with those of a similar national test conducted in 1975 to indicate achievement gain or loss among provinces and other subgroupings of students. Another test will be administered in five years. A study of the major factors contributing to student achievement and achievement by cognitive skill will also be conducted. The results of the 1975 and 1984 quality study in comparison to the 1985 EBTANAS are presented in Table 5.17. It shows large inconsistencies between these tests, but the information in the table is an imprecise measure and should be viewed as suggestive rather that definitive.

The monitoring section (Subdit Monitor) of Dikdasmen is also conducting a comparative quality of education study in its "Test Sampling" activity. For this effort grade five students are tested from three schools in each province. The Kanwil in each province is directed to chose the three best schools for the sample. The aim is to study the relative achievement of provinces through the scores of only the very best students. Because of the type of sample taken, it is of limited value as an accurate measure of student achievement regionally or nationally.

TABLE 5.17

PRIMARY SCHOOL EDUCATIONAL ACHIEVEMENT BY PROVINCE

(1975 and 1984 Grade 6 Quality Study and 1985 EBTANAS)

PROVINCE	QUALITY STUDY ALL SUBJECTS 1975 SCORE	ALL SUBJECTS 1984 SCORE	ALL SUBJECT RANKING 1975	1984	RELATION TO NAT. MEAN 1975 (+ Above; - Below)	1984	1985 EBTA NAS	RANKING EBTANAS	REL. TO NAT.MEAN
1. DKI Jakarta	155.58	288.53	1	1	+	+	7.04	1	+
2. Jawa Barat	133.66	239.31	6	13	+	-	6.53	3	+
3. Jawa Tengah	124.53	249.77	11	8	-	+	5.66	17	+
4. DI Yogjakarta		276.89		2		+	5.87	11	+
5. Jawa Timur	127.92	243.82	8	12	-	+	5.5	21	-
6. DI Aceh	103.81	203.45	20	25	-	-	6.07	9	+
7. Sumatera Utara	132.52	258.88	7	6	+	+	5.15	22	-
8. Sumatera Barat	135.14	249.27	5	9	+	+	6.47	4	+
9. Riau	109.76	238.01	16	14	-	-	6.22	8	+
10.Jambi	109.76	267.79	16	3	-	+	5.56	19	-
11.Sumatera Selatan	146.5	244.53	2	11	+	+	5.68	16	+
26.Bengkulu	139.14	220.26	3	21	+	-	5	23	-
12.Lampung	127.16	229.74	9	19	-	-			
13.Kalimantan Barat	106.89	260.92	18	4	-	+	5.8	13	+
14.Kalimantan Tengah	116.31	228.86	14	20	-	-			
15.Kalimantan Selatan	119.88	258.64	12	7	-	+	5.63	18	+
16.Kalimantan Timur	119.88	246.62	12	10	-	+	6.35	6	+
17.Sulawesi Utara	116.3	236.61	15	16	-	-	5.69	15	+
18.Sulawesi Tengah	116.33	204.9	13	24	-	-	5.79	14	+
19.Sulawesi Selatan	109.63	231.65	17	18	-	-	5.86	12	+
20.Sulawesi Tenggara	109.63	219	17	22	-	-	4.87	24	-
21.Maluku	125.79	260.55	10	5	-	+	6.59	2	+
22.Bali	135.69	236.96	4	15	+	-	6.44	5	+
23.Nusa Tengg.Barat	96.99	217.03	21	23	-	-	6.02	10	+
24.Nusa Tengg.Timur	104.6	235.28	19	17	-	-	6.25	7	+
25.Irian Jaya		186.76		26		-	5.54	20	-
27.Timor Timur							4.86	25	-
INDONESIA	121.8083	241.6444					5.632307		

5.2.5.6. Special Programs

This section addresses special programs or activities that do not fall clearly within one of the programmatic categories above or which are so large that they deserve special consideration. Two such programs will be mentioned here: the PU Wajar or universal compulsory primary education program and the special schools program.

The PU Wajar Program is designed to fulfill the goal of universal compulsory primary education within the time span of Repelita IV. PU Wajar is administered by a staff of professionals within the Directorate of Primary Education. This staff not only gathers data and monitors progress toward universal primary education, but also conducts programs to help reach this goal. At present these programs focus upon the last 5 to 10% of the 7-12 year age cohort not attending primary school. In addition to motivational activities to enroll students, three implementation strategies were specified in Repelita IV as primary means to enroll these difficult to reach potential students: small schools, SD PAMONG Patjar and Kejar Paket A. The first two are supported by PU Wajar. The latter is under the authority of the Directorate General for Out-of-School Education, Youth and Sports.

The small schools project and SD PAMONG are related with regard to the teaching/learning methodology and learning materials used. Small schools are formal, usually three-classroom schools with two or three teachers and a principal assigned. These schools are in more remote areas where class sizes are small and/or students are from semi-nomadic families (often slash and burn dry rice farmers, loggers or hunters). The teaching methodology (which is very similar to the new curriculum

materials) stresses interactive learning in small groups which allows one teacher to monitor two classes of students. The learning materials (modules) cover the same curriculum objectives as the regular formal school curriculum, but the are self-contained and self-instructional and based upon mastery learning techniques. The students can therefore take modules with them to study alone or in small groups when they are away from the school for a long period of time.

SD PAMONG patjar (out-of-school leaning centers) are designed to serve dropouts or students who are unable to enroll in regular formal schools for various reasons. Patjar learning is conducted in an individualized manner using the same materials used by the small schools. Patjar teachers are regular elementary school teachers who work in the patjar in the afternoons or evenings. They receive a stipend of Rp.15,000 per weekly patjar session. A patjar can use a SD PAMONG formal school, conventional SD, or a community center as an administrative base. The appropriate strategy is up to the local authorities.

At present there are approximately 350 small schools with an average enrollment of 50 students in Central Kalimantan, Sulawesi Tenggara and Madura. The total number of patjar in Bali and East Java in 1984 was estimated at 1600 to 1700 centers enrolling approximately 45 students each. PU Wajar targets call for the establishment of several thousand new patjar and small schools by 1987.

A second major special program of the Depdikbud is the special education program for handicapped students. This program is administered by a five-person professional staff within the Directorate

Jenderal of Primary and Secondary Education (Dikdasmen). Three types of special schools are administered from this office: SLB, SD Terpadu, and SDLB. SLB (Sekolah Luar Biasa) are of five types, serving blind children (Type A); deaf and hard of hearing (Type B); mentally retarded but educable (Type C1) or trainable (Type C2); physically impaired often Cerebral Palsy victims (Type D); and emotionally disturbed children (Type E). In 1984/85, there were 350 SLB throughout Indonesia, primarily in more urban areas enrolling 17,550 (Table 5.18). There are also three national SLB which act as model schools for blind students, deaf students, and retarded students. The SDLB are school that have combined programs for students with a variety of handicaps. There are 166 SDLB enrolling 2,128 students.

SLB Terpadu (Integrated Special Schools) are regular SD that have special education teachers assigned to assist handicapped students who are able to be integrated with regular primary school students. There are presently 74 schools with 178 students throughout the country. This program is in most need of expansion.

As can be seen from Table 5.19, approximately 79% of the SLB are in Java as are four of the six training institutes for special school teachers. Most students are in categories A, B and C and at the earlier levels of schooling (P1 through D8) which corresponds approximately to a primary education. Higher levels of education, up through senior secondary school and vocational/technical training, are also provided (levels L3 and K3).

Special education teachers are supposed to have an SPG degree plus two years of training in special education. They receive a stipend of

TABLE 5.18

NUMBERS OF SPECIAL SCHOOLS, TEACHERS, STUDENTS
OPERATIONAL IN APRIL 1984/85

Type of Schools	Schools	Teachers				Total Students
		Civ. Ser.	Civ. Ser. MOEC	Priv.	Total	
SLB	350	368	2.226	885	3.479	17.550
SD Terpadu	74	74	-	-	74	178
SDLB	166	668	-	-	666	2.128
T O T A L	590	1.108	2.226	885	4.219	19.856

Source: Dikdasmen (1985), Statistik SLB. Jakarta.

TABLE 5.19

TOTAL SLB BY PROVINCE, 1984/1985

Propinsi	Special Schools SEKOLAH LUAR BIASA													TEACHERS GURU			Jumlah Murid Total Students	Jumlah Kelas Total Classes
	A	B	C	D	M	AB	ABC	ABC D	BC	AC	BCD	CD	CD	JUMLAH Total	II/ N Dpk Negeri	Swast Private	Jmlh Total	
DKI Jakarta	2	8	18	2	1	-	-	-	6	1	-	-	-	40	329	177	506	3003	314
Jawa Barat	11	19	19	3	3	-	7	3	9	-	-	-	-	74	634	62	696	3226	554
Jawa Tengah	9	10	25	4	3	-	1	-	2	-	-	1	-	55	402	154	556	3830	437
D.I.Yogyakarta	3	3	10	-	3	-	5	3	11	-	2	-	1	41	389	121	510	2336	436
Jawa Timur	6	9	18	7	3	1	7	2	13	-	1	-	-	67	350	158	508	3609	530
D.I.Aceh	1	-	-	-	-	-	-	-	-	-	1	-	-	2	7	3	10	50	15
Sumatra Utara	2	1	2	1	1	-	-	-	1	-	-	1	-	9	64	68	132	220	61
Sumatra Barat	1	1	-	1	-	-	-	-	1	-	1	-	-	5	45	7	52	350	39
Riau	1	-	-	-	-	-	-	-	2	-	-	-	-	3	3	5	8	50	12
Jambi	-	-	-	-	-	-	-	1	-	-	-	-	-	1	12	4	16	100	10
Sumatra Selatan	1	1	4	2	1	-	-	-	-	-	-	-	-	9	52	35	87	550	57
Bengkulu	-	-	-	-	-	-	-	1	-	-	-	-	-	1	19	-	19	100	12
Lampung	-	-	-	-	-	-	-	-	2	-	1	-	-	3	12	9	21	60	7
Kalimantan Barat	-	1	1	-	-	-	-	-	2	-	-	-	-	4	35	1	36	300	52
Kalimantan Tengah	2	1	1	-	-	-	-	-	-	-	-	-	-	4	6	4	10	25	2
Kalimantan Selatan	1	1	-	-	-	-	-	-	1	-	-	-	-	3	14	6	20	100	20
Kalimantan Timur	-	-	-	-	-	-	-	-	1	-	-	-	-	1	15	-	15	60	11
Sulawesi Utara	1	2	1	-	-	-	-	-	-	-	-	-	-	4	11	13	24	70	20
Sulawesi Tengah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulawesi Selatan	1	3	2	2	-	-	-	-	-	-	-	-	-	8	40	22	62	300	61
Sulawesi Tenggara	1	1	-	-	-	-	-	-	-	-	-	-	-	2	6	3	9	32	6
Maluku	-	-	-	-	-	-	1	-	-	-	1	-	-	2	2	9	11	25	6
Bali	1	4	1	-	-	-	-	-	-	-	-	-	-	6	116	5	121	315	55
Nusa Tenggara Barat	1	-	1	-	-	-	-	-	1	-	-	-	-	3	12	10	22	72	12
Nusa Tenggara Timur	-	-	-	-	-	-	1	-	-	-	-	-	-	1	5	1	6	42	10
Irian Jaya	2	-	-	-	-	-	-	-	-	-	-	-	-	2	9	13	22	70	23
Timor Timur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jumlah	47	65	103	22	15	1	22	10	54	1	7	2	1	350	2594	885	3479	17550	2839

Source: Dikdasmen, Subdit SLB, 1985

Rp.8,300 per month while in special school training, but receive a regular government teacher salary once they are assigned. The six training institutes graduate about 1,000 teachers per year. The ratio of students to teachers varies from 7:1 to 10:1, depending upon the type of handicap. It is estimated officially that there are 300,000 handicapped children throughout Indonesia (some estimates place the total at nearly a half million). This means that only about 6.6% of the total number of handicapped children are presently being served (19,856 of 300,000). The target for Repelita IV is to provide 30% of these children with services. Planning for Repelita V calls for reaching 100% of these children by 1995.

Besides this major problem of magnitude, other less overwhelming problems mentioned by special schools program staff include the difficulty of obtaining accurate data on the numbers of handicapped students and their location, and poor supervisory infrastructure. Below the kabupaten level there is no one responsible for overseeing the operation of the special schools. The Kasi SD (Kepala Seksi Sekolah Dasar) is responsible for any special school activities in his/her area, but is usually overworked simply with their responsibilities for preschools and primary schools.

5.3 ANALYSIS

5.3.1. Introduction

The previous section has presented a description of the Indonesian preprimary and primary education systems as they exist today, drawing upon data and information from a variety of sources. The statistical data was obtained from two sources: yearly summary statistics compiled

from Pusat Informatika of Balitbang Dikbud, and the P2SD Program of Dikdasmen. This latter office provided much of the information on kabupaten level statistics as well as the reports of special projects being conducted by Dikdasmen. Pusat Informatika was the primary source for national aggregate statistics and provincial breakdowns.

Interviews with the staff of various units within Dikdasmen provided the bulk of the information on the operational aspects of preprimary and primary education programs. Information and financial data on the activities of the SD Inpres program were obtained from the Director of that program within the Department of Home Affairs. The Department of Home Affairs also collects detailed statistics on the operation of primary schooling (see Chapter Four). Our task in this Sector Review has been limited to the operational responsibilities of the Department of Education and Culture, and time was not available to obtain additional statistical data from the Department of Home Affairs which holds overall administrative responsibility for primary schools. (Theoretically the Pusat Informatika data should duplicate Department of Home Affairs data as the schools are reporting the same information through essentially the same hierarchy. It would be interesting to determine if this is indeed the case.)

Because the statistical data has been drawn from a number of sources, it is sometimes inconsistent,as is to be expected under such circumstances. Balitbang Dikbud gathers the most extensive set of statistics. Dikdasmen draws upon these data to the extent possible for such purposes as reporting on the status of primary education activities and assessing progress made toward fulfilling Repelita targets. Some

Balitbang data (especially at the secondary level) are not tabulated in time for yearly planning and budget projections and Dikdasmen often uses P2SD statistics for this purpose.

On occasion the data from these two offices do not agree. Presumably this is result of the system by which the information is collected. As noted in Chapter Four, Balitbang Dikbud relies on school data tabulated at the kabupten level, which is then forwarded to the Kanwil where it is combined with data from the whole province before being sent to Balitbang. Dikdasmen draws upon data provided by P2SD, much of which is gathered from the Department of Home Affairs and their local Dinas offices.

For this report, data sets were used on the basis of their level of aggregation. As mentioned, for national and provincial level data on enrollments, repeaters, dropouts teachers, facilities etc., Balitbang Dikbud data was used, for lower level data (district) Dikdasmen data was used. This situation is described to provide a perspective on why some inconsistencies may be detected in the presentation of the data. To the extent possible these inconsistencies are noted when they occur.

5.3.2. Needs

Improvement of educational quality and equal access to education remain the basic needs of the preprimary and primary education systems in Indonesia. This has been the case for the last 17 years, since the initiation of Repelita I. Indonesia has no clearly articulated and generally accepted defirition of educational quality. Student achievement will naturally be the critical dimension assessing

improvements in quality. Now that a national test is available, an important measure of future gain (albeit a measure still in need of improvement) will be in place. But agreement should be reached on the achievement standards to be attained. There are, however, other components of educational quality that may be of importance, such as attainment of the attitudes and behaviors desired for socialization to the principles of Pancasila. These objectives, too, may require specification.

Equality of access means that every child should live in reasonable proximity to an appropriate educational facility so that no undue cost or hardship hampers the child's attendance. Indonesia is close to attaining this goal for its primary school cohort age 7 to 12.

With equal access close to attainment, Indonesian educational planners and policy makers have reemphasized the need for quality improvements. This is clearly a real need, and it is being addressed in a variety of ways. Numerous programs are underway to improve the pre- and inservice training of teachers (traditionally a favorite intervention), and to improve the methodology of teaching, the content of the curriculum educational materials, physical facilities and the system of examination and evaluation. The critical question is how well these interventions are working to achieve the desired improvements in quality. So far, the measure by which these types of interventions are assessed is student achievement. The most comprehensive analysis of achievement in primary schools in Indonesia has been the National Assessment of Educational Achievement of 1975 which indirectly measured the impact of teacher training, textbook distribution, and other factors

(see Section 5.3.6). The need still exists, however, to reach the last 5% to 10& of the 7 to 12 year old age group which remains outside the primary education system, as well as to provide primary education options for dropouts. There is no reason why some of the interventions used to reach the 7 to 12 year olds who are currently not enrolled, such as Kejar and Patjar programs, cannot also be employed to reach older age groups.

Reaching the children in the 3 to 6 year old age group is a more complex situation. The reader will likely note that much more emphasis is given below to primary education. Preprimary education programs are not addressed at great length. This is not to belittle such programs- - they are extremely important- - but it is our view that the priority at present is for further research to be conducted on the role of Government support to preprimary education before new policies are specified to meet the needs of the three to six year old age group.

5.3.3 Plans

Repelita IV identifies specific targets to be attained by 1989 in terms of students enrolled, teachers trained, schools built and rehabilitated, textbooks printed and distributed, and library and other materials made available. The implicit assumption is that, taken together, these inputs will attain, or at least make significant progress toward attaining, the two premier goals of expansion of primary education to reach 100% of the 7 to 12 year olds and the improvement of educational quality. For planning and budgeting, both BAPPENAS and the Department of Finance play important roles. Annual plans are affected by two sometimes conflicting forces: the need to reach targets specified

by Repelita IV and the financial and political constraints imposed by BAPPENAS and the Department of Finance. The annual planning process is described in Chapter 3.

The development budget of Dikdasmen for the 1986/1987 fiscal year is currently being debated. It contains four program areas: assistance to primary education, assistance to lower secondary education, assistance to upper secondary education, and assistance for aptitude and performance. The budget request for primary education includes twelve projects. Together they call for an 86.7% increase over the 1985/86 allocation. The requests for individual projects are as follows:

Project	1985/86 (in thousands of rupiah)	1986/87
1. Upgrading Primary Education	13,791,924	25,524,346
2. Assistance to pre-schools	785,162	1,177,743
3. Assistance to special schools	996,576	1,295,549
4. Assistance to primary schools	1,148,017	1,951,629
5. Realization of universal primary education	445,500	668,250
6. Assistance to PMP	7,196,400	1,196,400
7. Assistance to Technical Educ.	200,000	807,618
8. Integrated Textbook Project	3,527,581	13,171,914
9. Upgrading Internal Student	1,100,000	1,280,000
10. Standardization of Facilities and Equipment	1,193,224	2,201,191
11. Enhancement of Educ. Quality	2,181,388	5,908,360
12. Project for Whole Life Education	DIP not approved	625,000
	32,565,772	60,808,000

Source: Departemen Pendidikan dan Kebudayaan (1985). Laporan Direktorat Jendral Pendidikan Dasar dan Menengah, Bahan Penyajian Laporan; Pelaksanaan Progam 1984/85 Kebijaksanaan Pelaksanaan Program 1985/86; Kebijaksaan Perencanaan 1986/87. Jakarta.

It is interesting to note where the greatest increases occur, as they may shed some light on the educational priorities of Dikdasmen from which we might infer a strategy by which educational quality improvements are to be attained. Item 1 above (77.8% increase) is a general category that involves building and rehabilitation of SD, TK, and SLB, and provisions of books and equipment. Item 4 (70% increase) involves in-service training for library management, national test sampling and analysis, SD student competitions, and distribution of 1984 curriculum materials to grades three and four in 140,000 SD. Item 7 (30.3% increase) involves a major increase for training of teachers in small schools. Item 8 (273% increase) involves textbook production and distribution (Item 8, by the way, is the only activity receiving funding from an outside donor in this case the World Bank.) Item 10 (84.5% increase) involves provision of educational equipment (to a large extent multi-media equipment). Finally, Item 11 (171% increase) involves implementation of national testing and test improvement.

While relative increases in budget requests are not a hard and fast indicator of priorities, they do substantiate Dikdasmen's general focus of attention on improvement in the quality of education. The planned interventions involve a wide variety of activities to improve quality. They imply a scattershot approach to quality improvement ("keep shooting until you hit something"). Since there is little information to guide planners toward which interventions or combination of interventions may be expected to have the most impact on quality, rather than concentrating a lot of resources on one activity, funding is spread across a variety of interventions.

Preschool development budget allocations do not reflect so large an increase (50%). In this area, the focus of funding is on providing inservice training to teachers, principals and teaching assistants (700 persons in 1986/87), on production and distribution of curricula and library materials and on data gathering.

Primary school facilities expansion is not emphasized in the MOEC budget because this aspect of the improvement of primary education is left to the SD Inpres Project of the Department of Internal Affairs. Yet, SD Inpres funding, while maintaining its current levels of about Rp.600 billion (approximately US $536 million), is also being shifted into new categories designed to enhance educational quality in SD Inpres schools. Less funding is now going to school construction and more to training and support of teachers, textbook and other learning materials production, and mechanisms to attract principals and teachers to more remote schools. Expansion is coupled with quality improvement efforts such as assistance in the training of additional teachers and provision of texts and library materials. In accordance with recommendations from a recent evaluation of SD Inpres programs, there is a clear movement toward an emphasis on expansion in remote areas. This is an important shift as it demonstrates a realistic appraisal of where real needs exist. It also demonstrates a programmatic shift which Dikdasmen and Balitbang Dikbud should support and enhance.

One final planned activity should be mentioned. Discussion has been underway for several years as to how best to divide the Directorate General of Primary and Secondary Education to make it smaller and more manageable. A decision now seems to have been made and a merger is

imminent (possibly next year) which would combine the Directorate General of Nonformal Education and the Directorate General of Primary Education into a new Directorate for Basic Education. This merger offers tremendous potential for development of innovative approaches for reaching populations presently excluded from basic education and/or in need of skills training. It will also entail a variety of administrative and operational problems that accompany any such large scale reorganization. It is difficult to say at this stage whether the benefits of such a reorganization will outweigh the difficulties. What is clear, however, is that with this merger soon to take place, it would probably be imprudent to undertake any additional basic systematic changes until after the reorganization is completed and effective operational procedures are underway.

5.3.4. Constraints

We have categorized constraints on the improvement of quality and equity in Indonesia basic education as immediate and potential, i.e. those that limit present action and those that may inhibit future action if certain conditions materialize. Among the constraints that could be considered immediate are the following:

1. Indonesia is tremendously diverse and includes areas that are geographically, culturally and economically remote. These areas present special challenges to educational improvement. Educational interventions are hindered by the distances that must be traveled to deliver supplies and materials, the differences between teachers from outside an area and those

they teach and live with, and the living conditions that they must accept.

2. The quality of the teaching corps is a constraint on educational improvement. The status of teaching is low in Indonesia because of low pay and inadequate incentives. Teacher training schools are usually the second or third choice of students who seek an upper secondary education. The most competent students choose a general secondary education option before they choose SPG.
3. Planning and policy making in primary education are hindered by the dual management system which allocates administrative authority for SD to the Department of Internal Affairs and technical/professional authority to the MOEC.
4. Preschool programs and still more programs for handicapped children are limited by the lack of supervisors who have training in these two areas of educational specialization. The supervisors who are currently responsible for preschool and special school programs, the Penilik TK/SD, are often overburdened with their supervisory responsibilities for SD and supervision of preschools and special schools can suffer. Without training and experience in these programs, the few visits penilik can make to these schools may be of little value.

