

EDUCATIONAL DEVELOPMENT PROJECT

(PN-0069)

EXECUTIVE SUMMARY

BORROWER: The Republic of Panama

GUARANTOR: The Republic of Panama

EXECUTING AGENCY: The Ministry of Education (MINEDUC)

AMOUNT AND SOURCE:

IDB (OC, U.S.):	US\$58,126.000
Borrower:	US\$15,128.000
Total:	US\$73,254.000

TERMS AND FINANCIAL CONDITIONS:

Amortization period:	25 years
Grace period:	6 years
Currency:	US Dollars from the Single Currency Facility
Disbursement period:	6 years
Interest rate:	variable
Inspection Fee:	1% of the loan
Credit Fee:	0,75% annually on undisbursed balance

BACKGROUND: In the last two decades, the education system in Panama fell behind because: (i) long overdue educational reforms were debated and continuously defeated in the 70s and 80s; and (ii) key stakeholders could not reach consensus on the course these reforms should follow. The consensus reached in 1995 helped establish a new education law (Law 34) and set in motion the necessary mechanisms to maintain a constructive dialogue on how to improve education. Law 34 of July 1995, creates the legal conditions to improve the relevance, efficiency and equity of education. It extends mandatory education from 6 to 11 years and establishes a framework for the gradual decentralization of pedagogical and administrative tasks. The proposed project seeks to support the government's efforts to implement profound changes in the administration, delivery and pedagogy of education in Panama.

OBJECTIVES: The proposed project is a six-year operation, whose objective is to improve the external efficiency or relevance, the internal efficiency, and accessibility of education, from pre-school to grade 12. Relevance means adapting the content of education to the needs of a modern state as well as the interests of rural,

and indigenous populations. Internal efficiency means improved pedagogy and administration. Equity requires improved access to higher-quality education and adopting measures to improve pupil performance throughout the system and especially in poorly served communities. The project will: (i) improve by 20% results of attainment tests at basic and secondary education levels; (ii) increase the percentage of students completing: (a) 6th grade from 78% in 1997 to 90% in 2002; (b) 9th grade from 61% in 1997 to 71% in 2002; and (c) 12th grade from 17% in 1997 to 26% in 2002; and (iii) decrease from 15.4 to 13.7 years for a child to graduate from basic education. Since access to pre-school and secondary education is limited for poor rural children, the proposed project, together with a current IBRD project, should help increase coverage for 4-5 year olds from 44% to 75% and for 15-17 year olds from 16% to 44% by 2002.

DESCRIPTION:

The project will consist of five interrelated components, which together will improve educational output and the operational efficiency of the educational delivery system. Overall, the project entails a three-phase process: (i) dialogue and design; (ii) piloting and evaluating new programs and systems; and (iii) implementation of new programs and management structures throughout the delivery system. The project seeks to support Panama in adapting its pedagogical and operational management mechanisms to improve educational outcomes through a decentralization process mandated by the new law.

COMPONENT 1. Curriculum Transformation (US\$14.7 million) This component will finance activities to support: (i) the development of a new curriculum and its implementation; and (ii) the design of a system for keeping curriculum up-to-date. The project will fund pilots in 25 secondary and 99 pre-school and primary schools prior to applying the results to all schools. The pilot schools will implement the new curriculum programs, the teachers and directors will be provided with ample training and teaching tools to ensure that teachers are well versed in effective teaching methods in addition to having access to libraries, laboratories, kits and computer aided learning facilities.

In support of the decentralization process, there will be a nationwide consultation, in the form of regional workshops and dissemination activities to establish consensus on the reform. This dialogue will include universities, employers, teachers and their

unions, parents' associations, community groups, political representatives and MINEDUC.

COMPONENT 2. Teaching and Learning Resources (US\$18.1 million) This component will finance: (i) the development and distribution of new teaching and learning materials for the new curriculum; and (ii) a system for developing, updating and distributing texts and making these accessible to low-income and indigenous students.

This component will include training for MINEDUC staff, and school personnel, including librarians, in the selection, purchase and use of new learning resources. It also includes funds to evaluate alternative ways of supplying texts and learning resources, and sets up a computerized stock, accounts and distribution system to manage resources.