Two other potential constraints can be identified as well:

1. An extended period of low price for oil and/or LNG seriously limit the funding available for primary education and other

educational activities in the future unless the manufacturing sector can take up the slack (see Chapter Two). This, in turn, could exacerbate the following potential constraint.

2. The simple fact that universal primary education for 7 to 12 year-olds is near attainment, could foster a view that the level of funding for primary education of the past (especially SD Inpres Programs) need not be sustained. This could shift emphasis away from programs to reach the last 5% to 10% of this group of children not in school. If reduction or loss of Inpres funding results, this would withdraw funding for educational expansion in rural and remote areas still in need of facilities. A potential source of funds for important quality improvements in both SD Inpres and regular SD might also be lost.

5.3.5 ISSUES

The analysis of the preprimary and primary education subsector revolves around five themes within which important issues are examined. These themes are: external efficiency, internal efficiency, access and equity, administration and supervision, and costs and financing. Discussion of each of these thematic categories draws upon and elaborates the information presented in the status section. The analysis section provides the rationale for the conclusions and recommendations that follow.

5.3.5.1 External Efficiency

Three types of persons emerge from the primary education system: 1)

dropouts, 2) sixth grade completers who are terminal, and 3) sixth grade completers who go on to secondary education. With regard to dropouts the external efficiency issue is whether they have received sufficient education to maintain basic literacy and numeracy. Experts disagree considerably on an appropriate international norm for the level of formal primary education that is required for a person to maintain basic literacy and numeracy. The most widely accepted standard is primary education equivalent to the fourth grade level. It is difficult to say whether this is an appropriate standard for Indonesia. Since retention of literacy and numeracy skills attained is largely dependent upon the types of opportunity available for using such skills in one's environment, it is likely that the functional level of literacy would also vary in different parts of Indonesia.

For the sake of discussion, let us use the fourth grade standard. Table 5.11 presented earlier indicates that dro-pout and repeater rates have decreased progressively over the last 15 years to the point where the dro-pout rate between the 1983/84 and 1984/85 school year was 3.0% and the repeater rate was down to 10.19%. Since nearly 60% of the total number of dropouts in 1982/83 were at the fourth grade level or above using the international standard, it appears that many dropouts may be departing with a functional level literacy and numeracy. (Whether this functional literacy and numeracy is maintained after leaving school is another important question.) However, this still leaves between 300,000 and 400,000 7 to 12 year-olds leaving formal schooling each year without functional literacy and numeracy.

As Chapter Ten will show in detail, many of these dropouts can be

served by nonformal education programs which lead to basic literacy and numeracy. The planned integration of basic education with nonformal education into a single Directorate General for Basic Education has the potential for offering new opportunities for systematizing and formalizing the transition of dropouts into alternative programs. It also provides an opportunity for programs that improve the opportunities for dropouts and others to use their literacy and numeracy skills programs like the village newspaper reading centers sponsored by the Department of Nonformal Education in Thailand.)

If Indonesia's SD PAMONG Patjar services can be expanded and combined with Kejar Paket A programs for the students dropping out of lower grade levels, as well as for dropouts from the upper levels of primary education, the combination has potential for development of a truly viable continuing education program which would provide ongoing opportunities to enhance academic and practical skills. Such a program might also offer an important inducement to students who have dropped out to re-enter formal education if they believed they had a viable opportunity to attend junior high school.

Terminal primary school graduates make up only about 30% of each year's primary school graduating class. The bulk of this group would probably go on to lower secondary school if they could, but opportunities are limited. As access to secondary education improves, the number of terminal students is likely to decrease.

Recently efforts have been made to functionalize curriculum to provide more information relevant to the environment of the learner and/or skills needed for the workplace. There have been discussions of

the possibility of introducing a two track system at the grade four or five level into the new primary school curriculum, a primarily academic track and a more functional track. This plan could raise serious equity issues. A similar plan was pilot-tested at the lower secondary level -- Paket A and Paket B curriculum track - with unsatisfactory results. It has since been rejected, and any proposed plans for primary education curriculum modification in this regard will likely meet the same fate.

The appropriate response to terminal students may be to provide the best possible basic academic primary education for everyone, expand their opportunities to continue on to secondary education, and provide flexible, out-of-school skill training programs for terminal students in skills demanded by the local employment market.

This approach is further rationalized by the fact that presently the majority of dropouts and terminal graduates end up in the agricultural sector, which is constricting (see Chapter 2) and which many believe is already saturated. In 1983, 62.6 % of the persons who had never been to school or did not finish primary school and 48.8% of the primary school graduates were in the agricultural sector (see Appendix I). With opportunities in the agricultural sector diminishing, only two programmatic options exist: either to expand secondary education to enable more students to move on to general junior secondary school (SMP) or provide skills training programs for the lower skill industrial sector. The Minister of Education and Culture has already identified vocational/technical training as a priority for nonformal education programming. With the imminent integration of basic and nonformal education, planning should begin on how best to identify

candidates for continuing basic training and skill training and funnel them into appropriate out-of-school programs.

In terms of progression on to higher levels of education the external efficiency of primary education in Indonesia is reasonably good when compared with other developing countries. Approximately 95% of the sixth grade students successfully pass the EBTANAS and graduate. Of this total approximately 65 to 70% (currently 68.8% according to the information provided in Chapter 2) go on to secondary school. This number may have increased recently. With the constriction of opportunities in the agricultural sector and the recent emphasis on industrial expansion in Indonesia in preparation for an industrial take-off during Repelita VI, it is likely that the number of primary school graduates seeking entrance into secondary education will further increase in the near future.

The external efficiency measure for preprimary education is the performance of preschool (TK) students in primary schools in comparison to that of their peers without TK experience. Regrettably, we were unable to obtain any information about this, and it is quite likely that no such information exists. The government policy with regard to preprimary education (at least during Repelita IV) is not to expand public facilities, but to enhance quality by establishing model TK in each province and to support private TK with subsidies for public teachers, teacher training and learning materials. Before any significant efforts are begun in Repelita V to expand or enhance preprimary education it would be wise to conduct thorough research on

the value of these programs and what types of pre-school experiences make the most difference.

Research on the external efficiency of pre-school programs in other countries, most of which focus upon disadvantaged students, have yielded mixed results. There are few studies that show clear advantages for such programs either in developing or industrialized countries. A series of unpublished studies conducted in India (Khalakdina, 1978) indicated that preschool participants were "better adjusted" in primary school. On the other hand, extensive studies of Headstart programs in the United States have indicated that any learning gains that may have been evident in the first years of primary school are soon lost. Research on the effects of preschool programs in various Indonesian contexts are required.

5.3.5.2 Internal Efficiency

Internal efficiency deals with the best use of resources (inputs) to attain desired outputs. Thus the basic issues of concern are wastage--how many students are lost in the system as dropouts or are required to repeat a grade --and quality of education, i.e. how well trained the students are who exit the system. The usual measure of output is achievement scores of graduates.

The definition of a "quality education" however, is elusive. In many countries, it is defined by a certain standard on achievement tests, for example students scoring above the 50th percentile on a nationally normed examination, or mastery of 90% of the items on a criterion-referenced exam. In other instances, trends in national standardized test scores are traced over time to determine whether

academic achievement levels are changing among various subgroups of the population. In Indonesia, academic performance is clearly a useful measure of quality, but there may be other desired educational outcomes as well, such as development of critical thinking skills of the attainment of the 36 desired traits of Pancasila. What is lacking is consensus on what really is meant by quality of education and how it should be measured.

After the criteria are established, the resource factors that contribute to the attainment of quality education can be examined. These resource factors include supplies of learning materials, teacher supply (student/teacher ratios), teacher training and teacher experience, utilization and quality of facilities, class size, classroom environment (equipment available,learning methodology, aptitude levels of classmates, etc.)

National student/teacher ratios at 27 to 1 are excellent. Student/class ratios and student/school ratios of 30 to 1 and 194 to 1 respectively also indicate a very satisfactory national average. These national ratios, however, mask some serious regional disparities. (see Section 5.3.5.3).

Few studies have shown an unambiguous correspondence between any single input or combination of inputs and student achievement. Textbooks are commonly believed to be a critical input, but this can vary depending upon the educational environment. The National Quality Study conducted in Indonesia in 1975 found that text availability made little difference; in math, students with insufficient numbers of books

actually did better than students with sufficient textbooks. A summary of the other findings of this study are presented below:

1. Type of school: Private school children show considerably higher achievement than children in State, Subsidized and Aided schools.
2. Size of Class: Unexpectedly it was found that children in large classes perform better than those in smaller classes.
3. Size of School: Again, those children who attend large schools achieve at higher levels than those in small schools.
4. Training of Teachers: Those teachers with the longest periods of training produce higher achievement in their pupils than those with limited or no training.
5. Experience of Teachers: With minor exceptions, those teachers who have taught longest produce better results than those with little experience.
6. Sex of Teacher: Women teachers get better results from their pupils than men.
7. Age of Teacher: Generally, the trend is for children with older teachers to do better.
8. Additional Teaching Posts: Contrary to expectation, it was found that teachers who have positions in more than one school, produce higher achievement levels in their pupils.
9. Morning and Afternoon Schools: There were only small differences in achievement levels according to the time of day of the school.

10. Use of Textbooks: Surprisingly, children with insufficient textbooks do almost as well as children with plenty, and in Mathematics they achieve better. Furthermore, teachers who use the prescribed textbooks showed inferior results overall.
11. In-Service Training of Teachers: Little or no advantage was found in the achievement scores of children whose teachers had undergone inservice training.
12. Other School Variables: Finally, higher achievement was shown by pupils in schools with school libraries, many classroom facilities, and teachers who used modern methods, frequent tests and regular homework.

Source: Moegiadi, C. Mangindaan and W.B. Elley. "Evaluation of Achievement in the Indonesian Educational System", Evaluation in Education: International Progress. Pergamon Press, 1979.

This type of education-production-function research is of interest and importance (a like study is being conducted on the 1984 quality study data by Balitbang Dikbud), but is general in nature. It does not focus on how existing programs or priorities are affecting achievement-a type of study that is of critical importance to policy makers and planners who are seeking ways to determine the most efficient configuration for the allocation or reallocation of resources. At present, large scale interventions are being conducted, such as the nationwide inservice teacher training efforts, with little or no impact evaluation and follow-up research

Wastage i.e., how many students are dropouts or repeaters is the

second major area of interest in an examination of internal efficiency. Resources are maximized when students move through the educational system and graduate in the appropriate number of years. Resources are wasted on every dropout and repeating student. The drop-out and repeater rates for the last fifteen years were presented in Table 5.11. At present the drop-out rate for primary school is 3.0% as compared with 10.2% in 1971. A repeater rate of 10.19% in 1984/85 in opposition to a rate of 12.3% in 1971 indicates that progress has been made over the last fifteen years as well in improving this measure of internal efficiency. These rates are used in the calculation of cycle costs and the number of years it takes to graduate a typical student. The current cycle cost for primary school in Indonesia ranges from approximately US$40 in Jakarta to US$60 in the outer islands. The number of years for graduation range from 6.88 yrs in Jakarta to 8.34 on the outer islands. For both these figures Indonesia compares favorably with other countries.

However, there is clearly room for progress. The most cost-efficient mechanisms might not involved efforts to keep students from dropping out, but to provide them with more effective alternative educational opportunities if they do. More information and research are required to help characterize the problem and its regional variations and to determine which are the most cost-efficient ways to lessen wastage in schools.

5.3.5.3 Access and Equity

Access and equity issues relate to whether certain subgroups within

a society are systematically or inadvertently excluded from education. Tremendous strides have been made by Indonesia in ensuring that all of her citizens eventually receive primary education. The national data indicate notable success in meeting this goal: 95% to 98% of the 7-12 age group are enrolled; programs are underway to reach the rest. While there are observable regional variations in such indicators as student to teacher and student to school ratios, these ratios have been improving significantly over recent years, and there is evidence of a programmatic focus to remedy the remaining disparities. Little data exist at the central level on differences among remote, rural, semi-urban and urban areas. Here further data collection may be required.

Several types of potential disparities can be examined in an analysis of equity. In this instance we will briefly examine subgroupings by age, by sex,and by region. Ideally we would also examine differences by socio-economic status, but no data were available. Clearly, this is a grouping of major concern and one for which additional information is needed in the future.

Age. Primary education serves many students outside the 7-12 year-old range. In 1984/85 approximately 4.6 % of all primary school students are six years old or younger and 11.9% are 13 years or older. Older students are served by out-of-school programs - SD PAMONG Patjar and Kejar Paket A. The data on Kejar programs will be presented in Chapter Ten. SD Pamong programs are to be expanded, and further expansion is likely to be valuable in urban as well as rural areas.

Sex. From the national data, there appear to be few male/female disparities in terms of access. As mentioned,the 1983 census data

indicates that about 49% of the 7 to 12 year-old age cohort was female and 51% male. The enrollments in primary school, 48% female and 52% male, nearly match this distribution. Although no specific information was available on male/female dropout and repeater rates, there appears to be little difference by sex, as the enrollment distributions of 48% female and 52% male are generally maintained from grade one through grade six.

Region. There are disparities between educational access for students in remote or rural and in more urban areas. The data cited in the status section and in Chapter Two indicate that the student to teacher and student to school ratios are much higher in provinces that have lower population densities (and are therefore more likely to be more rural and remote). Academic performance and rates for continuation into secondary school also indicate severe variations among regions. The provincial variations in student to teacher ratios, student to classroom ratios, drop-out and repeater rates can be even more exaggerated when we look at interprovincial differences among kabupaten. Appendices F,G,H. demonstrates the magnitude of these differences.

The results of the 1984 Quality Study and the 1984/85 EBTANAS (though not themselves comparable) also indicate large regional variations in achievement. (See Table 5.17). This fact is acknowledged by the way in which the EBTANAS can be weighted with a sliding scale for different provinces. While the concept of a sliding scale is more realistic and fair under current conditions, ideally such a measure should not be necessary.

Another area in which regional disparities are found is the ability

of primary students to master the Indonesian language. In only a few areas in Java do a majority of families speak Indonesian as their first language. As a result, children from various language groups have difficulty mastering Indonesian before the end of the third grade as called for in the curriculum. Students who have not mastered Indonesian by this time are at a distinct disadvantage throughout the remainder of primary school. They often have achievement levels at the end of sixth grade that are well below the achievement of students in Java and other areas where the language is more frequently spoken. Remedies for this problem would involve localization of language curriculum and special training for teachers. This solution, however, requires a local curriculum development and training capacity that varies according to region. This does not exist at present in Indonesia and, until it does, attempts at effective regionalization of curriculum would probably be futile.

The distribution of preschools (TK) throughout Indonesia raises special issues of access and equity (74.4% of TK are in Java which contains only about 28% of the 3 to 6 age cohort). If TK really are effective in helping prepare small children for success in primary school (a supposition that has yet to be established), then clearly only a limited number (7%) of children are receiving this benefit. Given the small TK enrollments, this issue is raised here only as something to be considered for a future research agenda. Lacking research, the current modest support for existing TK with no major plans for expansion on the part of the Government seems appropriate.

5.3.5.4 Administration and Supervision

The dualistic system for administering primary education was described in the constraints section and in Chapter Three. This joint system of MOEC and Dinas responsibility creates duplication of effort and confusion at the local level, makes for cumbersome planning and policy making, and tends to foster the mindset that the fault for problems lies elsewhere because "it really isn't our responsibility." The system also weakens the supervisory authority of the Penelik TK/SD who could be much more effective if they had direct evaluative responsibility for the promotion of teachers and principals rather than the generally indirect and informal role they now play.

With the role of the Penilik better enunciated, and their responsibilities expanded to include performance evaluation for promotion, an effort to increase the number of Penilik TK/SD might prove timely and more effective. The effort could have as its target the actual attainment of a ratio of 15 schools to one penilik, or an even lower ratio. It should be coupled with mechanisms to assure that the supervision is actually occurring and with the elimination of existing constraints to effective supervision, such as the lack of vehicles and gas money for visits to schools. New penilik could be appointed from the ranks of highly qualified and respected principals and senior teachers from the area. Trained and experienced personnel in preprimary education or persons expert in education for the handicapped could also be named. Potential benefits of such an administrative reorganization could be improved motivation of teachers and even a rise in the status of the teaching profession. If a truly viable system is in place which

rewards excellence through promotion, recognition and enhanced responsibilities, then the whole profession benefits.

If consolidation of primary education were to occur, it would also present an opportunity for redefining the role of the provincial and regional education offices for information management and planning of educational programs for their areas. Under a unified structure, data gathering could be better focused and additional responsibility delegated to regional offices for certain levels of decision-making and allocation of resources. If such a reorganization is to be carried out, it should proceed slowly and begin at lower levels such as the Kecamatan level.

5.3.5.5 Costs and Financing

5.3.5.5.1 Introduction

The current critical questions with regard to costs and financing of primary education are: 1) how best to use development budget funds of the Depdikbud (likely to be less for the near future) to improve the quality of education, and 2) how best to allocate SD Inpres funds (while they last) to ensure actual attainment of 100% compulsory education as well as improve quality. These two sources of funding, SD Inpres and Depdikbud development funding, will be the two important resources for attaining educational objectives, at least through the end of Repelita IV. An important unknown is whether any new source of funds as large as those of the SD Inpres program will be available during Repelita V for primary education. Surely, if a goal of as high priority as universal primary education is not enunciated and agreed upon at the highest

levels of Government, such a source of funding is unlikely to be available.

A second issue related to the financing of education is the need for long-term routine operational expenditures to follow-up development expenditure for school expansion and training of teachers. Heavy development budget expenditures in these areas put strain on both routing budget allocations for maintenance and repair of facilities and especially on teacher salaries. As mentioned above, SD Inpres funding allocations over the last several years seem to have shifted in recognition of the fact. Dikdasmen routine budgets have also expanded rapidly.

The SIAP (or unexpended funds) within Dikdasmen, are the highest of any of the Directorate General of the MOEC. Primary education does not account for much of this total. Almost all expenditure categories for primary education and special education in 1984 were at or near their projected levels for the end of Repelita III (Rakernas 1984 report). Preschool programs, however, reflected a shortfall in projected expenditures. Only 65% of the budget for building of preschools and 50% of the budget for equipment were expended. These amounts were minimal when compared to the total.

5.3.5.5.2 Financing Primary Education

The operational costs of a typical primary school are summarized in section 5.3.5.5.2. These cost estimates provide detailed information on expenditures, but the data is designed to capture a mean expenditure figure and current costs will vary by region. The primary sources of funding for primary schools are as follows:

Financial Source

a. Primary schools are financed by:

1) The Government under the:

a) Government Expenditure and Revenue Budget (APBN)

(1) Recurrent budget, consisting of:

(a) Subsidies to finance the components of implementation of school services, school administration, personnel welfare, school PORSENI (sports and art activities), organization of EBTANAS, supervision/data analysis and data report.

(b) Salaries for teachers and Regional Office employees.

(2) Development budget, consisting of:

(a) SD Inpres for the construction of primary school buildings including furniture, supply of clean water, additional classes, housing for the school watchman, housing for teachers and school principals, and

(b) Sectorally from the MOEC for textbooks library books and others.

b) Provincial Expenditure and Revenue Budget (APBD)

(a) Recurrent budget for stationery, PORSENI at provincial level and others.

(b) Development budget to supply:

(a) demonstration materials;

(b) rehabilitation of buildings;

(c) school equipment;

(d) land.

2) The Community, mainly from BP3".

3) Foreign aid, primarily World Bank loans and grant in the form of books.

Many public and private primary schools are funded by the SD Inpres Program. SD Inpres funding for the upcoming fiscal year (1985/86) is estimated to be about Rp.600 billion. The development budget for the five programs related directly to basic education, - TK, SLB, SD and compulsory education (wajib belajar) - called for an increase of 56% over the previous fiscal year, from Rp.17,167,179,000 to Rp.30,617,517,000. Given the current budget constraints this request is unlikely to be approved by the Ministry of Finance. Generally the development funding is utilized for learning materials, library books rehabilitation of schools, teacher inservice training and administrative materials. Two development budget "projects" will provide funding to primary education; the PMP teacher training project, and the Proyek Buku Terpadu or textbook project. This latter activity is the only area where significant outside donor funding to primary education can be found. The World Bank is providing assistance of US$425 million over five years for textbook production at the primary and secondary levels. The only other instances of external funding to primary education are a grant from the Helen Keller Foundation for SLB (Type A), and indirect funding from several sources for SPG teacher training.

5.3.5.5.3 Overview of the Cost Analysis

The cost analysis of primary education indicates that a relatively efficient system is in operation if we use the completion of primary school as the only criterion. Dropouts have been decreasing to a point where they compare favorably with other countries. However, while decreasing repeater rates are still high. Unit costs of primary education are reasonable low at Rp.78,948 per student. Jakarta has the lowest rate (Rp.63,455), followed by the Outer Islands (Rp.75,011), where student/teacher ratios are higher, and Java/Bali (Rp.82,702).

Cycle costs are based on the unit cost and average instructional years per graduate. Instructional years per graduate are lowest for Jakarta (6.88 years), followed by Java and Bali (7.80 years) and the Outer Islands (8.43 years). The resulting cycle costs of Rp.436,570 in Jakarta, Rp.645,016 in Java and Bali, and Rp.632,342 in the Outer Islands, indicate that a much less efficient primary school system is in operation in the more rural areas. Nationwide, however, unit and cycle costs in Indonesia compare favorably with those of other developing countries.

As a result of these relatively low unit and cycle costs, the rate of return to education is high, At 53% this rate, one of the highest in Southeast Asia, reflects the wisdom of investment in primary education, both for the Government and for the population.

If, however, the criteria for judgment is academic achievement a different picture emerges. Achievement scores on the EBTANAS and the 1984 Quality Study indicate that there is clear regional variation in educational quality.

There are also serious variations in internal efficiency in primary education in various regions. Drop-out and repeater rates in some provinces are appreciably higher than in others. An important question is whether inschool programs currently implemented to improve internal efficiency are more cost effective than other options, both inschool and out-of-school. Providing out-of-school programs for drop-outs might be much more effective than programs to keep them in school. Nonformal skill training programs might have much greater impact at lower cost than formal vocational training. Much more research is needed on the cost-effectiveness and impacts of various intervention strategies.

How best to spend available funding to eliminate regional variations and enhance educational quality is the underlying theme for most Indonesian educational planners at the present time. There are no clear answers as yet.

5.3.5.5.4 Detailed Analysis of Unit Costs and Returns to Primary Education

In this and the following section, current investment in the primary education subsector of Indonesian education are examined within the framework of three branches of economic analysis: unit cost analysis, cycle cost analysis and internal rate of return analysis. Unit cost analysis and cycle cost analysis can provide policy makers and planners with important information about existing inefficiencies when the need arises to cut costs, and about future opportunities that will increase the contribution to growth of each rupiah spent on education within each of the education and human resource development subsectors. More importantly, these analyses, together with benefit/cost (rate of

return) analysis, provide policy makers and planners with a standard that can be employed to evaluate the relative efficiency of the use of current levels of resources in each of the main education subsectors.

Each of the three types of analysis included in this and the following section provides a different type of information regarding the cost and financing of education. The unit cost analysis attempts to measure recurrent (or annual) inputs of resources into each of the subsectors. In this analysis, the aim is to identify and measure the total annual cost of instruction per student regardless of the source of funds. In Indonesia's public schools a large portion of, but not all, educational costs are borne by the Government. The portion of schooling that is funded from private sources is also a cost to the economy and is a part of the current level of resources needed at each level of education that must be considered by the Government when making decisions about whether education is effectively contributing to economic growth or not.

Unit costs that encompass both public and private sources of funds also can help policy makers and planners make decisions about the minimum resources needed for schools or human resource development programs, about internal efficiency, and about the level of resources that would be required for some level of expansion or quality improvement. Though increases in per-student expenditures are often associated with improvement in the quality of schooling, planners should not expect that educational quality of schooling can be maintained or improved by simply raising unit costs. The effectiveness with which

resources are used is also an important determinant of the level of educational quality attained.

The analysis of cycle costs relates the educational inputs examined under unit costs to the full costs of a student's degree program, which is used as a measure of educational output. Specifically, the cycle cost analysis combines costs and students flows (i.e., prevailing rates of progression, repetition and dropout) to yield a cost per graduate. Instructional years per graduate are calculated from student flow information and provide a measure of a system's relative internal efficiency. For example, in a six-year primary school program found to be 100% efficient (e.g., 0% repeaters and 0% dropouts), the average number of instructional years per graduate would be six. The cycle cost would then be the unit cost multiplied by instructional years per graduate. Hence, an education program with relatively high unit costs could have lower cycle costs than a program with much lower unit costs if the first program had significantly smaller numbers of repeaters and dropouts. The cycle cost analysis, which will be illustrated in greater detail later, is an indicator of how efficiently schools or programs are using current allocations of resources. This analysis helps policy makers and planners identify what output can be expected from a given level of investment in a specific subsector or program. From a macro-planning perspective, instructional years per graduate and cycle costs can aid in identifying those subsectors that are using resources less efficiently.

Unit Cost Analysis

Many of the existing studies and papers on education financing in

Indonesia have examined unit costs: Widodo, 1979; IIEP/BP3K (Boediono, Tibi) 1980; World Bank (Smyth, 1980; Masoock, 1983, Maas, 1984); Daroesman and Lamb, 1982; Heneveld, 1982; and Klees and Suparman, 1984. Most of these studies have calculated per student expenditures from macro budget data which, given the complexity of Indonesia's budgeting process, presents a number of problems and inconsistencies.

The presence of recurrent expenditures in the development budget makes it difficult to accurately account for actual annual operational expenditures per student. In addition, calculations of unit costs from macro budget data do not reflect the proportion of the budget that has actually been expended, nor do they account for the contributions of funds from private sources that exist at all levels of education. To avoid the complexities and inaccuracies associated with macro education budget data, a typical school approach will be used for primary and secondary programs.

The studies of unit costs conducted by Widodo (1979), IIEP/BP3K (1980) and Klees and Suparman (1984) have also examined unit costs from the school level. The Klees and Suparman analysis, which compares unit costs of traditional primary schooling to the SD PAMONG alternative, lays out a very complete typical school approach to unit cost analysis. In this approach, "typical" characteristics of the school (eg. average number of students and teachers per school) are taken from the most recent available statistics. From the "typical" school characteristics and available information on salaries, textbook and materials and maintenance costs, etc., aggregate school costs and per student costs are estimated. The typical school approach employed in the Klees/Suparman

study will be used in this analysis with some modifications for calculating unit costs for primary and secondary education.

Primary education in Indonesia can be undertaken in one of three settings: public schools (SD Negeri); private schools (SD Swasta) which are administered jointly by the Ministry of Education and Culture (MOEC) and the Ministry of Home Affairs, and religious schools which are administered by the Ministry of Religion. This section reports unit costs for public primary schools only. Though SD Swasta are part of the MOEC's planning concern, their numbers are small and declining. This section focuses on public schools because future decisions about financing primary education are likely to be dominated by public primary school concerns.

The three regional groupings used in projecting enrollments at the primary level are also used to examine unit costs for public primary schools. Basic school data on number of schools, enrollments, teachers and classrooms has been collected for each province and grouped into one of these three regions: (a) Jakarta; (b) the rest of Java and Bali (Java/Bali); (c) the Outer Islands. (A detailed rationale for the construction of these three groupings is given in the section in Chapter Two on enrollments, section 2.5.3). From these basic school data, a profile of a typical school is formulated for each of the three regions. Table 5.20 summarizes the basic indices used in making assumptions about the "typical" school for the three regions.

TABLE 5.20

SCHOOL PROFILES FOR PUBLIC PRIMARY BY REGION

	Region	Students/ School	Class Size	Student/ Teacher	Teacher/ School
I.	Jakarta (n=1)	321	40	31	10
II.	Java/Bali (n=5)	194	31	25	8
III.	Outer Islands (n-21)	172	28	27	6

Source: 1984-85 Balitbang Dikbud, MOEC Education Statistic

As would be expected, the size, number of students per teacher and number of teachers for each school decreases as one moves from Jakarta to the Outer Islands. As Region I and Region II contain continguous provinces, there is little variation from one province to the next in these four indices. There is more variation among the 21 provinces included in Region III for the four indices given in Table 5.20. For example the number of teachers per school ranges from 4.1 in Irian Jaya to 8.4 in Lampung, while average class size varies from a low of 22 students in Kalimantan Tengah to a high of 37 in Timur Timor. Despite these variations among the 21 provinces in Region III, no further obvious division of these islands emerged in the examination of school data.

The three "typical" schools that are constructed for this analysis from provincial-level data do not account for the wide disparity between urban and rural schools within regions. Though Kanwil and Kandep officials seem to have a fairly clear notion of which schools under their jurisdiction are urban, rural and remote, data on these

differences are not systematically collected and were not readily available at the time of this Sector Review. A recent World Bank study on gini coefficients suggests there are important differences in equity of access at the secondary level. The identification of three regions for the analysis of primary school unit costs attempts to account for some basic regional differences but, at the same time to keep the analysis simple enough that the reader can draw some basic conclusions. These regions are not intended to be prescriptions for all future analyses of primary education. Future groupings used and level of data disaggregation pursued should depend on the questions asked.

At the outset, a few general limitations of this analysis should be recognized. In the absence of good school-level data on resource requirements and actual expenditures, there is some unavoidable uncertainty involved in projecting resource needs of a "typical school." For example, data on average teacher salaries, or the per-student number and cost of textbooks are not necessarily complete or accurate. Past unit cost studies of primary education (with the exception of Klees and Suparman, 1984) have failed to include assumptions about textbook costs. School expenditures on nonsalary items such as classroom materials and maintenance are very difficult to quantify given the variety of sources from which these resources flow and the important role of private sources in meeting these resource needs. The reliability of data on resource needs at the school level should improve as the unit cost study to be jointly carried out by Balitbang Dikbud, Ministry of Home Affairs and Ministry of Finance gets underway.

The financing of public primary education in Indonesia is a complex

process, with funds and in-kind resources flowing into the schools from a large number of sources. Responsibility for primary education is divided between the Ministry of Home Affairs and the MOEC. The Ministry of Home Affairs is responsible for the bulk of resources allocated to the administration of primary schools: teacher salaries, school construction, maintenance and materials. MOEC, on the other hand, controls the technical aspects of primary education including curriculum development, design and distribution of textbooks, and teacher upgrading. Local government at the Dinas I and II levels also contribute a (relatively small) proportion of funds for materials, maintenance, administration and data collection, teacher upgrading and transfer. It is beyond the scope of this study to investigate the process of financing primary education in great detail. For a complete description of this issue the reader should see the excellent study of the financing of primary education completed by Daroesman and Lamb (1982). It is, however, important to understand the major sources and uses of resources for primary education and the constraints they impose on the analysis of unit costs. Table 5.21 summarizes these major sources and uses of public primary operating expenditures.

As noted in the introductory section, only the annual instructional cost per student will be considered in analyzing unit costs. Therefore, Table 5.21 illustrates only sources and uses of recurrent annual expenditures and does not account for capital investment items such as construction and major renovation, land, or furniture.

Ministry of Home Affairs (Dalam Negeri) allocations, which include teacher salaries, comprise the largest proportion of public resources

allocated to primary education. In addition to teacher salaries, which are provided through the "official component" of the SDO budget, the Ministry of Home Affairs is also responsible for the administration of

TABLE 5.21

MAIN SOURCES AND USES OF OPERATIONAL FUNDS
PUBLIC PRIMARY SCHOOLS

Categories of Uses	Government Sources						Private Sources		Total
	Dalam Negeri								
	SDO	APBD I	APBD II	SBPP	Dept. PDK	Inpres SD	BPJ	Other	
(A) Salaries									
1. Teaching	X	—	—	—	—	—	—	—	
2. Nonteaching	X	—	—	X	—	—	—	—	
3. Remuneration	—	—	—	X	—	—	X	—	
(B) Textbooks	—	—	—	—	X	—	—	X	
(C) Materials	—	X	X	X	—	—	X	—	
(D) Maintenance	—	X	X	X	—	—	—	—	
(E) Admin/Data Collection	—	X	X	X	—	—	X	—	
(F) Transfer/Appt. Travel	—	X	X	—	—	X	—	—	
(G) Upgrading	—	X	X	—	X	X	—	—	
(H) Students	—	—	—	—	—	—	—	X	
(I) Supervision	—	—	—	X	X	—	—	—	
Percent of Total	99.0%	0.7%	0.1%	5.1%	1.9%	0.2%	2.0%	—	100.0%

Based on Daroesman and Lambs' 1981/82 estimates.

the SBPP grant, which is formulated jointly with Ministry of Finance and MOEC and allocated through the "unofficial component" of the SDO budget. Schools receive SBPP funds every three months which are specified for three general categories of uses: topping off teacher and janitor salaries, purchase of materials and carrying out maintenance, administration and data collection. The amount that each school receives is determined according to a complex set of standards which specify allocations per student, per class, per headmaster and per school for each of the general categories listed above. Allocation of SBPP funds are also made to the provincial offices of education (Dati I) as well as to the kabupaten and kecamatan offices. At these levels, SBPP funds are used largely for collection and reporting of data and provision of the STTB (certificate) and administration of the EBTANAS (primary school leaving exams). In 1984/85 approximately 88% of SBPP funds were allocated directly to the school level. A further discussion of the use of SBPP funds will be taken up under the discussion of assumptions made for the calculation of unit costs.

The MOEC provides a relatively small proportion of the total resources used in running primary schools. The major categories of uses for MOEC allocations to primary schools are textbooks, teacher upgrading, and supervision. The Inpres SD, funding provides a large portion of resources for construction and major renovation of school facilities; at present, a very small proportion of Inpres SD funds are used for recurrent expenditures. Table 5.21 shows that in 1981/82, Inpres SD funds were only 0.2% of total primary school operating expenditures. This number has probably grown in recent years as more Inpres SD funds

have been shifted away from construction to such items as to light renovation, provision of textbooks and library books, and teacher upgrading. Because the Inpres SD fund is specifically defined as a special development fund, shifting major proportions of this fund to annual operating expenditure items in the future may prove problematic.

The BP3, though contributing relatively little to total primary school operating expenditures (only 2.0% in 1981/82),is an important source of funds for school materials, and in some cases, for school maintenance. The BP3 is a parent/teacher association that is organized at the school level and now exists in almost all public primary and secondary schools. Prior to 1974, a number of such parent-teacher associations existed. They emerged as purely voluntary organizations that reflected communities' interest in contributing to their children's education. Since 1974, MOEC has actively encouraged the BP3 as a form of community involvement in education. Today, payment of BP3 fees, the amounts of which are negotiated by the headmaster and parents of the school, is widespread and virtually obligatory. In some cases, the BP3 decides to exempt parents with low incomes from paying the fee. In general, because of the social pressure exerted, parents attempt to pay the BP3 fee regardless of their socio-economic status. At both the primary and secondary levels, the BP3 fees are an important supplement to those expenditure categories where the public sector contributes less, e.g., materials and maintenance. In addition to BP3 fees, students' families are expected to pay directly for a variety of school-related items which include, among other things, special one-time contributions for improvement of the school (e.g., installation of

electricity, the construction of sports facilities or similar investments in facilities or equipment), uniforms, a proportion of the required textbooks, transportation, notebooks, etc.

In the calculation of unit costs, it is important to account for all resources expended on the provision of education, as this represents the real annual cost to the economy of providing education at a certain level. For public education decision makers it is important to be able to distinguish between what proportion of total costs are borne by the Government and what proportion are borne by individuals. In the analysis of unit costs that follows, total unit costs are distinguished from public unit costs.

The main expenditure categories considered in the analysis of primary education unit costs are:

- Salaries:
  - Teacher salaries
  - Non-teaching staff salaries
- Textbooks
- Materials
- Maintenance
- Administration and data collection
- Students' Contributions

The following categories of expenditure are not included in the analysis: transfer/appointment of teachers, teacher upgrading, and supervision. While these three items certainly make an important contribution to the provision of primary education, they do not contribute directly to the instructional process. In addition, data were not readily available from which good assumptions could be made about these costs. Earlier studies (Daroesman and Lamb, 1982) suggest that these costs are a very small proportion of the total; and hence

their omission will not greatly change the overall magnitude of per-student costs.

What follows is a description of the assumptions used in estimating costs per school and per student for each of the six main cost categories listed above.

Salaries. Because salaries comprise such a large portion of total primary education expenditures, it is important to make some fairly detailed assumptions about teaching and nonteaching salaries.

Teacher Salaries. Public primary school teachers are civil servants, employed by the MOEC and seconded to the Ministry of Home Affairs. Average teacher salaries can be estimated from the civil service pay scale if certain assumptions are made about average years of experience, average level of education and marital status. The following assumptions emerged from evidence cited in past studies (e.g., Klees and Suparman, 1984) and from discussions with the Director of the Bureau of Personnel at the MOEC. It is assumed that the typical primary school has one headmaster, who is included in the estimates of teacher per school given in Table 5.20.

The following assumptions have been made regarding base salaries, marital status and resulting salary supplements for headmasters and resulting salary supplements for headmasters and teachers:

Assumption.		Headmaster	Teacher
(a)	Marital Status	95% married + 3 children	80% married + 3 children
(b)	Base Salary	Rp.124,400/mo.	Rp.94,400/mo
(c)	Family Allowance	13,000/mo	8,307/mo
(d)	Rice Allowance	18,096/mo	15,834/mo
(e)	Structural Allowance	4,800/mo	
	SUBTOTAL	Rp.170,296/mo	Rp.118,541/mo

(in current 1985 rupiah)

Past studies (Heneveld, 1982) have estimated the proportion of married teachers to be 50%. MOEC sources confirm that the proportion is much higher. The number of children per family is expected to be higher than three (1980 estimates of fertility rates for Indonesia show the average number of children per woman to be approximately 4.5 (World Bank, 1983)). The actual average number of children per family is irrelevant for the calculation of teachers' family and rice allowances, as salary supplements are only given for one spouse and up to three children, but the rate of 4.5 children per woman does, suggest that it is reasonable to assume the average minimum number of children per family is at least three.

A headmaster's base salary is assumed to be at Golongan IIIb, step 10 on the 1985 national civil service pay scale, while a teacher's base salary is assumed to be Golongan IId, step 9. Both headmaster's and teacher's family allowance are equal to 5% of the base salary for a spouse plus 2% of the base salary for each child, up to a maximum of three. The maximum family allowance is, thus 11% of the base salary.

Assuming that 95% of headmasters are married, an average family allowance of Rp.13,000/mo (124,000 X[.11 X .95] = 12,999.9) is calculated. Similarly, if 80% of primary school teachers are married, the average family allowance is Rp.8,307/mo (94,400 X [.11 X .80] = 8,307.2). Each civil servant receives 10Kg of rice per family member per month. Rice is assumed to cost Rp.377/Kg. The rice allowance for the "average" headmaster is thus (10Kg + [40Kg X .95] X 377) = Rp.18,096/mo. and the rice allowance for the average teacher is (10Kg + [40Kg X .80] X 377) = 15,834/mo. Headmasters also receive a structural allowance for the position they occupy. This allowance is also specified in the civil service pay scale; actual figures from the 1985 pay schedule are used in this analysis.

In addition to the salaries and benefits above, which come out of the "official component of the SDO," headmasters and teachers receive additional supplements from SBPP and BP3. The SBPP is a government grant; hence the proportion of SBPP allocated to teacher and headmaster welfare is included in the public costs of teachers.

The procedure for calculating SBPP and BP3 contributions to teacher and headmaster salaries will be deferred to the discussion of materials and maintenance costs. Table 5.22 summarizes total annual teacher salaries (including headmasters) for each typical school, broken down by the three main sources of funds.

Total salary estimates will appear much higher in this analysis than in to earlier analyses of unit costs at the primary level. This is due to the substantial wage increase for civil servants that was

TABLE 5.22

TOTAL ANNUAL TEACHING SALARIES BY TYPICAL SCHOOL
(000 1985 Rupiah)

Source of Funds	(A) (10 Teachers)	(B) (8 Teachers)	(C) (6 Teachers)
PUBLIC:	15,102.01	12,210.86	9,344.80
- SDO	(14,845.98)	(12,000.99)	(9,156.01)
- SBPP	(256.03)	(209.89)	(188.79)
PRIVATE			
- BP3	288.90	174.6	147.60
TOTAL	15,390.91	12,385.48	9,492.40

A = Jakarta
B = Java + Bali
C = Outer Islands

instituted by Presidential Decree in March 1985. This wage increase raised civil servant salaries by a factor of 2.5.

Nonteaching salaries. It is assumed that in addition to the teaching staff, each school has a staff of two janitors who are each paid a base salary of Rp.47,200/mo (i.e.: Golongan Ib, step 5); 50% are assumed to be married with total family and rice allowances equaling Rp.13,906 per month. The total annual cost of two janitors is thus Rp.1,466,544. At the primary level, janitors employed by the civil service also received a small salary supplement from the SBPP grant. The estimated amount of SBPP salary supplement for two janitors was Rp.10,241 for Jakarta, Rp.8,396 for Java/Bali, and Rp.7,552 for the Outer Islands. Assumptions used in calculating these amounts will be given in the section on materials and maintenance costs. The variation

from one region to another is accounted for by the differences in average amount of SBPP granted to individual schools.

Total annual expenditures on teaching and nonteaching salaries for each typical school, broken down into total allocations and allocations from public sources only, are as follows:

TABLE 5.23

TOTAL ANNUAL EXPENDITURES ON SALARIES BY TYPICAL SCHOOL
(000 1985 Rupiah)

School Type	Teaching		Nonteaching		Total Salaries	
	Public	Total	Public	Total	Public	Total
A	15,102.01	15,390.91	1,476.79	1,476.79	16,578.80	16,867.70
B	12,210.88	12,385.48	1,474.94	1,474.94	13,685.82	13,860.42
C	9,344.80	9,499.60	1,474.10	1,474.10	10,818.90	10,973.70

Textbooks. As noted earlier, information is scarce regarding the number of textbooks available for each primary school student. Official estimates suggest there is one textbook per subject available for each child enrolled in public primary school. With the increased production and distribution of textbooks under the GOI/Bank integrated textbook project) it is likely that these student to textbook ratios exist in many areas of Indonesia. It is, however, also likely that there are many rural or remote areas where student to textbook ratios are quite high. In the absence of good data to support this hypothesis, an assumption of one textbook per student per subject will be used in estimating textbook costs. The following assumptions about number of textbooks per student are taken from the Klees and Suparman (1984) study

and accounts for textbook use in the following five subjects: Indonesian language, math, social science, Pancasila, and natural and social science. Assumptions about the cost per text are revised to include 1985 estimates from the Integrated Textbook Project and are as follows:

Grade	No. of Texts/ Student	Cost/ Text	Cost/ Student
1	6	Rp.800	Rp.4,800
2	6	800	4,800
3	10	800	8,000
4	9	800	7,200
5	9	800	7,200
6	9	800	7,200
Total cost for 1 complete set:			Rp.39,200

These cost estimates are somewhat conservative, as the actual price of primary school textbooks varies from Rp.800 to Rp.900. To arrive at an estimated total cost of textbooks for the "typical" primary school as well as an average per student, it is necessary to make some assumptions about the number of students per grade. The 1984/85 enrollment data were examined to get the actual distribution of students among grades one through six for each of the three regions. On the basis of these distributions, average number of students enrolled per grade were calculated for each of the typical schools:

Students per Grade, by Typical School

Grade	(A)	(B)	(C)
1	57	37	38
2	54	35	33
3	55	34	30
4	53	31	27
5	52	30	24
6	50	27	20
TOTAL	321	194	172

The following additional assumptions are made regarding textbook costs per school:

- o One additional complete set of textbooks is provided for the library;
- o Each teacher has a complete set of texts for the grade he or she teaches;
- o Each school has one complete set of teacher's guides valued at Rp.54,500. (See Klees and Suparman, 1984). (These are guides enough for 6 teachers, so school type A with 10 teachers requires 1.67 sets of teacher's guides and school type B, with eight teachers, requires 1.33 sets.)
- o It is assumed that textbooks will last, on the average, four years, so total textbook costs per year are equal to the total cost of textbooks times the annualization factor for 4 years (i.e.,.3155).
- o It is assumed that,on the average, 5% of the textbooks are lost or damaged each year. Hence the annual cost of replacing lost or damaged textbooks will equal the total cost of textbooks per year X .05.
- o It is assumed that the MOEC will provide 75% of all textbooks and the remaining 25% will need to be purchased by the students themselves.

These assumptions yield the following annual textbook costs per school.

TABLE 5.24

TOTAL ANNUAL EXPENDITURES ON TEXTBOOKS BY TYPICAL SCHOOL
(000 1985 Rupiah)

School Type	Public	Total
A	626.23	834.98
B	387.89	517.19
C	335.78	447.70

C. Materials, Maintenance and Administration/Data Collection

Resources for materials, school maintenance, administration and data collection come from three main sources: local government budgets (i.e., APBD I and APBD II), SBPP grants and BP3.

Fairly reliable estimates can be made of SBPP allocations to each of these three expenditure categories. However, it is, difficult to determine what proportion of budgeted SBPP allocations actually reach the school and even more difficult to verify that these funds are actually spent on the items for which they are intended. Table 5.25 summarizes SBPP grants allocated directly to public primary schools in FY 1984/85. Total per-province allocations are broken down into eight categories of use.

TABLE 5.25

1984/85 ALLOCATION OF SBPP GRANTS BY PROVINCE
(1984 Rupiah)

Province	Teaching Aids	Admin.	Maint	Teachers	Juniors	Sports Activities	Maint	Data Coll.	TOTAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. D.I. ACEH	288.901.200	96.330.000	50.560.000	537.930.000	17.385.000	25.180.000	12.590.000	12.590.000	1.041.266.200
2. SUMUT	944.010.600	322.198.500	153.500.900	1.750.110.000	55.380.000	76.750.000	38.375.000	38.375.000	3.378.699.100
3. SUMBAR	421.696.900	144.794.000	73.240.000	771.750.000	22.890.000	36.620.000	18.310.000	18.310.000	1.507.610.900
4. R I A U	245.758.400	85.247.501	41.240.000	364.530.000	14.880.000	20.620.000	10.310.000	10.310.000	792.895.900
5. JAMBI	187.515.000	66.514.500	36.560.000	340.710.000	17.175.000	18.280.000	9.140.000	9.140.000	685.034.500
6. SUMSEL	319.213.000	172.282.500	74.900.000	755.010.000	25.005.000	37.450.000	18.725.000	18.725.000	1.621.310.500
7. BENGKULU	103.120.400	34.996.000	20.560.000	198.150.000	13.395.000	10.280.000	5.140.000	5.140.000	390.781.400
8. LAMPUNG	514.671.000	165.477.000	61.580.000	678.480.000	26.250.000	30.790.000	15.395.000	15.395.000	1.508.038.000
9. DKI JAKARTA	423.838.500	124.468.500	45.460.000	576.780.000	31.890.000	22.730.000	11.365.000	11.365.000	1.247.897.000
10. JAWA BARAT	2.771.591.800	917.481.500	399.040.000	4.096.290.000	216.735.000	199.520.000	99.760.000	99.760.000	[illegible]
11. JAWA TENGAH	2.418.899.800	805.844.000	405.920.000	4.541.670.000	266.985.000	202.960.000	101.480.000	101.480.000	[illegible]
12. D.I. YOGYA	244.302.300	85.449.000	38.860.000	518.940.000	26.700.000	19.430.000	9.715.000	9.715.000	[illegible]
13. JAWA TIMUR	2.499.076.900	821.054.000	402.800.000	4.640.940.000	226.590.000	201.400.000	100.700.000	100.700.000	[illegible]
14. KALBAR	261.889.500	81.984.500	45.620.000	473.130.000	18.195.000	22.810.000	11.405.000	11.405.000	926.438.800
15. KALTENG	175.947.900	64.330.500	43.720.000	246.810.000	12.915.000	21.860.000	10.930.000	10.930.000	587.443.400
16. KALSEL	248.596.300	91.968.500	52.400.000	498.630.000	19.065.000	26.200.000	13.100.000	13.100.000	963.059.800
17. KALTIM	200.613.400	71.454.500	33.540.000	379.140.000	24.420.000	16.770.000	8.385.000	8.385.000	742.707.900
18. SULUT	207.905.700	75.211.500	37.660.000	458.400.000	11.175.000	18.830.000	9.415.000	9.415.000	828.012.200
19. SULTENG	177.790.500	65.091.000	36.500.000	312.300.000	13.680.000	18.250.000	9.125.000	9.125.000	641.861.500
20. SULSEL	739.821.300	257.556.000	121.780.000	1.209.240.000	49.620.000	60.890.000	30.445.000	30.445.000	2.499.797.300
21. SULTERA	138.081.600	48.711.000	27.500.000	262.890.000	10.620.000	13.750.000	6.875.000	6.875.000	515.302.600
22. B A L I	286.139.900	97.006.500	51.420.000	578.490.000	21.690.000	25.710.000	12.855.000	12.855.000	[illegible]
23. N. T. B.	280.464.800	88.250.500	44.020.000	511.710.000	13.635.000	22.010.000	11.005.000	11.005.000	982.100.300
24. N. T. T.	162.347.100	56.511.000	33.700.000	286.500.000	17.520.000	16.600.000	8.300.000	8.300.000	589.278.100
25. MALUKU	143.752.500	53.020.500	27.240.000	270.150.000	14.925.000	13.620.000	6.810.000	6.810.000	536.328.000
26. IRIAN JAYA	51.059.600	16.978.000	12.740.000	135.120.000	6.375.000	6.370.000	3.185.000	3.185.000	235.012.600
27. TIMOR TIMUR	52.101.100	15.230.500	7.520.000	64.200.000	5.640.000	3.760.000	1.880.000	1.880.000	153.211.500
J U M L A H	14.709.106.800	4.926.441.000	2.378.880.000	25.458.000.000	1.200.735.000	1.189.440.000	594.720.000	594.720.000	51.052.042.800

Source: Subsidi/Bantuan Pembiayaan Penyelenggaraan Sekolah Dasar Negeri.(SBPP-SD) Dept. Keuangan, Dept. Dalam Negeri, Dept. Pendidikan dan Kebudayaan, 1984.

The eight categories can be regrouped into the following broader categories and proportions of total funds allocated to each of these categories can be calculated for Indonesia as a whole:

Category		Proportion of Total Budget
1.	Salary Supplements	52%
	- Teachers	(50%)
	- Janitors	(2%)
2.	Materials	31%
	- Teaching Aids	
	- Materials for Sports Activities	
3.	Maintenance	5.8%
	-	
	-	
4.	Administration/Data Collection	10.8%
	TOTAL	100.0%

One can calculate the actual proportions for each province or grouping of provinces. Given the standard for allocating resources to each of the original eight categories, it is not likely that these proportions will vary much from one region to another. Total SBPP funds were, therefore, calculated for each the three regions and divided by the number of schools per region to yield the following average per school SBPP allocations in 1984/85.

TABLE 5.26

AVERAGE SBPP ALLOCATIONS PER SCHOOL IN 1984/85

Region	Total SBPP Allocation to the Region	No. Schools per Region	Annual SBPP Funds per School
I. Jakarta	Rp.1,247,897,000	2,437	512,063
II. Java + Bali	28,677,955,000	68,317	419,788
III. Outer Islands	21,126,190,800	55,951	377,584

Source: 1984/85 General Education Statistics, Balitbang Dikbud

Interviews conducted with public primary school headmasters in Cianjur (Jawa Barat) support these estimates: one headmistress reported that she received Rp.101,250 from SBPP every three months (or Rp.101,250 X 4 = Rp.405,800 per year); a headmaster reported that he received approximately Rp.100,000 every 3 months (or Rp.100,000 X 4 = Rp.400,000/Year). These school-level reports are consistent with average per-school allocations estimated for the Java/Bali region. Applying the proportions given on the previous page to these average per-school allocations, the following breakdown of costs are derived for each of the 3 "typical" schools:

TABLE 5.27

SUMMARY OF PER SCHOOL SBPP ALLOCATIONS BY EXPENDITURE CATEGORY (1984/85 Rupiah)

Category	School Type (A)	(B)	(C)
Teacher Supplements (50%)	256,031	209,889	188,792
Non-Teacher Supplements (2%)	10,241	8,396	7,552
Materials (31%)	158,740	130,131	117,051
Maintenance (6%)	30,724	25,187	22,655
Administration/ Data Collection (11%)	56,327	46,175	41,534
T O T A L (100.0%)	512,063	419,778	377,584

Data on resource allocations to these expenditure categories were not readily available for APBD I, APBD II and BP3. Estimates for local and BP3 contributions are therefore based on information collected in school level interviews and on estimates made in the Daroesman/Lamb (1982) study.

The Daroesman/Lamb study reports an average BP3 fee of Rp.100/ student per month. Interviews of primary school officials conducted during this sector review identified a fee range of Rp.100-500 in Jawa Barat and several reports of Rp.250. An average monthly per-student fee

of Rp.250 was used to calculate total BP3 funds collected per school. Even if this amount is high for an average monthly fee, it probably understates actual parental contributions through the BP3. In addition to the monthly fee,many schools also charge fees for entrance, uniforms and other miscellaneous items. For example, one school was installing electricity using a special additional collection of BP3 fees. BP3 fees are allocated to the following expenditure categories: teacher supplements, materials and administration. The proportion of funds going to each category are taken from estimates established in the Daroesman/Lamb report. Table 5.28 below gives estimated BP3 contributions by typical school and expenditure category:

TABLE 5.28

SUMMARY OF BP3 CONTRIBUTIONS
PER TYPICAL SCHOOL
(1985 Rupiah)

Category	Type of School (A)	(B)	(C)
Teacher Supplements (30%)	288,900	174,600	154,800
Materials (48%)	462,240	279,360	247,680
Administration (22%)	211,860	128,040	113,520
T O T A L (100%)	963,000 1/	582,000 2/	516,000 3/

1/ 321 students X Rp.250 X 12 mos = 963,000/school/yr
2/ 194 students X Rp.250 X 12 mos = 582,000/school/yr
3/ 172 students X Rp.250 X 12 mos = 516,000/school/yr.

It is even more difficult to estimate the level of local government contributions to the school expenditures on materials, maintenance and administration. The only resources allocated directly by the Ministry of Home Affairs are through the SBPP grants which they administered through the central office. Information on local governments' (i.e. Dati I and II) direct allocations to this type of school operating expenditures is not reported to any one central source. The Daroesman and Lamb study found that in 1981/82 the contribution of local government (both Dati I and II) resources to school materials, maintenance and administration is very small: approximately 15% of total expenditures on materials, 24% of maintenance and less than 8% of administration. With the relatively good estimates of SBPP and BP3 contributions, these percentages of local government funds can be used to calculate total expenditures on materials, maintenance and administration/data collection. Table 5.29 gives estimates of total annual expenditures per school on these three cost items.

TABLE 5.29

SUMMARY OF TOTAL ANNUAL EXPENDITURES ON MATERIALS, MAINTENANCE, ADMINISTRATION per Typical School ('000 1985 Rupiah)

Type of School	COST ITEM Materials		Maintenance		Admin/Data	
	Public	Total	Public	Total	Public	Total
A	269.19	731.43	40.59	40.59	78.70	290.56
B	202.96	482.32	33.27	33.27	60.71	188.75
C	181.92	429.60	29.93	29.93	54.47	167.99

Student's Costs

There are a wide variety of school-related costs that families of students are expected to pay for directly. School uniforms, the cost of transportation to and from school, notebooks and writing materials are examples. In addition there are often additional BP3 fees for special projects or school improvement. It is assumed for purposes of this analysis that each student pays a total of Rp.5,000 per year for such out-of-pocket expenditures.

The various cost components for each of the typical schools from the three regional groupings can now be aggregated into total school and per student costs. Table 5.30 summarizes aggregate annual costs for each of the three typical schools, and includes a breakdown of total costs and those covered by government budget allocations.

With enrollment information for each of the three typical schools examined in this analysis, it is quite easy to move from aggregate annual school costs to per student costs. Assuming enrollments of 321 for the typical Jakarta primary school, 194 for Java+Bali and 172 for the Outer Islands, the following unit costs emerge:

TABLE 5.30

SUMMARY OF AGGREGATE ANNUAL SCHOOL OPERATING EXPENDITURE
(000 1985 Rupiah)

	SCHOOL TYPE					
	A		B		C	
	Public	Total	Public	Total	Public	Total
(1) Salaries	16,578.80	16,867.70	13,685.82	13,860.42	10,818.90	10,966.50
- Teaching	(15,102.01)	(15,390.91)	(12,210.88)	(12,385.48)	(9,344.80)	(9,492.40)
- Nonteaching	(1,476.79)	(1,476.79)	(1,474.94)	(1,474.94)	(1,474.10)	(1,474.10)
(2) Textbooks	626.23	834.98	387.89	517.19	335.18	447.70
(3) Materials	269.19	731.43	202.96	482.32	181.92	429.60
(4) Maintenance	40.59	40.59	33.27	33.27	29.93	29.93
(5) Admin/Data Coll.	78.70	290.56	60.71	188.75	54.03	162.27
(6) Students	-	1,605.00	-	970.00	-	860.00
TOTAL	17,593	20,370.26	14,370.65	16,051.95	11,421.00	12,901.72

TABLE 5.31

SUMMARY OF ANNUAL PER STUDENT COSTS
PUBLIC PRIMARY SCHOOL BY REGION
1985 Rupiah

Item	REGION Jakarta Total	Jakarta % Total Cost	Jakarta Public	Java + Bali Total	Java + Bali % Total Cost	Java + Bali Public	Outer Islands Total	Outer Islands % Total Cost	Outer Islands Public
Salaries	52,547	(78.8%)	51,647	71,446	(81.5%)	70,546	63,759	(80.4%)	62,900
- Teaching	(47,947)	(70.0%)	(47,047)	(63,943)	(72.8%)	(62,943)	(55,188)	(69.6%)	(54,330)
- Nonteaching	(4,600)	(6.8%)	(4,600)	(7,603)	(8.7%)	(8,988)	(9,871)	(10.6%)	(8,570)
Textbooks	2,601	(3.8%)	1,951	2,665	(3.0%)	1,999	2,603	(3.1%)	1,952
Materials	2,274	(3.3%)	836	2,446	(2.8%)	1,046	2,493	(2.8%)	1,058
Maintenance	126	(0.2%)	126	172	(0.2%)	172	174	(0.2%)	174
Administration	905	(1.3%)	245	973	(1.1%)	317	977	(1.2%)	317
Students	5,000	(14.6%)		5,000	(11.4%)		5,000	(12.0%)	
TOTAL	63,455	100.0%	54,805	87,702		74,076	75,011		66,401

(Notes: Differences between aggregate school costs and unit costs due to the use of rounded figures in Table 5.30)

There are several observations that can be made of the unit costs that emerge for public primary school from this analysis. First, though there are some important contributions of private funds to primary schools, especially for materials, the bulk of the funding comes from government sources.

On the average, public sources of funds account for 83% of total annual per-student costs. These figures vary slightly from one region to another: 80.1% in Jakarta, 84.5% in Java/Bali and 83.6% in the Outer

Islands.

The highest proportion of per-student costs is accounted for by teachers' salaries, ranging from 69.6% in the Outer Islands to 72.8% in Java/Bali. The higher proportion of teacher's salaries to total costs in Java/Bali results from the average lower teacher to student ratios in these provinces.

Overall, unit costs are lowest in Jakarta and highest in Java/Bali. The per-student costs of the Outer Islands are slightly lower but closely resemble those in the Outer Islands. This would suggest that certain economies of scale that are being reached in the other regions illustrate the relatively higher cost of providing traditional schooling (one teacher; one class) in smaller schools. From this analysis, the difference between unit costs in Java/Bali and the Outer Islands is accounted for by the lower student/teacher ratios in Java/Bali. Different regional averages were not calculated for teachers salaries, other sources of data suggest teacher salaries in the Java/Bali provinces are, on the average, considerably higher than in the Outer Islands. With good estimates of regional averages of teachers salaries, the disparity between unit costs in Java/Bali and the Outer Islands would be even greater.

5.3.5.5.5 Student Flows and Cycle Costs

This section combines the information on unit costs which are calculated by level of education in Chapter Two and student flows from enrollment trends to yield a cost per graduate for each level of education. The cost per graduate, or cycle cost, is an important

indicator of the relative efficiency with which available educational resources are used at each level. It is one approach to relating educational inputs to educational outputs. In other words, it is a very simple measure of how much "education" is produced, given the current levels of investment and the prevailing inefficiencies in a given subsector of education.

Educational inputs are narrowly defined, for purposes of this analysis as costs, and outputs are measured as numbers of graduates. A truer measure of inputs and outputs would reflect the quality of inputs (e.g., not just teacher salaries, but the quality of instruction purchased with these salaries) and the quality of outputs (e.g., ability of graduates). measuring educational quality in quantitative terms, however, is generally very difficult and is certainly beyond the scope of this analysis. A cycle cost is calculated for the various levels of education by first analyzing students flows for the instructional years per graduate, then multiplying the years times the estimated unit cost.

The first half of this section deals with the methodology for calculating instructional years per graduate and the application of this methodology to the various subsectors of Indonesian education. The second half of this section will bring together unit costs and instructional years per graduate to produce a total cost per graduate or cycle cost. A comparison across subsectors will then be made of the resulting cycle costs.

Student Flows, Primary Schools

The student flow models and instructional years per graduate in the following pages are based on the assumptions about repetition and

progression that were made in the section on enrollment projections in Chapter Two for each level of education.

Student flows and instructional years per graduate have, however, been completed for virtually all primary and secondary programs. Each student flow model begins with an initial cohort of 1000 students and follows them through the entire cycle, accounting for repetitions, dropouts and progressions. As explained in the previous section, these internal efficiency measures are calculated from two years of baseline data. Drop-out rates are assumed to be a residual of progression and repetition.

On the basis of the progression and repetition rates (Tables 5.32 through 5.34) given for public primary schools by each of the three regional groupings, the following student flow models can be constructed for Jakarta, Java/Bali, and the Outer Islands.

Take an example from Table 5.33 which summarizes student flows and instructional years per graduate of public primary schools in Java and Bali. We begin with an initial cohort of 1000 students in grade one and follow them to grade two. We can see that at grade one the repetition rate is 14.2% and the progression rate is 80.5% (dropouts are the residual, i.e., 100% - (14.2% + 80.5%). If 100 students are enrolled in grade one in year 1, on the basis of the stated repetition and

TABLE 5.32

STUDENT FLOWS AND INSTRUCTION YEARS PER GRADUATE: PUBLIC PRIMARY JAKARTA

GRADE	I			II			III			IV			V			VI			GRADS
	EN:	RP: 0.127	PR: 0.879	EN:	RP: 0.092	PR: 0.876	EN:	RP: 0.078	PR: 0.906	EN:	RP: 0.062	PR: 0.933	EN:	RP: 0.041	PR: 0.946	EN:	RP: 0.002	PR: 0.993	
1	1000		879																
2	127	127	112	879		770													
3	16	16	14	193	81	169	770		698										
4	2	2	2	22	7	19	229	60	207	698		651							
5				2	1	2	24	5	21	250	43	234	651		616				
6							3	0	2	24	3	22	260	27	246	616		611	611
7										2	0	2	24	1	22	248	1	246	246
8													2	0	2	22	0	22	22
9																2	0	2	2
total instr.yrs	1145			1096			1025			975			937			888			882

EN = Enrollment
RP = Repetition
PR = Progression

Instruction years/graduate: 6.88

TABLE 5.33

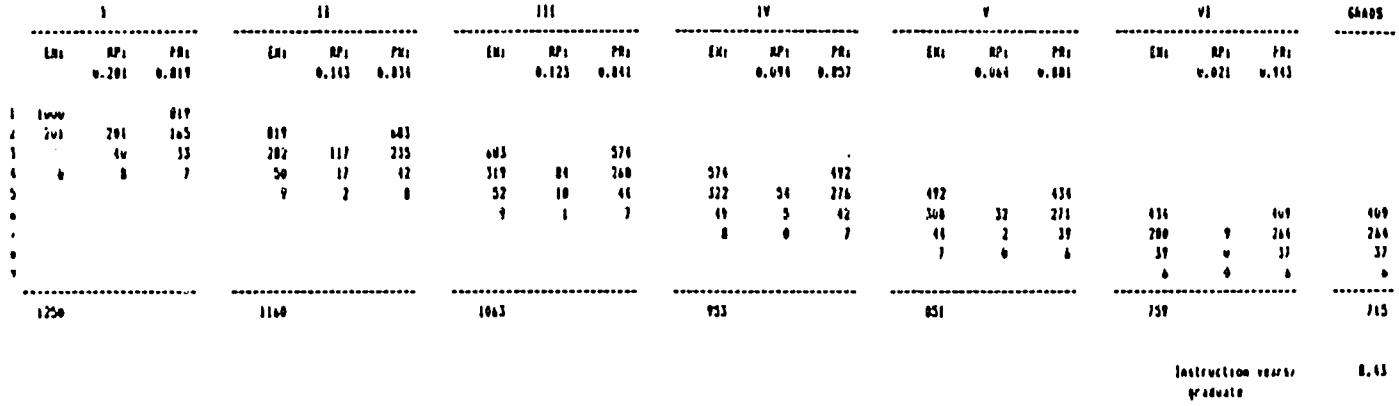
STUDENT FLOWS AND INSTRUCTION YEARS PER GRADUATE: PUBLIC PRIMARY BALI/JAVA

GRADE	I			II			III			IV			V			VI			GRADS
	EN:	RP: 0.142	PR: 0.805	EN:	RP: 0.114	PR: 0.871	EN:	RP: 0.100	PR: 0.875	EN:	RP: 0.075	PR: 0.884	EN:	RP: 0.051	PR: 0.910	EN:	RP: 0.009	PR: 0.957	
1	1000		805																
2	142	142	114	805		701													
3	20	20	16	206	92	179	701		614										
4	3	3	2	27	10	23	250	70	218	614		542							
5				3	1	3	30	7	26	264	46	234	542		494				
6							4	1	3	30	3	26	261	28	238	494		472	472
7										4	0	3	28	1	25	242	4	232	232
8													3	0	3	25	0	24	24
9																3	0	3	3
total instr.yrs	1165			1041			985			911			835			764			731

Instruction years/graduate: 7.80

TABLE 5.34

STUDENT FLOWS AND INSTRUCTION YEARS PER GRADUATE: PUBLIC PRIMARY
Other Provinces



progression rates, it can be expected that 805 will progress to grade two in year two and 142 will repeat and reenter grade one in year two. It is then necessary to make some assumptions about what happens to these 142 repeaters in year two of grade two as we have for new enrollees the year before, i.e., 80.5% of 142 repeaters will progress to grade two in year three (114) and 14.2% of 142 repeaters (20) will reenter grade one in year three.

Moving to grade two we find that of the original 100 students, 805 enter grade two in year two. Of these 805 students, 87.1% (701 students) will continue on to grade three in year three, but 11.4% (92 students) will reenter grade two in year three. In addition to the 92

repeaters form the previous year of second grade, 80.5% of grade one repeaters in year two (i.e., 114 students) progress on to grade two in year three. The total number entering and reentering grade two in year three in thus (92 +114) = 206. These calculation are carried out at each grade level until the numbers progressing or repeating are smaller than a whole number. Totals of instructional years are calculated for each grade level; these include original enrollees plus successive years of repeaters. Instructional years per graduate equal the total number of instructional years at each grade level divided by total graduates. In other words, for Java and Bali, it takes 5,701 students years to produce 731 graduates or an average 7.80 instructional years per graduate (5701 731 + 7.80).

The following conclusions can be drawn form the instructional years per graduate summarized for public primary education in Tables 5.32, 5.33, and 5.34. Of the three regions examined, instructional years per graduate are lowest in Jakarta (6.88 yrs) and highest in the Outer Islands (8.43 yrs). For Java and Bali, instructional years per graduate are 7.80 years. The differences from one region to the next correspond directly to the successively higher repetition rates that prevail as one moves from Jakarta to the Outer Islands.

An interesting observation about access can be ma rorm the regional variations in student flows and years per graduate. Internal inefficiencies, which can in part be measured by repetition rates, can be viewed as limiting access to education. In Table 5.34 we see that of the 1000 new grade one students in the Outer Islands, 201 will reenter grade on the following year. Assuming that the capacity of the system

does not expand dramatically from one year to the next, (i.e., a capacity to take in 1000 grade one students in year 2 is maintained) and assuming a repetition rate of 20.1%, in year 2 there would only be 799 places available for new entrants into grade one. The remaining 201 places are claimed by repeaters. The impact of repeaters on access becomes more pronounced for grade two and subsequent grades where there are not only repeaters form grade two of the previous year, but also a group of grade one repeaters who are progressing of to grade two in year three. In general, access could be expanded in real terms by reductions in the repetition rate. This concept is of particular importance for primary education in the Outer Islands, where access is more limited and repetitions rates are higher.

5.3.5.5.6 Cycle Cost Comparisons

This section brings together the unit cost information and the information on instructional years per graduate of the previous sections. Combining the cost data with the information on student flows and instructional years per graduate, costs per graduate or "cycle costs" can be estimated for each educational level. These cycle costs overestimate the total costs incurred per graduate to the extent that they disregard the value of education acquired by students who do not complete the cycle. Cycle cost, however, allow us to account for the inefficiencies of dropouts and repeaters in monetary terms. Simply multiplying annual unit costs by the average number of years it takes a graduating student to complete the cycle underestimates total costs because it does not account for the resources that have been spent on repeaters and dropouts. The cycle cost measure also allows for the

calculation of an "attrition cost index" which indicates the difference between cycle costs in an ideal cycle with no repeaters or dropouts (assuming a constant unit cost) and actual cycle costs under prevailing dropout and repetition rates. In a very rough way the difference wasted on internal inefficiencies. The attrition cost index is a ratio of actual to optimal cycle cost. Hence, an attrition cost index of 1.00 would should there is no "waste" of resources on attrition. The higher the index, the higher the level of resources spent on repeaters and dropouts.

Table 5.35 summarizes unit costs, optimal cycle costs, instructional years per graduate, actual cycle costs, and attrition cost indices for all levels of education. This summary allows for a comparison across subsectors of annual costs and the relative efficiency with which these resources are used.

Conclusions about the relative costs and efficiencies for each of the education subsectors follow. The ratio of unit costs at the various levels of education to primary education allows for a comparison of annual per-student costs across subsectors. All unit costs were calculated in 1985 prices except those calculated for higher education, which were based on 1984 budget data and do not reflect the large salary increase for civil servants (including public university professors)

TABLE 5.35

SUMMARY OF UNIT AND CYCLE COSTS
ALL LEVELS OF EDUCATION

	TOTAL COST/ STUDENT	RATIO TO AVG PRIMARY	OPTIMAL COST/ GRAD	INSTRUCTION YEARS PER GRADUATE	ACTUAL COST/ GRAD	ATTRITION COST INDEX
I. PRIMARY						
- AVG. INDONESIA	78,948	1.00				
- JAKARTA	63,455	0.80	380,730	6.88	436,570	1.15
- JAVA + BALI	82,702	1.05	496,212	7.80	645,076	1.30
- OUTER ISLANDS	75,011	0.95	450,066	8.43	632,342	1,41
II. JUNIOR SECONDARY						
(A) GENERAL:						
- PUBLIC SMP	107,300	1.36	321,900	3.29	353,017	1.10
- PRIVATE SMP (I) *	118,609	1,50	355,827	3.56	422,248	1.19
- PRIVATE SMP (II)**	94,205	1.19	282,615	3.56	335,370	1.19
(B) VOCATIONAL/TECHNICAL						
- PUBLIC ST/SKKP	107.300	1.36	321,900	3.57	383,061	1.19
III. SENIOR SECONDARY						
(A) GENERAL:						
- PUBLIC SMA	131,797	1.67	395,391	3.45	454,700	1.15
- PUBLIC SMA/JAKARTA	131,797	1.67	395,391	3.25	428,340	1.08
- PUBLIC SMA/JAVA+BALI	131,797	1.67	395,391	3.21	423,068	1.07
- PUB. SMA/OUTER ISLANDS	131,797	1.67	395,991	3.71	488,967	1.24
- PRIVATE SMA (I) *	198,456	2.51	595,368	3.80	754,133	1.27
- PRIVATE SMA (II) **	114,276	1.45	342,828	3.80	434,249	1.27
(B) TECHNICAL						
- PUBLIC STM	176,724	2.24	530.172	4.58	809,396	1.53
(C) COMMERCIAL						
- PUBLIC SMEA	135,747	1.72	407,241	3.33	452,038	1.11
(D) TEACHER TRAINING						
- PUBLIC SPG	149,894	1.90	449,682	3.29	493,151	1.10
- PRIVATE SPG (II)	119,562	1.51	358,686	3.41	407,706	1.14

TABLE CONTINUES

II. HIGHER

A. PUBLIC	
- (AVE. PUBLIC)	399,000
- MEDICINE	501,000
- NATURAL SCIENCE	656,000
- ENGINEERING	377,000
- AGRICULTURE	270,000
- ECONOMICS	196,000
- SOCIAL SCIENCE	170,000
- EDUCATION	297,000
(AVG./WEIGHTED)	(280,000)
B. PRIVATE	
- MEDICINE	350,000
- NATURAL SCIENCE	832,400
- ENGINEERING	616,800
- AGRICULTURE	511,900
- ECONOMICS	301,600
- SOCIAL SCIENCE	266,900
- EDUCATION	356,700
(WEIGHTED AVG)	343,800

* Scenario I : "action" private schools; based on actual budget data for 10 schools in Jakarta

** Scenario II : Astimates bored on current salaries figures & other assumptions for "typical" private school.

that took place in 1985. To make higher unit costs roughly comparable to the other unit costs, the portion of higher education unit costs that go to salaries were adjusted to reflect the 1985 salary scale increase.

1. In general, there is not a great deal of variation in unit cost from one level of education to another. Compared to the average unit cost for primary, public general junior secondary is 1.36 times higher and public general senior secondary is 1.67 times higher. The ratio of students in public higher education the those in primary education is quite low by international standards. This supports earlier observations about declining annual budget per student in public universities.
2. At the senior secondary level, the ratio of private SMA, scenario I, and public technical senior secondary schools (STMS) is 2.24 times higher.
3. Optimal costs per graduate are calculated for each level of education. This indicates the ideal cost per graduate if unit costs were held constant and there were no repetition or dropouts. The unit cost for each level of education is multiplied by the number of years in a cycle (e.g., six years for primary).

   Instructional years per graduate are given for all levels of education in the next column. By developing-country standards these years per graduate are quite low. The only figure that is noticeably different from the rest is the 4.58 years per graduate observed for STMs.

4. What is more interesting from an Indonesians policy maker's perspective are the variations in instructional years per graduate and their impact on cycle costs. Though the unit costs are higher for the private SMA, scenario I, then the public STM unit costs, the cost per graduate or "cycle cost" is higher for STMs. This reflects the relative inefficiency of this program's use of existing resources in producing graduates. Comparing attrition cost indices, we see that of all the levels of education, public senior secondary STMs appear to be using existing resources least efficiently. (see attrition cost index of 1.53)

5. Among primary schools, those in the Outer Islands appear to be the least efficient, with an attrition cost index of 1.41. Public SMAs in Java and Bali with an attrition cost index of 1.07 appear to be using available resources most efficiently.

In the Economics Chapter text (Chapter Two) these costs are related to the returns to education at each level to get a benefit/cost ratio. The reader is referred to the Economics Chapter for these important comparisons.

5.4 Conclusions

Several conclusions emerge from the information and analysis presented above:

Conclusion 1. The current emphasis on improving the quality of primary education is appropriate, but unfocused. There is no clear and widely accepted definition of what is meant by quality education or what the indicators should be (such as student achievement gains, development of critical thinking skills, demonstration of Pancasila attitudes or behaviors, etc.). Every individual has his or her own idea of what quality means, but these concepts are not clearly defined or shared. Equally critical is the lack of information about the best use of resources to maximize educational quality. Whereas a variety of interventions are being implemented -- inservice teacher training and upgrading, textbook production and distribution, teaching/learning methodology improvement -- what is most needed is effective follow-up of each of these efforts with evaluation and research to make careful determination of the impact of each intervention and its relative merits as a cost-effective means for achieving quality improvements.

Conclusion 2. Over the last 15 years Indonesia has made spectacular strides in providing access to education for its people. Ninety-five to ninety-eight percent of her 7 to 12 year-olds are enrolled in primary education. The goal of kewajiban belajar is near attainment. To actually reach the goal will be a challenging task. These last few potential students are from groups of children who are the hardest to reach: dropouts, the poor, handicapped children, children in remote areas, and children from migrant agricultural families.

Indonesia has programs in place that have proved successful in reaching these groups of children, but they must be expanded. The task is to identify the clients for these programs and where they reside, specify which types of programs or combinations of programs will best serve their needs, and allocate the funds necessary to expand programs for them.

For the future, it will be necessary to explore new programs and strategies to maintain the gains achieved during Repelita IV. As the population grows and its characteristics change, old programs will require modification and new problems will emerge requiring innovative solutions. Indonesia cannot afford to rest on its successes, but must continue to improve kewajiban belajar programs.

Conclusion 3. The dualistic administrative structure for primary education leads to inefficiencies with regard in field supervision and educational planning, and to overlap in data collection. The ultimate solution for eliminating these inefficiencies would probably be unification of authority over all aspects of primary education within the MOEC. However, rapid movement to change the present structure could cause serious disruptions of the system, especially at a time when a major reorganization involving primary education and nonformal education is imminent. Progress is being made in remedying some of these inefficiencies, such as recent modification of the salary distribution system, but additional carefully designed and phased efforts are required.

Conclusion 4. At the current rate of output the SPG will produce an oversupply of primary school teachers over the next ten years . The real need is not to increase the output of teachers, but to establish mechanisms to ensure that teachers are provided in the more rural and remote areas where they are needed. This is an area where improved efficiency could also result in quality improvement.

Conclusion 5. The status of the teaching profession is low in the eyes of the Indonesian community and needs to be enhanced to increase the motivation and raise the morale of primary school teachers and attract more capable people to the profession. This is a very long term process, but might begin in several ways: restricting access to SPG and selecting the most qualified candidates to improve the quality of new teachers, improving the promotion and reward structure, or supporting more teacher participation in their own training, curriculum development, etc. as in Cianjur.

Conclusion 6. The current policy at the preprimary level of efforts toward quality enhancement without major expansion efforts is appropriate. If some guidance and control are not provided in the future, however, certain inequities may result as a result of variations in access to preschools. Research is needed on the effects of preprimary education in Indonesia and on what types of programs are most beneficial.

Conclusion 7 Special school programs for handicapped children require major expansion efforts if Repelita IV targets are to be met. At present, only 7% of the targeted 30% enrollment for Repelita IV is being fulfilled by special school programs. As special schools expand, supervision will become a second area requiring attention. There are few supervisors below the provincial level trained and experienced in special education. More are required simply to oversee programs that are currently in existence.

5.5 Recommendations

This final section on preprimary and primary education presents recommendations for policy and planning as well as recommendations for further research and development. These recommendations are presented within three priority areas. Given the realities of the planning and budgeting process in Indonesia, most of these recommendations are aimed toward identification of goals and objectives for Repelita V. However, there are some recommendations, especially those relating to research and development, that might be initiated prior to 1988/89.

5.5.1 First Priority - Focus Efforts on Improvement in the Quality of Education: Recommendations 1 - 6

Recommendation 1: Define Specific Criteria for Judging Attainment of Quality Education.

Discussion

One of the reasons why Indonesia has made such dramatic progress toward the attainment of universal compulsory primary education is that

a realistic and clearly defined policy objective was established. Such an objective for educational quality, including specific targets and benchmarks for judging its attainment, should be provided for Repelita V. The targets should be specific, realistic and broadly subscribed to by both the public and policy makers. The process by which this policy objective and its targets are arrived at is extremely important. Consensus on its value and commitment to its attainment is critical. Steps to formulate a definition should begin immediately if specific targets are to be identified prior to the preparation of Repelita V.

Implementation Alternatives

Three means for bringing about specification of the policy objective and targets may be:

1. To make this definition of quality a major theme of discussion for the Minister of Education's Group of 250;
2. Specification of the indicators of quality could become a primary objective of the yearly national meeting of provincial educators (Rakernas); and
3. To encourage dialogue at the provincial level among educators, community leaders, and village representatives on what is meant by quality education, the results to be fed into a national definition of educational quality.

Recommendation 2: Place Priority on Refinement of the EBTANAS.

Discussion

No matter what criteria are ultimately chosen to judge success in providing quality education, the EBTANAS will serve as a primary measure of student achievement, having been specifically designed to fill this function. Substantial effort has gone into its development and, given the time allotted, production of the initial tests was a notable achievement. Yet the EBTANAS is still seriously flawed. To be accepted as a true measure of educational quality, the achievement test must be viewed as valid by the educational community, students and their parents. Refinement of the EBTANAS should be made a priority.

Implementation Alternatives

1. Additional funding should be allocated for work on the EBTANAS to accelerate item analysis, development of alternative items and cross validation of results with other measures such as the Quality Study being conducted by Balitbang Dikbud and the Tes Sampling effort of Dikdasmen.
2. The EBTANAS results should be made the dependent variables for a series of educational production function studies duplicating those currently underway for the 1984 Quality Study. Comparison of results should be made for cross validation of the measures.

Recommendation 3: Move to Implement the New Primary School Teaching/Learning Methodology Through a Carefully Designed Dissemination Strategy.

Discussion

The new teaching/learning methodology, which has been tested in Kabupaten Cianjur and which will be tried out further in other areas this year, is expected to produce significant quality improvements if implemented properly. A carefully crafted dissemination strategy should be designed and followed up at each stage with evaluation research on its impact.

Teacher inservice training activities are already scheduled for the next few years. Dissemination of the new methodology would require reorientation of this planned training. It would seem far more cost-effective to utilize the training teams currently in place rather than create a new cadre of trainers.

It appears that of the reasons why the new methodology seems to be successful in Cianjur is that follow-up support for training was provided through the teacher discussion and feedback groups, the PKG (Pusat Kegiatan Guru) at the kecamatan level and the KKG (Kelompok Kegiatan Guru) at the school level. This system should be supported by the Depdikbud as part of the dissemination strategy. This feedback and reinforcement process for teachers may be as important to the success of the new methodology as the materials themselves. This is an empirical question that can be answered by appropriate evaluation and research.

The new methodology requires that more time be allocated to the

study of critical curriculum objectives. Yet all other curriculum objectives must also be covered given the way the system is presently designed. With only 245 days allocated each year for study (and something like 215 to 225 days actually available), not enough time is available to cover the complete curriculum. If the new methodology is to be implemented effectively, decisions must be made on the curriculum objectives that can be eliminated without hindering student understanding of the topical area. (The PPSP Project implemented in the 1970's conducted formative evaluation of curriculum units which might prove useful in determining what could be eliminated.) Several free days should also be built into the yearly schedule to allow more time for review or for individual work with slower students.

Implementation Alternatives

1. Evaluation research impact studies should be conducted to compare control groups of students with students using the new methodology and tracer studies to assess student performance in higher levels of schooling. These are needed in each of the several subgroups that characterize important variations of educational environments throughout Indonesia.
2. The dissemination strategy should include a series of variations of inservice teacher training to support dissemination of the new methodology, varying levels of support for the establishment of PKG and KKG as in Cianjur to test alternative mechanism to follow-up in-service training, and agreement to eliminate noncritical curriculum objectives. Each of these alternative measures should be followed up with cost

studies and impact studies, both quantitative production function studies and ethnographic classroom process studies.

Research and Development

Recommendation 4: Follow-up of Quality Improvement Interventions With Research.

Discussion

To conduct the kinds of studies outlined above, Balitbang Dikbud should reorganize its research priorities to provide impact evaluation and feedback for the major interventions implemented by the Directorates General. If educational quality is to be improved in a cost-efficient manner, benchmarks must be established and specific, accurate and timely information must be provided about the short and long term success of these efforts and about their expense in terms of human and fiscal resources. For example, if inservice teacher training is conducted or new textbooks, library, or laboratory materials are distributed, these actions should be followed by descriptive impact studies especially where new educational environments or socio-economic groups are encountered.

Implementation Alternatives

1. An evaluation research working group composed of staff members of Balitbang Dikbud and Dikdasmen could be formed to plan and implement evaluation research studies to determine the impact and cost-effectiveness of major programs. Early candidates for such study would be the phased dissemination of the new primary education teaching/learning methodology and the World Bank

supported textbook project (Proyek Buku Terpadu).

2. Dikdasmen together with Balitbang Dikbud could specify evaluation research objectives and the scope of work for major intervention programs and contract the research to Indonesian higher education institutions or local research organizations. These institutions could prepare requests for proposals, much as the international donor agencies do, to be reviewed by a team from Balitbang and Dikdasmen. Once the contract is made, the team would be responsible for periodic oversight of the progress of the contracting agency toward fulfilling of the research objectives.

Recommendation 5: Development of Diagnostic Materials for Primary School Students.

Discussion

The individual student is the true focus of all educational improvement efforts. Though other things are critically involved, in large part enhancing educational quality means ensuring that the individual student understands and learns the curriculum. It is, therefore, important for the teacher to have a reliable and valid way to assess what the student doesn't understand. Waiting until the end of the year for a comprehensive test is too late. It is also inefficient. Holding back a student who could have been promoted if timely remediation of weak areas had been provided is an inefficient use of educational resources.

Teachers obviously conduct their own diagnosis of student weaknesses during the school year, but the techniques used are unstandardized and idiosyncratic, depending upon the skill of the individual teacher. With the learning group format of the new teaching/learning methodology, it may be even harder for a teacher to get enough feedback to make a correct diagnosis of the weaknesses of individual students and provide remediation. A series of diagnostic tools could be developed in coordination with the new methodology to assess whether the student understands critical concepts. Ideally, these tools should be more than simple tests of knowledge of the lesson content. They would be measures of retention over time, understanding of important concepts and relationships, and the level of development of critical thinking skills. Again the experience of the PPSP project might prove useful in such an effort.

Implementation Alternatives

1. Development, try-out and refinement of such a series of diagnostic instruments could take place over a long period of time based upon assessment of each curriculum objective, and the students' retention of the curriculum content at various intervals. If a measure of critical thinking skills could be developed (which is not an easy task) student mastery of an objective might be assessed as a predictor of desired critical thinking skills.
2. A second (and more practical) alternative involves accelerating

the process specified above. Critical curriculum objectives would be agreed upon ahead of time. (These might be based on the content prioritization done through development of the new teaching/learning methodology). The assumption would be made that these objectives are steps in the development of the desired critical thinking skills. Diagnostic instruments would then be developed to assess students' weaknesses in these areas. Later, correlation studies could be made to assess the validity of the assumptions.

Recommendation 6: Begin Research on the Impact of Preprimary Education Programs on Student Achievement.

Discussion

Balitbang Dikbud, in coordination with Dikdasmen, should begin a research study tracing preschool graduates from different socio-economic backgrounds in an effort to determine whether children from preschool programs perform better in primary school over an extended period of time. The results of this research would inform future policies with regard to the level and type of support appropriate for preschool programs.

Implementation Alternatives

1. A short term approach involves identifying TK graduates currently enrolled in primary schools, identifying a random sample of these students stratified according to such variables as type of preschool attended and socio-economic background, and assessing their achievement in primary school. Such

studies have been conducted in other countries and a review of this literature would be an important first step.

2. A longer term, but probably more effective approach, is to select current students in TK by the characteristics of interest and trace them over time in longitudinal studies.

5.5.2 Second Priority - Fulfillment of the Goal of Universal Compulsory Primary Education

Policy and Planning

Recommendation 7. Expand Special Education, Small Schools, Kejar and Patjar Programs with Support From SD Inpres.

Discussion

A dialogue should begin between planners from the MOEC, Department of Home Affairs, and BAPPENAS on the possibility of transferring additional SD Inpres funds to programs aimed at unenrolled 7 to 12 year-olds in the hardest to reach groups - dropouts, students in remote areas, and the rural poor. SD Inpres funds have been gradually shifted to support these types of activities, primarily small schools programs. For maximum impact they should be expanded to include funding for kejar, patjar and SLB Programs and coordinated with Depdikbud planning. This coordination will come to be of special importance when primary education and nonformal education programs are integrated into a new directorate general. Planning and coordination of field implementation programs to be emphasized for Repelita V and to fulfill the Repelita IV target of 100% enrollment should begin now before the integration takes place and organizational and

administrative problems occupy the time of planners.

Implementation Alternatives

1. A coordination committee composed of the Minister, Directors General from Depdikbud, and high level representatives from the Department of Home Affairs, BAPPENAS and the Ministry of Finance meets every month to discuss integrated activities. These efforts could be enhanced by operational teams of lower level planners formed to meet on a continuing basis to plan coordinated implementation of kewajiban belajar policies.
2. High level policy discussions could be held to focus on the feasibility of transferring SD Inpres funding from school construction and rehabilitation activities to activities that support fulfillment of kewajiban belajar targets in Repelita IV and sustain progress through Repelita V. Initially these discussions should focus on the most appropriate use of SD Inpres and kewajiban belajar funds to reach the last 5% to 10% of the 7 to 12 year-olds with programs that have proved effective.

Recommendation 8: Enhance the Role of Selected Kanwil and Kandep in Specifying Areas of Educational Need and Planning Educational Interventions.

Discussion

Identifying intraregional areas where students are not yet being served by primary education programs and planning the appropriate

programs to reach them is done most effectively at a local level. The particular needs for educational programs and the constraints on them are more clearly understood at this level. The Policy Planning and Management Information System Project of Balitbang Dikbud is designed in part to enhance such a capacity.

Implementation Alternatives

1. Initial efforts could stress working with the selected Kanwil offices to enhance their capacity to identify 7 to 12 year-olds in local areas, to gather background data on them and to design and deliver programs to reach these children. This might help the Kanwil offices to develop a sense of their ability to conduct data based planning, deliver needed services, and act as a model for future efforts.
2. Additional funding could be obtained as part of kewajiban belajar to expand training of Kanwil and Kandep in data gathering and program implementation in the manner outlined above. SD Inpres might be a source of funds as well for such efforts.

Recommendation 9: Expand Special Schools Programs for Handicapped Children.

Discussion

Repelita IV has a specified target of reaching 30% of the 300,000 handicapped children in Indonesia through special schools programs SLB, SDLB and SD Terpadu. At present, only 7% of this group is enrolled. The Repelita IV target will not be reached if additional support for

special schools programs is not obtained. This support must include funding for training teachers, preparing facilities and learning materials, and data gathering and supervision at the field level.

Implementation Alternatives

1. Building special facilities for handicapped students has been the primary thrust of programs to date. Preparation of special facilities is time consuming and expensive. Many handicapped children require special facilities, but a recent program innovation, SLB Terpadu, has been introduced to integrate education of handicapped students within regular primary schools. This is a potentially less expensive approach, as it requires only special teachers and learning materials rather than teachers, learning materials and special facilities. Emphasis could be placed on identifying handicapped children who could be integrated with other children and expand the SLB Terpadu Program.
2. Investigate the possibility of transferring SD Inpres funding to preparation of new SLB and SDLB facilities, materials and teacher training as part of the educational expansion mandate of SD Inpres.
3. Explore the possibility of outside donor funding of special school programs, especially the SLB Terpadu approach which is an innovation that may prove valuable for other countries.

Research and Development

Recommendation 10: Coordination of Nonformal Education Programs Patjar and Other Kewajiban Belajar Programs to Identify Dropouts and Others and Move Them Into Appropriate Programs.

Discussion

Planning should begin for developing viable mechanisms for identifying and tracing dropouts and 7 to 12 year-olds not attending school so as to ensure that they enter alternative continuing education programs. The beginning of this effort should precede the reorganization of the primary education and nonformal education departments into the new Directorate general of Basic Education for the reasons outlined above. The integration of these two departments provides a fortuitous opportunity for innovative programming to institutionalize an out-of-school (or open) continuing education program from the beginning of the primary level. One day this program might extend through higher education. The focus of initial efforts, however, should be 7 to 12 year-olds who are not attending school or have dropped out and providing viable out-of-school alternatives to make it possible for them to continue on to higher levels of education.

Implementation Alternatives

1. Kejar PD graduates who have attained basic literacy and numeracy could make the transition into Patjar programs which could provide them with the academic training they need to take the EBTANAS. With expansion of the SMP Terbuka Program these students could continue on in an out-of-school secondary

education program or, if they meet age limitations, enter conventional SMP programs.

2. Diagnostic tests, if developed as in recommendation 5, could be used to specify the appropriate programmatic level for Patjar students or move them through the program more quickly. Prototypes of such tests have already been prepared by UNS (Universitas Sebelas Maret) staff.
3. A system of urban Kejar linked with Patjar or urban Patjar alone could be established to serve unenrolled children and dropouts in urban areas.
4. Mass media, especially radio programming, could be designed by TKPK (Center for Educational Communications and Technology) to publicize kewajiban belajar activities and motivate and direct students to the appropriate program in their area. Radio programming for teacher training and for support of literacy training with Packet A materials have met with some success in the past (the latter with more limited success) and such techniques might be further investigated and refined to support the activities of Kejar and Patjar tutors and teachers.
5. Research and development must continue into other innovative programs to meet the changing needs of the population or provide more effective strategies for reaching specific subgroups of the population, such as children of nomadic families, children of families in extremely remote area (such as Irian Jaya), or cultures with extreme linguistic differences.

Recommendation 11: Gather Data at the National Level That Allows Identification of Remote, Rural, Semi-urban, or Urban Environments.

Discussion

At the central level there are few data that can be used to assess differences among remote, rural, semi-urban and urban areas. These data are needed for quality control, for determining the progress being made in different settings by various Depdikbud efforts, and for planning appropriate programs for these areas. Balitbang Dikbud should develop a system for categorizing kabupaten or even kecamatan according to these differences and monitor educational indicators for each category.

Implementation Alternatives

1. A secondary analysis effort could be used on 1980 census indicators such as population density, infant mortality rates, population growth rates, average size of urban areas or villages, percent of population in agricultural sector, etc. to compile an index to categorize kabupaten or kecamatan. This index would be tested by observation of selected areas.
2. Balitbang Dikbud could develop a survey form for completion by a select group of kecamatan and kabupaten education offices whose characteristics are known. The data provided could be compiled into an index of certain indicators which also would be validated over time in other areas.

Recommendation 12: Conduct a Study of Teacher Attrition and Measures to Attract Teachers to Remote Areas.

Discussion

Compounding the problem of serving students in remote areas is the difficulty of recruiting teachers for remote area schools and retaining them once they arrive. The extent of this complex problem is not currently known. SD Inpres has programs to attract teachers and principals to small remote schools by providing housing and salary subsidies. Dikdasmen is contemplating establishment of short, three to six month, training courses for secondary school graduates in remote areas to prepare them as primary teachers. It is not known within Balitbang how well programs such as these are working. Also unknown are the extent of the problems of teachers moving from remote and rural areas to more urban areas and the comparative rates of teacher resignations in remote and less remote areas. Balitbang Dikbud should conduct a study of teacher attrition in remote and rural areas to make accurate identification of areas where teacher shortages are severe and to predict the rate of teacher recruitment that is required for these areas.

Projections of teacher demand and output of teacher training senior secondary schools (SPG) indicate that at the national level an oversupply of teachers may be evident over the next few years. This observation taken at face values implies serious inefficiencies in the area of primary teacher training. Yet it is clear that this level of data analysis masks severe teacher shortages in remote areas. If

informed policy decisions are to be made concerning reallocation of preservice teacher training resources, a thorough understanding of the problem and the realities of trying to retain teachers in remote regions is required.

Implementation Alternatives

1. Such a study might be conducted through a secondary analysis of existing data within Balitbang, Dikdasmen and the Department of Home Affairs. Detailed records on individual teachers over a five to ten year time span would presumably be required and this level of detail may not be available.
2. Selected kabupaten could be identified and Balitbang research staff or doctoral students could be assigned to gather specific information on teacher attrition over time. This is probably the more feasible alternative.

5.5.3 Third Priority - Continue Steps to Consolidate the Administration and Operations of Primary Education and To Enhance the Status of the Teaching Profession: Recommendations 13-14

Recommendation 13: Streamline the Administration of Primary Education by Placing Teacher Promotions Under the Authority of Depdikbud.

Discussion

As mentioned earlier, the dualistic system of overseeing primary education activities -- administrative oversight by the Department of Home Affairs and professional oversight by Depdikbud -- is inefficient

and can lead to a waste of resources. One area in which efficiency improvements could take place is teacher promotions. At the present time, all promotions come under the authority of Dinas P&K in the kabupaten. The penilik is supposed to have input into the promotion process. In reality, however, most teacher promotions are automatic. A report is required from the penilik if any teacher is to be passed over for promotion. Thus, promotion is automatic unless a teacher is totally incompetent. Ability plays little part in the promotion process. A potential structure of reward for better performance is not utilized. Promotion of teachers based upon performance not only could help motivate teachers, it could also raise the status of the penilik and lead to a more efficient use of resources. Improved educational quality might also result if poor teachers were weeded out of the system through nonpromotion.

Implementation Alternatives

1. A transfer of authority for promotion could occur slowly throughout Repelita V to minimize disruption of administrative systems. It could begin with training of supervisors and administrators at the local level, slowly shifting responsibilities from Dinas to the Kancam and Kandep offices. Kancam and Kandep might initially report to Dinas and Kanwil at the provincial level, gradually moving to complete control of promotions over time.
2. These efforts could be linked with other efforts designed to raise the status of the penilik. With administrative authority

for promotions removed from Dinas, the penilik would become much more the true supervisor of the work of the teachers and principals in his/her area. This enhanced role could be accompanied by access to higher civil service rank and salary.

3. Cost-savings that might result from eliminating low performance teachers from the system could be transferred to hiring additional penilik. This would allow a penilik to school ratio closer to the desired 1 to 15 level. Supervisory responsibilities might be more effectively carried out since each Penilik could be responsible for supervising fewer schools. Funds might also be transferred to ease other constraints on effective supervision such as the lack of gasoline money for transportation to schools.

Recommendation 14: Implement Measures to Enhance the Status of Teachers and Principals.

Discussion

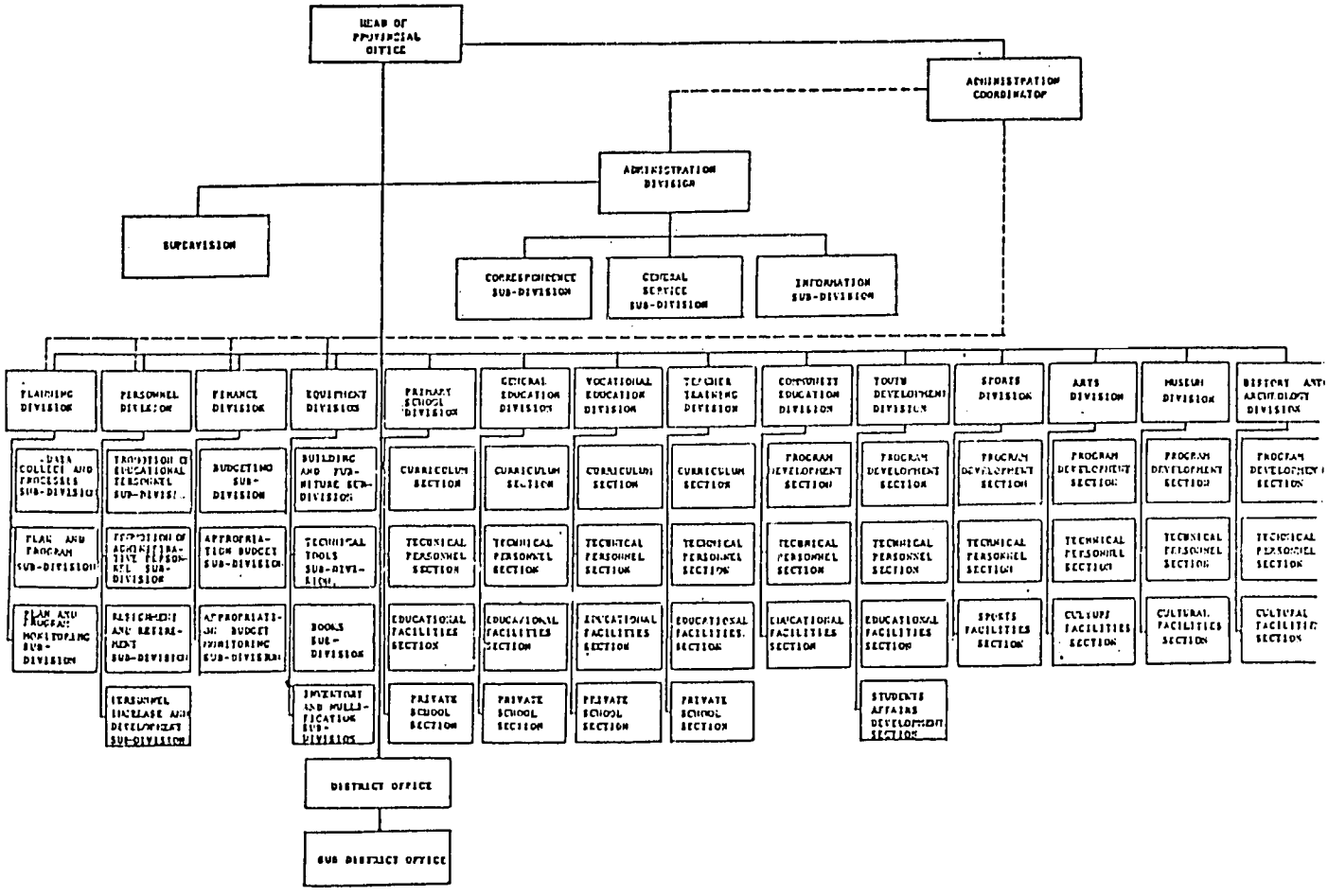
The status of the teaching profession in Indonesia is low. This results from poor pay and incentives and the generally lower quality of General Junior Secondary School (SMP) students who enter teacher training. The status of the profession and motivation of teachers would be increased by improvements in the promotion system that reward talented and dedicated teachers and provide other incentives both in terms of higher pay and recognition as well as mechanisms to promote more teacher participation in training, materials development, etc.

Implementation Alternatives

1. A career ladder system could be instituted to provide additional pay and promotion to teachers identified as being especially effective. Such programs instituted elsewhere, however, have proven difficult to implement effectively and expensive. This type of program could be coordinated with slight across-the-board pay increases for all teachers to emphasize the importance of teachers.
2. Raising the maximum civil service rank of principals and penilik, coupled with an increase in the number of penilik positions, to be filled with the very best teachers and principals could also prove effective in providing motivation and enhancing morale. Enforcing the mandatory retirement age of 60 for penilik would help ensure a continued flow of supervisory openings.

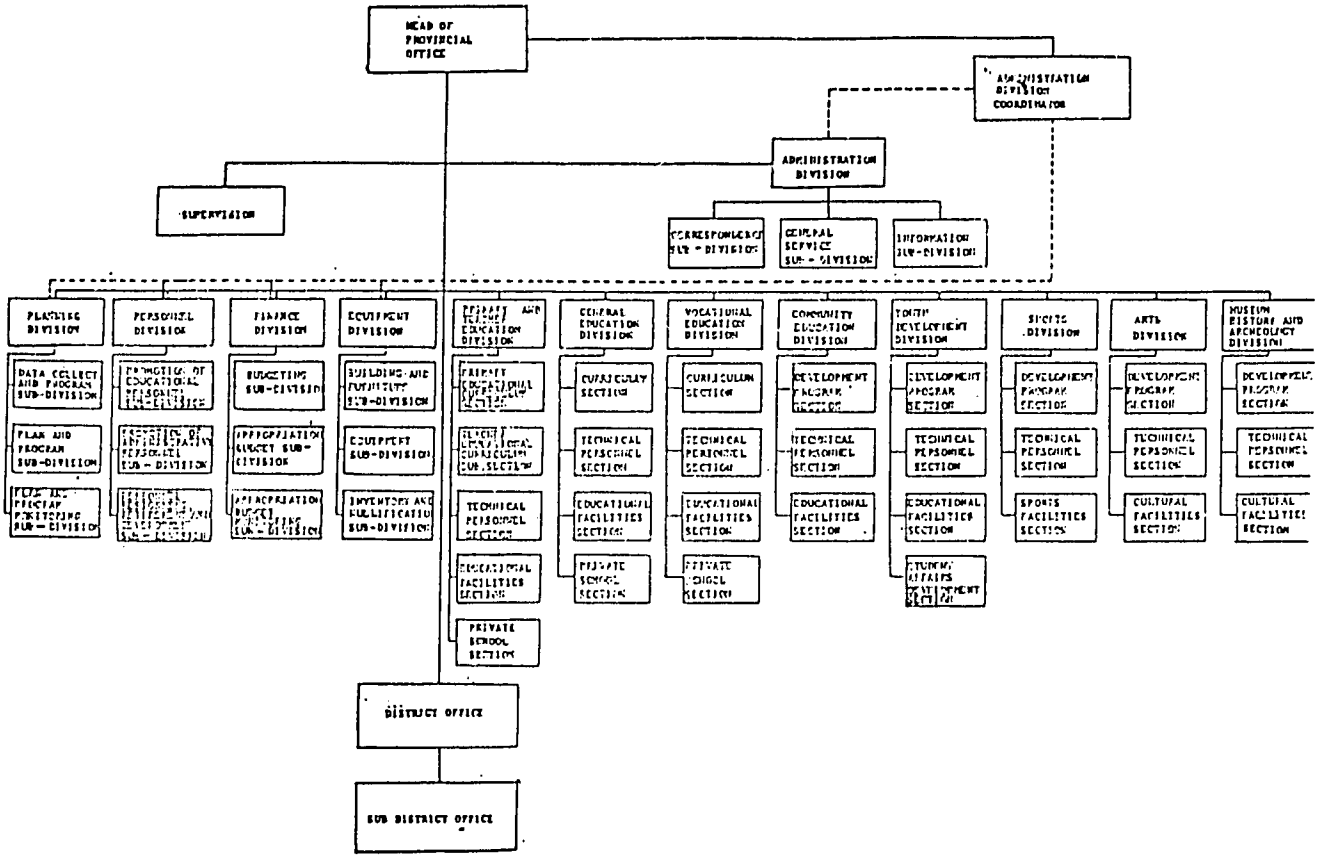
APPENDIX A

ORGANIZATIONAL STRUCTURE OF MOEC
PROVINCIAL OFFICE (TYPE A)



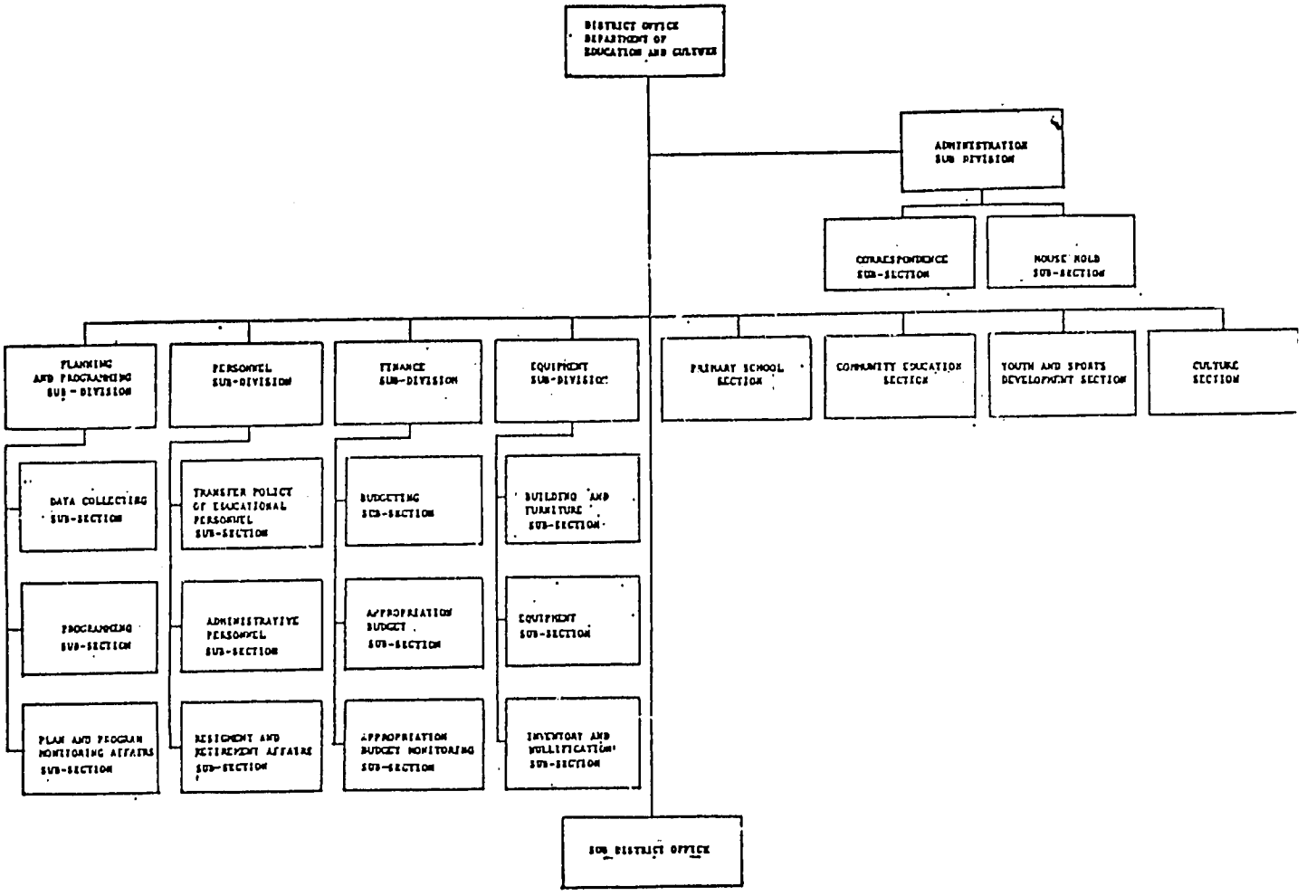
APPENDIX B

ORGANIZATIONAL STRUCTURE OF MOEC
PROVINCIAL OFFICE (TYPE B)



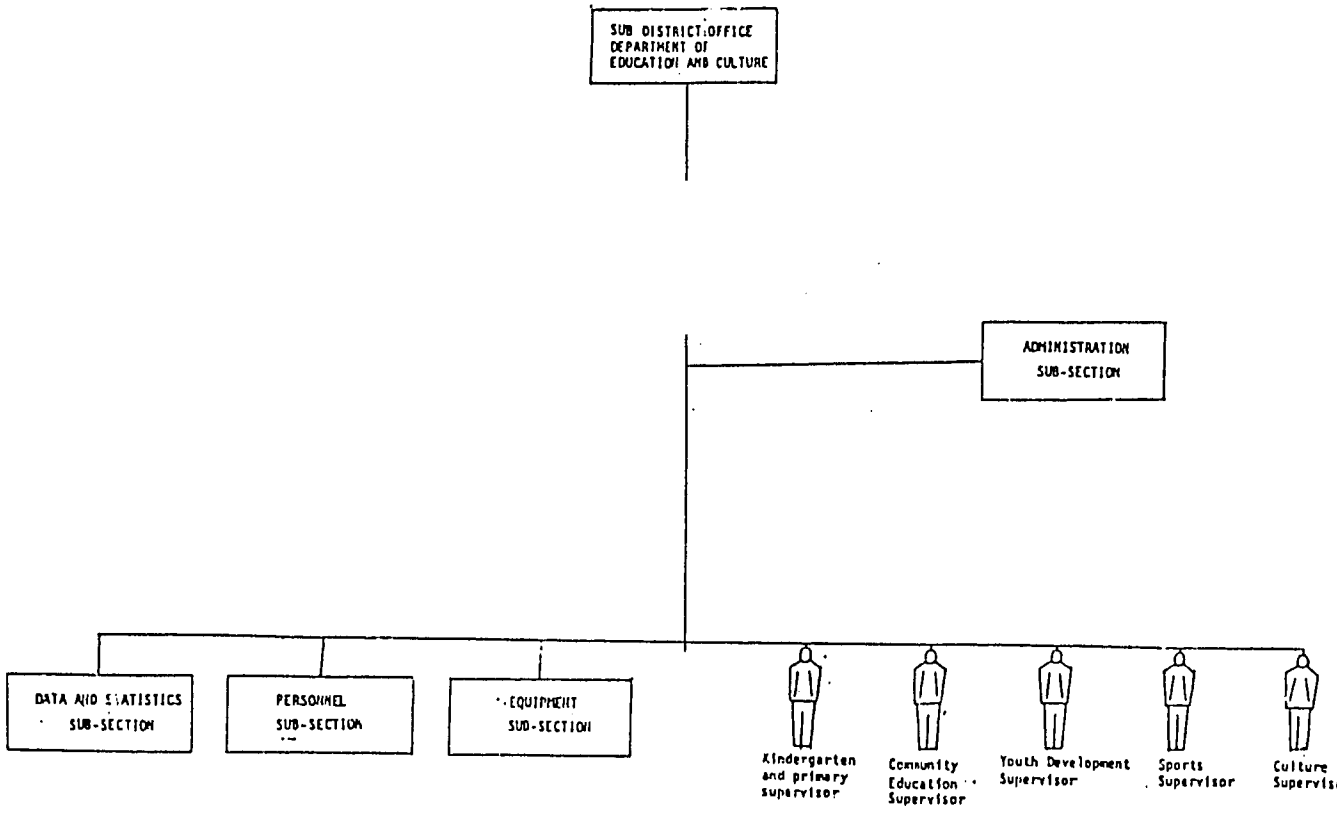
APPENDIX C

ORGANIZATIONAL STRUCTURE OF MOEC DISTRICT OFFICE



APPENDIX D

ORGANIZATIONAL STRUCTURE OF MOEC SUB-DISTRICT OFFICE



APPENDIX E

IMPACT TABLES: A TOOL FOR PLANNERS

I. DESCRIPTION

A. The Impact Table Technique

The impact table technique was developed as a support tool for education planners. It is based upon the LOTUS 1-2-3 microcomputer spreadsheet program, but other spreadsheet programs (Visicalc, Supercalc, etc.) could also be used. The technique involves designing interrelated statistical tables which can be manipulated to allow planners to adjust funding or resource allocation options and project their impact upon various components of a system. In this example, data on the primary education sytem of North Yemen is used. A wide array of systems and their impacts could be examined. The range is only limited by the questions of concern, the imagination of the planner and the type of data available.

As with all such projections the most critical limitation is the availability and quality of the existing data. Recently, however, a series of education sector reviews have been prepared in several countries which aim to gather a current and comprehensive set of statistical information. These education and human resources sector assessmets have been produced by the IEES Project of USAID. The Yemen sector assessment was arbitrarily chosen for use in this example. Sector assessments provide a very useful basis for this technique as they present in a single document much of the available statistical information on a specific sub-sector. In addition, the data has been

examined carefully for accuracy and consistency with other data sets. Consistency in the data is extremely important as impact tables are designed to specify the interrelationships between components of a system under consideration. Although just about any data set can be drawn upon, control is lost when the data does not address the same time period, population and/or geographical region.

B. Potential Uses for Impact Tables

The primary users for whom the impact table technique is designed are: planners and decision makers who wish to examine the effects of alternative resource allocations, information analysts or managers who are interested in presenting data in a useful fashion, and/or technical advisors who want a tool either for communicating information and findings and/or a method of enhancing collaboration. Some of the potential uses of impact tables are:

Options Assessment and Forcasting.

Impact tables can be designed to incorporate a large number of points within the tables where decisions can be made on how resources could be allocated. This allows the planner to easily experiment with a variety of allocation levels and combinations of allocations and examine their impact on outcomes of interests. The various options can also be presented more easily as laborious recalculations are not required. More accurate forecasting is also possible as the tables can be quickly modified based upon more timely or accurate information as it becomes available.

Systematizing Planning and Prioritizing Needs.

Impact tables focus upon the interrelationships between components of a system. To be done thoroughly they require care in specifying the critical components affecting outcomes and a definition of the interfaces between components. This can lead to more systematized planning by forcing the planner to examine the relationships between components and focus upon the critical points where poor performance of an individual component may have a negative effect on overall outcomes. Areas in greatest need of additional resources or of careful monitoring can also be more readily identified.

Institutionalizing Microcomputer Capacity

Impact tbles have the potential of presenting information in a clear and easily modifiable fashion. Extensive training is not required to master the technique and once mastered the technique can be applied to a variety of questions of interest to planners. Because of this potential for motivation can be used as a tool to improve collaboration between technical advisors and their host country counterparts and help foster institutionalization of microcomputer capacity.

A drawback of much of the information that has been produced in project development work or sector assessment is its static nature. Technical advisors or other "experts" are brought in and necessarily must produce a study based upon information available at one point in time. In an environment which is constantly changing, such studies are of limited value. Impact tables hold the potential for a more dynamic presentation of such information. They can be modified at any time and the consequences of the revised information immediately determined.

This allows the host country planner or policy maker to become the focus of the information management effort as long as he/she is the person with access to the most current information. The outside technical advisor can introduce the impact table technique as a planning tool and focus training upon ways in which the host country planner can use the technique to improve his/her work.

Evaluation and Program Monitoring

Impact tables can provide a convenient mechanism for monitoring and evaluation by providing a basis for assessing progress. They can be designed by planners at a macro or micro system level, measuring factors ranging form the effects of five year plan budget allocations on female enrollment in public schools, to the effects of adding an additional trainer to a teacher training institution. Again the emphasis on interrelationships between components can provide a valuable dimension for an evaluation as it can highlight some of the basic assumptions the underlie a project or activity. (Morris Solomon of the USDA has taken this program evaluation potential further and developed a microcomputer approach to program design and evaluation using Lotus 1-2-3).

C. The Operating System

The impact tables demonstrated here use Lotus 1-2-3. Lotus 1-2-3 was chosen because it is very user friendly and because it is extensively menu driven. As a result once it is learned, constant reference to backup documentation is not required. It is extremely

flexible and can be used for data base management, and graphics, as well as spreadsheet analysis. The minimum memory requirement for Lotus 1-2-3 is 192 KB. It can, therefore, run on relatively inexpensive microcomputers. The examples used here were prepared on an IBM PC, but 1-2-3 is also available for use on any microcomputer with an MS-DOS operating system or on Apple microcomputers with CP/M-80.

A variety of spreadsheet programs are suitable for the impact table technique and Lotus 1-2-3 should not be considered as the only option. Newer integrated spreadsheet and wordprocessing programs, such as Symphony and Framework, could also be used.

II. GENERAL TECHNIQUES FOR DEVELOPING IMPACT TABLES

A. Prioritizing Information Needs

When the technique is first introduced either for actual planning or for training purposes, the basic and most difficult steps in developing the tables is defining the questions to be addressed and deciding upon what data is required to address the questions of concern. The exercise becomes irrelevant without a clear conception of what information is required and how this information relates to the decision-making, planning or policy questions it is to serve. If the technique is being used for microcomputer training purposes, questions should be identified that are relevant and useful to the trainee in his work. This will better provide motivation for the person to apply the technique after training.

Because it is easy to learn and use individually the technique also has the advantage of privacy. All information depending upon how it is

used, can have consequences that go well beyond those originally intended. As long as the planner or decision maker has access to a microcomputer, the tables can be controlled and manipulated in private. The planner can experiment with alternative assumptions and/or projections and choose what is to be circulated to wider audiences.

B. Specifying Output Format - The Impact Tables

After we define the questions of concern, an overview of data available must be obtained. The questions of concern might be modified after a review of available information. The final form of the impact tables may result from a series of reviews and redefinitions. The availability of data will likely determine the way in which the question of concern will be answered - the output format.

The process used for specifying the desired output can be more important than the output itself. The process forces the planner to examine the quality of the data its relevance and how the information relates to various components of a system. If a training situation is involved this stage can lay the basis for more productive future planning based upon a clearer understand of these relationships.

In the following examples two output tables are depicted. They are availability of school buildings (Table 1) and students served (Table 2). Students served is the most important output table to be examined in this example as it presents the information addressing the question of concern, i.e., system capacity. Various output tables are combined to form the overall impact table. An impact table, therefore, is the result of combining a series of output tables to address the question of concern. This example concerns a projection of the students

Table 1

FACILITIES AVAILABILITY (-shortfall)

REGION	MALE Sup-Dem	FEMALE Sup-Dem	COEDUC Sup-Dem	ALL SCHOOLS Sup-Dem
Sana'a	44	-26	-222	-205
Taiz	-311	-32	-392	-734
Hodeidah	93	9	-298	-196
Ibb	-108	-11	-217	-336
Dhamar	131	-3	-140	-11
Hajjah	173	-1	-70	102
Beidah	41	0	-58	-18
Sa'eda	106	3	-38	72
Mahweet	32	-2	18	49
Ma'rib	59	0	-9	49
Al-Jawf	18	-2	10	27
TOTAL	279	-64	-1416	-1202

Table 2

STUDENTS SERVED (-shortfall)

YEAR	Stud/Teachers 45	Stud/Funds 1222
1982/83		
1983/84		1205.615
1984/85		-92690.6
1985/86	-701634.815	-143325.
1986/87	-718164.792	-192629.
1987/88	-714992.623	-245741.
1988/89	-699057.569	-303274.
1989/90	-666492.464	-366024.
1990/91	-611089.179	-434056.
1991/92	-532328.872	-508022.
1992/93	-442232.813	-588267.
1993/94	-332200.852	-675392.
1994/95	-229804.065	-769698.

that can be served through 1994/95, given a number of assumptions about enrollment and progression rates, teachers trained, government revenues and allocations.

The regional listing of facilities (school buildings) and students that could potentially be served within these facilities is also presented as background information, but is not related to the 10-year impact projection because the level of analysis is different. This regional information does not include projections of schools to be built over the 10-year span addressed by the other data.

A variety of formats could be used to address the same question. In turn, a large number of questions can be addressed by the same set of impact tables. In the example, questions of appropriate government revenue allocations, demands on teacher training institutes, need for expatriate teaching staff, male/female vs. coeducational schools could all be explored with the same set of tables.

Other key issues in determining impact table format are the availability, timeliness and accuracy of data, appropriate interrelationships between tables and consistency in the level of analysis. These topics are discussed below.

C. Review of Available Data

As mentioned earlier, the impact table technique can be used to address macro level questions, such as the effects of alternative levels of government funding or student flow through the secondary education system given various projections of dropouts, retention and graduation rates at the primary level. It can also be used for micro level purposes such as program evaluation, budgeting, or deciding upon

resource allocations in a single institution. The only limitation is the availability and accuracy of the data for the questions being addressed.

The technique is designed to use "compatible" quantitative data. (With some imagination, it might be adapted for use with quantified, qualitative data.) "Compatible" quantitative data simply means that the data should be at the same level of analysis and address the same time frame, population and region(s) of interest if tables are designed to interrelate. It is quite possible, and desirable, to use data from lower levels of analysis to act as input for higher level tables, as it can improve accuracy, but for the impact tables the same level of analysis is, usually required. For example, departmental government budgetary expenditures by line item or activity could feed into upper level government expenditure tables. If, on the other hand, retention rates in private schools in 1982 in a specific province were used to project 10-year student flows in public schools nationwide such data would not be compatible and the results nonsensical.

All potentially useful existing data sets including estimates or projections should be identified and examined for relevance to the question being addressed before the impact table worksheet is designed. This data should be accurate, but accuracy is not essential when the tables are first designed if more accurate data is expected later. When the interrelationships between the tables are specified properly and appropriate "control and decision points" (to be discussed later) are built into the tables, these points allow the data to be easily revised when more accurate information is available.

D. Identification of Control and Decision Points

It is suggested that the available data be arranged in terms of supply and demand tables which, when interrelated will provide the basis for the impact tables. Other arrangements can be specified. The supply/demand format is useful because it establishes a simple "demand less supply" basis for output tables. The tables in the following example show teacher demand (Table 3) and teacher supply (Table 4) through 1995. These tables feed into the final impact table - students served.

A "base table" (Table 5) - primary education enrollment projections - is presented in this example. The demand tables - teacher demand, government expenditures per student and facilities demand by region (Tables 3, 6 and 7) - are based upon the yearly enrollment projections of the base table. A base table is often useful, but not essential.

The output of the base table and supply tables can be modified through "control points" which provide input into the demand tables. "Control points" are the points at which the base and supply tables can be updated. These points can reflect "real data", but can also be used to examine the consequences of alternative resource allocations. Because "real data" can change (and in the process we hope become more accurate) as many control points as possible should be established for rapid manipulation of the tables.

The supply tables are Tables 4 and 8. Examples of their respective control points are 4A and 8A and 8B, teachers produced from teacher

Table 3

TEACHER DEMAND AT 45 to 1 (45 — 3A)
13382.26
14960.42
17345.53
18776.88
20186.21
21682.72
23287.61
25010.94
26861.75
28849.53
30984.39
33277.24
35739.75

Table 4

TEACHER SUPPLY PROJECTIONS

	NEW YEMENI TEACHERS				
	FROM 5-YR TTI	FROM 3-YR TTI	TOTAL NEW TEACHERS (4A)	OLD TEACHERS	TOTAL TEACHERS
1982/83			0	2016	
1983/84	160	290	450	2016	
1984/85		353	353	2466	
1985/86		366	366	2819	3185
1986/87	560	482	1042	3185	4227
1987/88	907	660	1567	4227	5794
1988/89	1090	869	1959	5794	7753
1989/90	1310	1137	2447	7753	10200
1990/91	1573	1509	3082	10200	13282
1991/92	1912	1826	3738	13282	17020
1992/93	1912	2225	4137	17020	21157
1993/94	1912	2225	4137	21758	25895
1994/95	1912	2225	4137	26496	30633

Table 5

PRIMARY EDUCATION ENROLLMENT PROJECTIONS
(7.4% Growth in New Grade 1 Enrollments)

	(1.074)						
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	TOTAL
PROG.RATE	-	0.71	0.797	0.723	0.774	0.813	(5B-5F)
REP.RATE	0.082	0.061	0.12	0.074	0.04	0.054	(5G-5Z)
YEAR (5A)							
1982/83	178075	144445	115428	79112	50613	34529	602202
1983/84	196338	142262	124335	99262	65175	45847	673219
1984/85	210867.012	158393.5	141159.8	109403.9	87285.67	73438.99	780549.0
1985/86	226471.1708	170456.5	152793.0	118565.2	95260.94	81412.85	844959.8
1986/87	243230.0375	183091.1	164258.8	127532.9	102520.9	87745.82	908379.7
1987/88	261229.0603	196641.1	176434.0	136999.2	110138.2	94280.70	975722.6
1988/89	280560.0107	211192.7	189492.6	147141.1	118292.7	101263.1	1047942.
1989/90	301321.4515	226820.9	203515.4	158030.1	127047.0	108757.4	1125492.
1990/91	323619.2389	243605.7	218575.6	169724.4	136448.5	116805.5	1208779.
1991/92	347567.0626	261632.5	234750.2	182284.0	146545.7	125449.2	1298228.
1992/93	373287.0253	280993.3	252121.7	195773.0	157390.1	134732.4	1394297.
1993/94	400910.2651	301786.8	270778.7	210260.2	169037.0	144702.6	1497475.
1994/95	430577.6248	324119.1	290816.3	225819.5	181545.7	155410.6	1608289.

Table 6

GOVERNMENT EXPENDITURES AT YR 1,222 PER STUDENT (1222) — 6A

YEAR	
1982/83	735890844
1983/84	822673618
1984/85	953830974.1
1985/86	1032540893.
1986/87	1110040106.
1987/88	1192333046.
1988/89	1200505019.
1989/90	1375351791.
1990/91	1477128157.
1991/92	1586435682.
1992/93	1703831927.
1993/94	1829915491.
1994/95	1965329237.

Table 7

FACILITIES DEMAND BY REGION (through 1994/95)

	Male @ %	SCHOOLS @ %	FEMALE @%	SCHOOLS @ %	COEDUCATIONAL	
7A →	300	0.855	0.382 ← 7B	300	0.145	0.139 ← 7C	300	SCHOOLS @	MALE
	STUDENTS	ALL SCHOOLS		STUDENTS	ALL SCHOOLS		PERCENT	0.618
Sana'a	343221.7	437.0		67651.87	31.3		901.2	
Taiz	308294.5	392.6		79078.76	36.6		862.0	FEMALE 0.861
Hodeidah	134346.0	171.1		26468.41	12.3		352.7	
Ibb	236239.9	300.8		32554.98	15.1		580.1	
Dhamar	129670.7	165.1		9957.721	4.6		295.7	
Hajjah	80580.10	102.6		4850.599	2.2		179.9	
Beidah	45927.91	58.5		6739.535	3.1		114.0	
Sa'ada	32727.07	41.7		1305.930	0.6		71.2	
Mahweet	43590.26	55.5		3311.467	1.5		99.3	
Ma'rib	13613.36	17.3		722.9259	0.3		30.1	
Al-Jawf	7012.944	8.9		3300.209	1.5		23.9	
TOTAL	1375224.	1751.1		235942.4	109.3		3510.1	

Table 8

PROJECTED GOVERNMENT FISCAL CAPACITY
EDUCATION EXPENDITURES
PRIMARY EDUCATION

YEAR	Est. GDP* (Y Rials)	Government Expenditures	Percent Gov't Exp. for Educ.	Gov't Exp. for Educ.	Percent Gov't Exp. Prim. Educ.	Gov't Exp. for Primary Education
1982/83	14126000000	5181000000	~~0.199~~ 8A	1031019000	8B	
1983/84	14720000000	5924000000	0.185	1095940000	0.752	824146880
1984/85	15088000000	6042000000	~~0.185~~	1117770000	~~0.752~~	840563040
1985/86	15465000000	6163000000	0.185	1140155000	0.752	857396560
1986/87	15852000000	6287000000	0.185	1163095000	0.752	874647440
1987/88	16248000000	6412000000	0.185	1186220000	0.752	892037440
1988/89	16654000000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	17087000000	6671000000	0.185	1234135000	0.752	928069520
1990/91	18361000000	6805000000	0.185	1258925000	0.752	946711600
1991/92	19279000000	6941000000	0.185	1284085000	0.752	965631920
1992/93	20243000000	7080000000	0.185	1309800000	0.752	984969600
1993/94	21255000000	7221000000	0.185	1335885000	0.752	1004585520
1994/95	22318000000	7366000000	0.185	1362710000	0.752	1024757920

*Assumes 2.5% annual real growth to 1988 and 5.0% thereafter

teacher training institutes in 1983/84 (8A), percent government expenditures for education (8A) and percent government expenditures for primary education (8B). It should be noted that the Lotus 1-2-3 copy function allows for any change in one point to result in the same change to several points. This is what happens at control points 9A and 9B where changing a single formula will result in a like change to each formula in the column.

The control points on the base table are 5A (growth in grade one enrollment), 5B, C, D, E, F (progression rates at various grade levels) and 5G, H, I, J, K L (repetition rates at various grade levels).

The demand tables can be manipulated through the "decision points". They provide an avenue for planners to experiment with of alternative scenarios. In Tables 3, 6 and 7 this decision points are labled 3A, 6A, and 7A, B, C - respectively. These points are teacher to student ratio, unit costs (per student costs), students per school, percent all male students and percent female students. A single change in any of these decision points can "ripple through" the whole set of tables if the tables are properly interrelated. It is important to establish appropriate decision points and correctly base all calculations in a table upon them. Usually it is desirable to set as many decision points as possible to allow for a maximum amount of flexibility.

E. Worksheet Mapping

Prior to beginning the actual data entry on the spreadsheet, it is helpful to sketch out the planned worksheet on paper. Any subtables which will feed information into higher level tables should be identified. The relationships between the tables which will appear on

the master worksheet should be specified at this stage as well. Once a clear idea is obtained of how the tables will interrelate data and formula entry onto the worksheet can begin. Because Lotus 1-2-3 has very flexible move and copy commands the worksheets can be easily modified if an error is made an entry. It is useful and less time consuming, however, to try and specify the layout in advance. This also helps to avoid formula reference errors that may result when tables are moved. When satisfactory formulas are prepared the protect function of Lotus 1-2-3 should be used.

As a guide, it is also helpful to present a key to the tables at the beginning of the worksheet for reference. Only a portion of the worksheet is visible at a time and the key allows quick movement to the area of interest. Figure 1 is an example of such a key. The whole worksheet is presented in Figure 2.

Figure 1

WORKSHEET MAP - PRIMARY

DEMAND TABLES

A22 to I38 - Primary Education Enrollments
L20 to L38 - Teacher Demand
A42 to E60 - Required Government Expenditures
A64 to L89 - Facilities Demand by Region

SUPPLY TABLES

N20 to V38 - Teacher Supply Projections
N42 to X62 - Government Expenditure Projections
N64 to T89 - School Distribution by Governorate (1984)

IMPACT TABLES

Z12 to Z38 - Teacher Availability (-shortfall)
Z44 to AB62 - Government Revenue Availability (-shortfall)
Z64 to AE89 - Facilities Availability (-shortfall)
Z92 to AE108 - Students Served (shortfall)

DEMAND TABLES
A22 to I38 - Primary Education Enrollments
L30 to L38 - Teacher Demand
A42 to E60 - Required Government Expenditures
A64 to L99 - Facilities Demand by Region
SUPPLY TABLES
N20 to Y38 - Teacher Supply Projections
N42 to X62 - Government Expenditure Projections
N64 to Y99 - School Distribution by Governorate (1984)
IMPACT TABLES
Z12 to Z38 - Teacher Availability (-shortfall)
Z44 to AA62 - Government Revenue Availability (-shortfall)
Z64 to AC99 - Facilities Availability (-shortfall)
Z92 to AE100 - Students Served (shortfall)

Figure 2

SUPPLY TABLES
N20 to Y38 - Teacher Supply Projections
N42 to X62 - Government Expenditure Projections
N64 to Y99 - School Distribution by Governorate (1984)

IMPACT TABLES
Z12 to Z38 - Teacher Availability (- shortfall)
Z44 to AA62 - Government Revenue Availability (- s
Z64 to AC99 - Facilities Availability (- shortfall
Z92 to AE100 - Students Served (- shortfall)

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(7.4% Growth in New Grade 1 Enrollments)

1.074	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	TOTAL
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REP.RATE	0.092	0.041	0.12	0.074	0.04	0.054	
YEAR							
1982/83	170075	144445	115498	79112	50613	34579	607202
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1984/85	210067.012	150293.5	141159.0	109403.9	87285.67	73430.99	780549.0
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1992/93	373287.0253	280997.5	252121.7	195775.0	157390.1	134732.4	1394297.
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1994/95	430577.6240	324119.1	[illegible]416.5	225817.5	181545.7	155410.6	1608299.

TEACHER DEMAND AT 45 to 1

45.
13382.36
14960.42
17345.53
18776.88
20186.21
21682.72
23287.61
25010.94
26861.75
28849.33
30984.39
33277.20
35739.75

TEACHER SUPPLY PROJECTIONS

	NEW TRAINED TEACHERS FROM 9-TO TTI	FROM 3-YR TTI	TOTAL NEW TEACHERS	OLD TEACHERS	TOTAL TEACHERS
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1987/88	907	660	1567	4227	5794
1988/89	1090	869	1959	5794	7753
1989/90	1310	1137	2447	7753	10200
1990/91	1573	1509	3082	10200	13282
1991/92	1712	1876	3738	13282	17020
1992/93	1912	2225	4137	17020	21157
1993/94	1912	2225	4137	21730	25095
1994/95	1912	2225	4137	26496	30633

TEACHER AVAILABILITY

	SUPPLY LESS DEMAND
1982/83	
1983/84	
1984/85	
1985/86	-15391.0047
1986/87	-13959.2176
1987/88	-15000.7269
1988/89	-13534.6126
1989/90	-14810.9436
1990/91	-13579.7595
1991/92	-11829.5305
1992/93	-9827.29503
1993/94	-7382.24113
1994/95	-5106.75703

GOVERNMENT EXPENDITURES AT YR 1,222 PER STUDENT

YEAR	1222
1982/83	735890444
1983/84	877673618
1984/85	953838974.1
1985/86	1032540893.
1986/87	1110046106.
1987/88	1192333046.
1988/89	[illegible]
1989/90	1375351208.
1990/91	1477128157.
1991/92	1586435400.
1992/93	1703831907.
1993/94	1829915490.
1994/95	1965329737.

PROJECTED GOVERNMENT FISCAL CAPACITY
EDUCATION EXPENDITURES
PRIMARY EDUCATION

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1983/84	14771000000	5924000000	0.185	1095940000	0.752	824146000
1984/85	15000000000	6042000000	0.185	1117770000	0.752	[illegible]
1985/86	15445000000	6163000000	0.185	1140155000	0.752	[illegible]
1986/87	15837000000	[illegible]	0.185	1163975000	0.752	[illegible]
1987/88	16240000000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1988/89	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1989/90	[illegible]	6471000000	0.185	[illegible]	0.752	[illegible]
1990/91	18361000000	6863000000	0.185	[illegible]	0.752	[illegible]
1991/92	19277000000	6961000000	0.185	[illegible]	0.752	[illegible]
1992/93	20243000000	[illegible]	0.185	[illegible]	0.752	[illegible]
1993/94	21255000000	7271000000	0.185	1335405000	0.752	[illegible]
1994/95	22318000000	7344000000	0.185	1342710000	0.752	[illegible]

*Assumes 2.5% annual real growth to 1988 and 5.0% thereafter

GOVERNMENT REVENUE AVAILABILITY (-shortfall)

YEAR	Supply Less Demand
1982/83	
1983/84	1477262
1984/85	-113267934.
1985/86	-175144333.
1986/87	-233799446.
1987/88	-308295606.
1988/89	[illegible]
1989/90	-417797771.
1990/91	-530416557.
1991/92	[illegible]
1992/93	-750862327.
1993/94	-825329771.
1994/95	[illegible]

FACILITIES DEMAND BY REGION (through 1994/95)

	Male 6 % SCHOOLS 0 % (300 0.853 1.302) STUDENTS	ALL SCHOOLS	FEMALE 6 % SCHOOLS 0 % (300 0.143 0.179) STUDENTS	ALL SCHOOLS	COEDUCATIONAL 300 SCHOOLS 0 PERCENT	MALE 0.610 / FEMALE 0.041
Sana'a	343271.7	437.8	67631.07	31.3	901.2	
Taiz	300294.3	392.6	79075.76	36.4	862.0	
Hodeidah	134344.0	171.1	26440.41	12.3	332.7	
Ibb	73279.9	300.8	32534.90	15.1	300.1	
Dhamar	179470.7	142.1	9957.721	4.6	295.7	
Hajjah	80580.10	108.6	4850.399	2.2	179.9	
Beidah	43917.91	30.5	6[illegible]9.535	3.1	114.0	
Sa'ada	32777.07	41.7	1385.530	0.6	71.2	
Mahweet	41390.36	55.5	3311.447	1.5	97.3	
Ma'rib	13612.36	17.3	772.9759	0.3	30.1	
Al-Jawf	7012.944	8.9	3360.209	1.5	77.9	
TOTAL	1375214.	1754.1	233942.4	109.3	3310.1	

SCHOOL DISTRIBUTION BY GOVERNORATE (1984)

REGION	NUMBER OF SCHOOLS MALE	FEMALE	COEDUCATIONAL
Sana'a	401	5	679
Taiz	92	5	470
Hodeidah	364	21	55
Ibb	193	4	363
Dhamar	196	2	156
Hajjah	276	1	110
Beidah	99	3	56
Sa'ada	140	4	33
Mahweet	30	0	117
Ma'rib	76	0	11
Al-Jawf	3	0	34
TOTAL	2031	45	2094

FACILITIES AVAILABILITY (-shortfall)

REGION	MALE Sup-Dem	FEMALE Sup-Dem	COEDUC Sup-Dem	ALL SCHOOLS Sup-Dem
Sana'a	44	-26	-222	-[illegible]
Taiz	-311	-32	-392	-734
Hodeidah	93	9	-[illegible]	-196
Ibb	-108	-11	-217	-336
Dhamar	131	-3	-140	-11
Hajjah	173	-1	-70	[illegible]
Beidah	41	0	-[illegible]	-[illegible]
Sa'ada	106	3	-38	72
Mahweet	22	-2	20	40
Ma'rib	39	0	-9	49
Al-Jawf	18	-2	10	27
TOTAL	279	-64	-1616	-1398

STUDENTS SERVED (-shortfall)

YEAR	Stud/Teachers 45	Stud/Funds 1222
1982/83		
1983/84		1205.615
1984/85		-97690.6
1985/86	-701634.015	-143325.
1986/87	-710144.772	-177629.
1987/88	-714997.623	-215741.
1988/89	-679657.569	-303274.
1989/90	-666492.444	-344024.
1990/91	-611089.179	-434556.
1991/92	-532770.077	-500072.
1992/93	-442232.013	-580767.
1993/94	-332200.052	-675392.
1994/95	-229804.062	-769670.

APPENDIX F

PRIMARY SCHOOL STATISTICS
PROVINCE OF TIMOR TIMUR (1984/85)

Kabupaten/Kodya	Sekolah Dasar				Guru				Jumlah Kelas	Murid		Rata-rata
	Negeri Biasa	Negeri Inpres	Swasta	Jumlah	Negeri Biasa	Negeri Inpres	Swasta	Jumlah		P	L	
Dili	16	17	6	39	229	303	21	553	293	5.678	7.949	13.627
Baucau	8	10	31	49	124	164	52	340	361	3.157	4.419	7.576
Lautem	11	13	3	27	59	78	24	161	183	2.362	3.307	5.669
Viqueque	13	14	5	32	95	125	-	220	211	4.413	6.179	10.592
Manatuto	8	8	3	19	59	76	17	152	139	1.466	2.053	3.519
Aileu	6	7	3	16	20	24	14	58	87	826	1.157	1.983
Ainaro	14	17	5	36	72	96	35	203	186	2.832	3.965	6.797
Manufahi/Same	12	13	5	30	22	26	17	65	155	2.498	3.498	5.996
Covalima	11	12	8	31	58	78	4	140	159	1.235	1.729	2.964
Bobonaro	21	23	6	50	117	156	33	306	331	3.194	4.472	7.666
Ermera	11	12	9	32	65	83	12	160	129	3.279	4.590	7.869
Liquica	11	13	3	27	53	69	7	129	134	1.151	1.611	2.762
Ambeno	17	19	4	40	75	97	9	181	194	1.165	1.632	2.797
Jumlah	159	170	91	428	1.048	1.375	245	2.668	2.562	33.256	46.561	79.817

APPENDIX G

PRIMARY SCHOOL STATISTICS
PROVINCE OF KALIMANTAN SELATAN (1984/85)

/Kodya	Sekolah Dasar				Guru				Jumlah Kelas	Murid		Jumlah
	Negeri Biasa	Negeri Inpres	Swasta	Jumlah	Negeri Biasa	Negeri Inpres	Swasta	Jumlah		P	L	
[illegible]	161	235	1	397	836	956	-	1.792	2.323	28.091	31.344	[illegible]
Laut	71	113	3	187	382	297	2	681	1.006	13.270	14.504	27.772
to Tuala	65	183	-	248	365	577	-	942	1.209	16.414	18.401	34.815
a i n	61	106	-	167	387	392	-	779	[illegible]	10.382	11.203	21.585
. S.Selatan	110	174	-	272	756	558	-	1.314	1.501	14.121	15.120	[illegible]
. Sungai Tengah	102	108	1	201	1.095	207	-	1.302	1.624	17.299	18.328	35.627
u Sungai Utara	120	240	5	365	606	604	25	1.235	1.750	16.757	16.332	33.109
along	35	110	1	204	401	380	-	861	1.075	10.016	11.772	21.788
a Baru	63	235	3	301	408	1.088	2	1.498	1.716	21.540	25.296	46.834
dya Banjarmasin	102	207	30	339	642	1.294	99	1.035	2.280	32.333	35.708	[illegible]
u m l a h	1.[illegible]	1.71[illegible]	44	2.771	6.940	6.135	129	12.311	15.[illegible]	201.741	[illegible]	[illegible]

APPENDIX H

PRIMARY SCHOOL STATISTICS
PROVINCE OF NUSA TENGGARA TIMUR (1984/85)

paten/Kodya	Sekolah Dasar				Guru				Jumlah Kelas	Murid		Jumlah
	Negeri Biasa	Negeri Inpres	Swasta	Jumlah	Negeri Biasa	Negeri Inpres	Swasta	Jumlah		P	L	
p a n g	125	180	141	446	945	1.147	885	2.977	2.753	37.065	40.468	77.533
r Tengah Selatan	102	146	141	389	738	813	756	2.307	2.351	30.856	33.710	64.966
r Tengah Utara	-	60	112	172	-	350	649	999	1.030	14.251	14.919	29.180
l u	2	79	139	220	16	456	946	1.418	1.315	18.044	19.048	37.092
o r	39	46	85	170	334	292	646	1.272	1.001	12.243	13.004	25.247
es Timur	38	93	160	291	321	600	1.144	2.065	1.841	24.031	25.658	49.689
k k a	27	106	142	275	182	509	986	1.676	1.505	20.417	23.325	43.742
d e	31	105	156	292	232	632	966	1.830	1.499	19.113	21.634	40.747
a d a	24	94	125	243	188	540	908	1.636	1.321	18.572	20.098	38.670
gerai	25	244	265	534	141	933	1.326	2.400	2.762	45.329	49.537	94.966
a Barat	61	97	151	309	454	341	937	1.732	1.743	23.401	26.862	50.263
a Timur	49	65	65	179	217	266	335	818	1.044	11.698	13.257	24.955
m l a h	523	1.315	1.682	3.520	3.767	6.879	10.485	21.130	20.165	275.000	302/320	577.020

APPENDIX I

POPULATION 10 AND OVER THAT WORKED THE PREVIOUS WEEK BY HIGHEST LEVEL OF EDUCATION COMPLETED AND AREA OF WORK

Area of Work	Highest Level of Education Completed						
	1	2	3	4	5	6	7
Primary Sector	63,3	49,5	24,1	9,3	5,0	4,8	69,3
Agriculture	62,6	48,8	23,0	8,3	3,3	3,2	68,7
Mining	0,7	0,7	1,1	1,0	1,7	1,6	0,6
Secondary Sector	12,4	14,9	15,7	12,1	9,1	8,6	9,7
Industry	8,9	10,4	11,5	8,9	6,9	5,6	8,0
Construction	3,5	4,5	4,2	3,2	2,2	3,0	1,7
Tertiary Sector	24,3	35,6	60,2	78,6	85,9	86,6	21,0
Transportation/Communicatiuns	2,5	4,5	7,1	4,3	4,7	1,3	1,0
Others	21,8	31,1	53,1	74,3	81,2	85,3	20,0
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Catatan:
1. Primary school, but not completed
2. Completed primary school
3. Completed junior high
4. Completed senior high
5. Completed academy
6. Completed university
7. Never been to school

ANNEX A
LIST OF INTERVIEWEES

Ali, Achmad, Director Primary Education Division, Dikdasmen, MOEC
Bachtiar, Harsya, Chairman of Balitbang Dikbud, MOEC
Boediono, Head, Pusinfot, Balitbang Dikbud, MOEC
Bonner, Cameron, Education Human Resources Development Officer, USAID
Calvano, Mike, Consultant, Pustikom, Balibang Dikbud, MOEC
Djazuli, Achmad, Head, Planning Division, Dikdasmen, MOEC
Easton, Staff Pusat Pengujian, Balitbang Dikbud, MOEC
Ely, Don, Consultant, Pustikom, Balitbang Dikbud, MOEC
Fauzi, KaKandep P & K, Cianjur, MOEC
Fernandez, Hermano, Consultant, Pusat Pengujian, Balitbang Dikbud, MOEC
Guyub, Haryanto, Staff, Dikdasmen, MOEC
Harahap, Hasrun, KaSeksi Kurikulum, Madrasah Ibtidaiyah, Dept. Agama
Hardjakusumah, Giwangan, Kepala Bagian Perencanaan, Inspectorate General, MOEC
Hawid, Abdul, Staff Kurikulum, Departemen Agama
Jiyono, Staff, Pusat Penelitian, Balitbang Dikbud, MOEC
Johara, Kasubdit Taman Kanak-Kanak, Dikdasmen, MOEC
Marsadji, G.L., Kaseksi P2SD/PPD, Dikdasmen, MOEC
Masri, Staff Perlengkapan, Balitbang Dikbud, MOEC
Moegiadi, Sekretaris, Balitbang Dikbud, MOEC
Morfit, Michael, Education Officer, USAID/EHR
Mudjiman, Haris, Deputy Director, Puslitbang Jari, UNS, Surakarta
Mudjito, Staff P2SD/PPD, Dikdasmen, MOEC
Napitupulu, Washington, Director General, Nonformal Education, Sports and Youth, MOEC
Rahardjo, Staff Pustikom, Balitbang Dikbud, MOEC
Ranuwihardjo, Sukadji, Director General, Higher Education, MOEC
Ridwan, M.Y., Kasubdit, P.U. Wajar, MOEC
Paimuri, H., Kasubdik Pembinaan Madrasah Ibtidaiyah, Departemen Agama
Pongtuluran, Aris, Head, Planning Bureau, MOEC
Sahib, Sutopo, Kaseksi Pegawai, Dikdasmen, MOEC
Setijadi, Rector, Open University, MOEC
Simandjuntak, W., Staff, Puslit, Balitbang Dikbud, MOEC
Soenardi, Staff, Pusinfot, Balitbang Dikbud, MOEC
Sukarna, Kasi Dikdas, Cianjur, MOEC
Sutisna, Kepala SD Cimanohayu, MOEC
Suwarso, H.S. Sekretaris, Inspektorate Jendral, MOEC
Tjokroatmodjo, Sukotjo, Inspektor General, Inspectorate General, MOEC
Thoyar, Husni, Kasubdik Pembinaan Madrasah Isanawiyah, Dept. Agama
Tyoyib, I.M., Kasubdik, Peminaan Madrasah Atiyah, Dept. Agama
Udaya, Kep. Proyek Buku Terpadu, Dikdasmen, MOEC
Walinono, Hasan, Director General, Primary and Secondary Education, MOEC
Widodo, Martini, Senior Staff, Puslit, Balitbang Dikbud, MOEC
Yasin, Anwar, Sekretaris Dikdasmen, MOEC
Zenick, Manuel, World Bank Representative

ANNEX B
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ANNEX C
TERMS AND ACRONYMS

	ENGLISH	INDONESIAN
ADB	Asian Development Bank	Bank Pembangunan Asia
AKTA I	Tertiary Level Teacher Training Certification: Primary	Program AKTA I
AKTA II	" " Jr. Sec.	Program AKTA II
AKTA III	" " Sr. Sec.	" AKTA III
AKTA IV	" " University	" AKTA IV
AKTA V	" " University	" AKTA V
APBN	Gov.t Expenditure & Revenue Budget	Anggaran Belanja Negara
APDB I & II	Local Gov.'t Budgets	Anggaran Pembangunan Daerah I & II
BAKN	National Personnel Office	Badan Administrasi Kepegawaian Negeri
Balitbang Dikbud	Office of Education and Culture Research and Development	Badan Penelitian dan Pengembangan Pendidikan & Kebudayaan
Bappeda	Regional Planning Office	Badan Perencanaan Pembangunan Daerah
Bappenas	National Development Planning Board	Badan Perencanaan Pembangunan Nasional
Biro Perencanaan	Bureau of Planning	Biro Perencanaan
PLKI	Vocational Training Center	Pusat Latihan Kejuruan Indonesia
BP3	Parent Teacher Assoc. Fee	Beaya Pungutan Persatuan Orang Tua dan Guru
BPM	Regional Training and Material Center	Badan Pembangunan Masyarakat

BPG	Teacher Education Center	Badan Pendidikan Guru
BPKB	National Training and Activity Center	Badan Pusat Kegiatan Belajar
BPS	Office of Statistics	Biro Pusat Statistik
Bupati	Head of District	Kepala Kabupaten
BUTSI	Indonesian Volunteer Service Corporation	Badan Tenaga Sukarela Indonesia
Camat	Head of Sub-District	Kepala Kecamatan
Dalam Negeri	Ministry of Home Affairs	Departemen Dalam Negeri
Dati I and II	Local Gov.'t levels	Daerah Tingkat I & II
DepKeu	Ministry of Finance	Departemen Keuangan
Dept. Agama	Ministry of Religion	Departemen Agama
DGB	Directorate General of the Budget	Direktorat General Anggaran
Dharma Pertiwi	National Org. of Wives of Army Officers	Persatuan Istri ABRI
Dharma Wanita	National Org. of Wives of Civil Servants	Persatuan Istri Pegawai Negeri
DIK	Budget Document	Daftar Isian Kegiatan
Dikdas	Direktorate of Primary Educ.	Kantor Pendidikan Dasar
Dinas	Regional Office	Dinas
DIP	Project Document	Daftar Isian Proyek
Ditjen PDM (Dikdasmen)	Dir. Gen. of Primary & Secondary Educ.	Direktorat Jendral Pendidikan Dasar & Menengah
Ditjen PT (Dikti)	Dir. Gen. of Higher Education	Dir. Jendral Pendidikan Tinggi

Ditjen PLSPO	Dir. Gen. of Out-of-School Education Youth & Sport	Dir. Jen. Pendidikan Luar Sekolah, Pemuda, dan Olah Raga
Ditjen Kebudayaan	Dir. Gen. of Culture	Dir. Jen. Kebudayaan
Dosen	Lecturer	Pengajar
DUP	Project Proposal Document	Daftar Usulan Proyek
D1	Teacher training Certificate: Primary	Program Diploma 1
D2	" " Jun. Sec.	" " 2
D3	" " Sen. Sec.	" " 3
EBTANAS	Primary School Finishing Examination	Evaluasi Belajar Tingkat Nasional
FKIP	Faculty of Education in University	Fakultas Keguruan Ilmu Pendidikan
GBHN	Guidelines for State Policy	Garis-Garis Besar Haluan Negara
GDP	Gross Domestic Product	Pendapatan Dalam Negeri
GOI	Government of Indonesia	Pemerintah Indonesia
IAIN	State Institute of Islamic Religions	Institut Agama Islam Negeri
IBM	International Business Machines	International Business Machines
IBRD	International Bank for Reconstruction and Development	Bank International Pembangunan & Rekonstruksi
IGGI	Inter-Governmental Group on Indonesia	Group Antar Negara untuk Indonesia
IIEP	International Institute for Education Planning	International Inst. for Educ. Planning
IKIP's	Teacher Training Colleges	Institut Keguruan Ilmu Pendidikan

Inpres SD	Primary School built under Presidential Decree Funds	Sekolah Dasar Inpres
Inspector Jendral	Inspectorate General	Inspektor Jendral
IPA	Science	Ilmu Pengetahuan Alam
IPB	Institute of Agriculture at Bogor	Institut Pertanian Bogor
IPS	Social Studies	Ilmu Pengetahuan Sosial
ITB	Institute of Technology at Bandung	Institut Teknologi Bandung
Kancam	MOEC Sub-District Office	Kantor Kecamatan P & K
Kandep	MOEC District Office	Kantor Departemen P & K
Kanwil	MOEC Provincial Office	Kantor Perwakilan P & K
Kas Negara	MOF Regional Office	Kas Negara
Kasi Dikmas	Head of Community Education Section	Kepala Seksi Pendidikan Masyarakat
Kasi SD	Head of Prim. School Section	Kepala Seksi SD
KBKM	Vocational Skills Training	Kursus Belajar Kejuruan Masyarakat
Kejar Paket A	Basic Education	Kelompok Belajar Paket A
Kejar PD	Community Education Out-ofSchool Learning Group	Kelompok Belajar Pendidikan Dasar
Kejar Usaha	Income Generating Learning Group	Kelompok Belajar Usaha
Kewajiban Belajar	Universal Compulsary	Kewajiban Belajar

Primary Education

KKG	Teacher Work Group	Kelompok Kerja Guru
LKMD	Village Development Program	Lembaga Ketahanan Masyarakat Desa
KPUA, B, C	Pre-Primary Teacher Training	Kursus Pendidikan Umum A, B, C
LIPI	Research Foundation of Indonesia	Lembaga Ilmu Pengetahuan Indonesia
LNG	Liquified Natural Gas	Gas Cair Natural
Madrasah Ibtidaiyah	Islamic School (Primary)	Madrasah (Tingkat SD)
MenPan	Ministry of Administrator Reform	Menteri Aparatur Negara
MOEC	Ministry of Education and Culture	Departemen Pendidikan dan Kebudayaan
NFE	Nonformal Education	Pendidikan Luar Sekolah
NTCC	National Technical Coordinating Committee	Koordinator Bantuan Tehnis Luar Negeri
ODA	Overseas Development Assistance	Lembaga Bantuan Luar Negeri
Patjar	SD PAMONG Out-of School site	Tempat Belajar
Pancasila	State Ideology	Pancasila
PEDC	Polytechnic Education Development Center	Pusat Pengembangan Pendidikan Politeknik
Pengawas	Supervisor	Pengawas
PENMAS/Dikmas	Community Education	Pendidikan Masyarakat
Penilik	Education Supervisor in Kancam	Penilik Tingkat Kancam
Penilik TK/SD	Supervisory for Pre-Primary and Primary	Penilik TK/SD
PGA	Religious Teacher Training	Pendidikan Guru Agama

Pimpro	Development Project Leader	Pimpinan Project
Pusinfot	Office of Information (Balitbang)	Pusat Informatik
Puslit	Office of Research (Balitbang)	Pusat Penelitian
Pusisjian	Office of Testing (Balitbang)	Pusat Pengujian
Puskur	Office of Curriculum (Balitbang)	Pusat Kurikilum
PTPG	Higher Education Institute for Teacher Training	Perguruan Tinggi Pendidikan Guru
P3D	Primary School Development Project	Proyek Pengembangan Pendidikan Dasar
P3GTK	Technical Teacher Training Unit Center	Pusat Pengembangan Pendidikan Guru Taman Kanak2
PKK	Family Life Education Program	Pendidikan Kesejahteraan Keluarga
PKG	In-Service/On Service Teacher Training Program	Pusat Kegiatan Guru
PKG	Teacher Activity Office	Pusat Kegiatan Guru
PMP	Civics	Pendidikan Moral Pancasila
Pola Tinggi	Integrated Public /Private Higher Education	Pendidikan Tinggi Terpadu
PPPG	Teacher Education Development Office	Pembinaan & Pengembangan Pendidikan Guru
PPSP	Development School Project	Sekolah Pembangunan

Pramuka	Scouts	Pramuka
Proyek Buku Terpadu	Integrated Textbook Project	Proyek Buku Terpadu
PSPB	Indonesian Political History	Pendidikan Sejarah Pengembangan Bangsa
PU Wajar	Office of Universal Compulsary Educ.	Pendidikan Umum Wajib Belajar
RADIN	Meeting of Provincial Officials for Budgeting	Rapat Dinas
RAKERNAS	National Working Meeting of Budget	Rapat Kerja Nasional
RARAS	MOEC Echelon I Officials Meeting	Rapat Teras
REPELITA	Five Year Plan	Rencana Pembangunan Lima Tahun
Raudhatul Athfal	Pre-primary Religious (Moslem)	Taman Kanak Kanak Islam
Sakernas	National Labor Force Survey	Survey Tenaga Kerja Nasional
Sanggar	World Bank In Service On Service Teacher Training Center	Sanggar
SBPP	Government Subsidy to Primary School	Subsidi Bantuan Pemerintah untuk Pendidikan
SDLB	Integrated Schools for Handicapped	Sekolah Dasar Luar Biasa
SD-Negeri	Public Primary School	Sekolah Dasar Negeri
SD PAMONG	Primary Education by Parents Teachers, and Community	Pendidikan Dasar oleh oleh Masyarakat, Orangtua dan Guru
SD-Swasta	Private Primary Schools	Sekolah Dasar Swasta
Sekjen	Secretariate General	Sekretaris Jendral

Sekneg	National Secretariat	Sekretariat Negara
SGA	Religion Teacher Training Secondary School	Sekolah Guru Agama
SGB	Teacher Training Primary School	Sekolah Guru Bantuan
SGTK	Pre-Prim Teaching Certificate	Sekolah Guru Taman Kanak Kanak
SGO	Sports Teacher Training Secondary School	Sekolah Guru Olah Raga
SIAP	Unexpended funds	Sisa Anggaran Pemerintah
SIPENMARU	University Selection Examination	Sistim Penyaringan Mahasiswa Baru
SKB	District Training & Material Center	Sanggar Kegiatan Belajar
SKKP	Home Economy Junior Secondary School	Sekolah Kejuruan Kepandaian Putri
Skripsi	Undergraduate thesis	Karangan Ilmiah Mahasiswa
SLB	Schools for the Handicapped	Sekolah Luar Biasa
SLB Terbuka	Open Schools for the Handicapped	Sekolah Luar Biasa Terbuka
SMA	General Senior Secondary School	Sekolah Menengah Atas
SMEA	Commercial Senior Secondary School	Sekolah Menegah Ekonomi Atas
SMKK	Home Econonomy Senior Secondary School	Sekolah Menengah Kesejahteraan Keluarga
SMP	General Junior Secondary School	Sekolah Menengah Pertama

SMP Terbuka	Open Junior Secondary School	SMP Terbuka
SPG	Teacher Training Senior Secondary School	Sekolah Pendidikan Guru
SPGLB	Teacher Training Senior Secondary School for Special Education	Sekolah Pendidikan Guru Luar Biasa
SPP	Gov.'t Subsidy to Secondary School	Sumbangan Pemerintah untuk Pendidikan
ST	Vocational Junior Secondary School	Sekolah Teknik
STM	Technical Senior Secondary School	Sekolah Teknik Menengah
STTB	Primary School Graduation Certificate	Surat Tanda Tamat Belajar
Subdit Monitor	Sub-directorate for Monitor	Sub-direktorat Monitor
S1	Bachelor's Degree	Sarjana Muda
S2	Master Degree	Sarjana Lengkap (Pasca Sarjana)
S3	Doctoral Degree	Program Doktor
SUPAS	Intercensal Population Survey	Survey Penduduk Antar Sensus
SUSENAS	Economic & Social Survey	Survey Ekonomi dan Sosial
TK (Taman Kanak Kanak)	Pre-Schools	Taman Kanak-kanak
TTUC	Technical Teacher Upgrading Center	Pusat Upgrading Guru Teknik
UDKP	Village Development Unit	Unit Kerja Pembangunan Desa
UGM	University of Gajah Mada	Universitas Gajah Mada

U.I.	University of Indonesia	Universitas Indonesia
Ujian Persamaan	Primary School Equivalence Examination	Ujian Persamaan
UNAIR	University Airlangga at Surabaya	Universitas Airlangga
UNDP	U.N. Development Program	U.N. Development Program
Universitas Terbuka	Open University	Universitas Terbuka
UNPAD	University of Pajajaran at Bandung	Universitas Pajajaran Bandung
USAID	U.S. Agency for International Development	U.S. Agency for International Development
WB	World Bank	Bank Dunia
Yayasan	Private Institutes	Yayasan