COMPONENT 3. Teacher, Director and Supervisor's Professional Development (US\$6 million) This component will finance three main lines of activities: (i) one-time in-service training to prepare teachers in new programs, new teaching methods and how to use new teaching resources and administer assessment tools; (ii) reshaping the MINEDUC training unit to take on more of a policy making role, and coordinating and contract training services. This includes the purchase of more training from regionally dispersed university campuses, and introducing non-course alternatives for in-service training; and (iii) change existing training policies and incentives to encourage teachers, directors and supervisors to take more relevant and priority training. This component will support the establishment of national training policies and incentive structures which tie training to educational priorities. It will provide 14,000 primary and 11,000 secondary teachers and directors with the skills to teach the new programs.

COMPONENT 4. Educational Evaluation (US\$5.8 million) This component will finance three main activities: (i) new assessment tools to evaluate student attainment of curriculum objectives; (ii) development of indicators and databases to track education system performance (IBRD finances hardware/IDB software and analysis functions); and (iii) the design of a national assessment system which would combine classroom assessments with testing attainments (MINEDUC will coordinate the design with technical support from the Bank and the IBRD). Together, these

activities will provide the basis for the development of a national educational assessment system.

COMPONENT 5. Improving Operational Efficiency (US\$10 million) This component will finance several activities aimed at improving operational efficiency: (i) improving personnel management, planning, and evaluation capacity; (ii) establishing performance-based budgeting; (iii) guiding the decentralization process and related institution building (training directors and parents' associations to adopt new management responsibilities); (iv) analyzing the current use of school facilities and the use of teacher's allocations to make better use of resources; and (v) examining non-traditional alternatives to accommodate the expansion of basic education (from 6 to 11 years) and improve access. The component will also strengthen the capacity to plan, manage and administer the education system at national, regional and school levels. To support the decentralization mandated by the new law, the project will finance the development of performance indicators to improve MINEDUC's ability to manage the system as schools gain more autonomy, key services are decentralized, and others are outsourced.

**ENVIRONMENTAL
CLASSIFICATION:**

The Environmental Committee (CMA) classified this operation as Category II in its July 23, 1996, meeting.

BENEFITS:

By improving internal and external efficiency and coverage, more students will benefit from a better, more relevant education. They will achieve more in each year at school and attend school for more years. Wasteful repetition and desertion will be reduced, as will the annual cost per pupil.

The availability of teaching materials, visibility of pupil progress, increased valorization of education by parents, and the recognition accorded to teachers through their participation in the modernization of the system will increase job satisfaction and responsibility for teachers, and thus restore intrinsic motivation. At the same time, increased access to professionally relevant training, with its subsequent impact on promotion and earnings will improve current incentive structures.

Specific benefits include:

Component 1. Curriculum Transformation. It is expected that, by the end of the project's fifth

year, at least 80% of all schools will be implementing new curriculum programs.

Component 2. Teaching and Learning Resources. It is expected that: (i) a plan to implement educational resources and equipment in 124 pilot schools (99 primary and 25 secondary) will take place during the first year; (ii) a new system of text distribution and information management will be implemented by the end of the second year; and (iii) a new resource management policy, plans and procedures, will be implemented throughout the system by the end of the fifth year.

Component 3. Teacher, Director and Supervisor Professional Development. It is expected that: (i) new staff development policy and training delivery systems will be functioning and most training will be decentralized by the end of the third year; (ii) 70% of teachers, directors and supervisors in all schools will have completed the retraining and will be equipped to use new teaching tools, and execute and benefit from new assessment instruments by the end of the sixth year; and (iii) 90% of MINEDUC staff, regional directors, and supervisors will have attained the basic skills and tools to facilitate the implementation of new programs and contribute to on-going curriculum development and updating.

Component 4. Educational Evaluation. It is expected that by the end of the project's fifth year: (i) a new assessment system, based on the new curriculum, will be implemented; and (ii) objective standards to measure educational attainment will be in place.

Component 5, Improving Operational Efficiency. It is expected that, by the end of the project: (i) at least 85% of schools with four or more teachers with the participation of parent's associations will be able to manage their non-payroll budget; and (ii) 90% of schools in the system will have achieved some level of autonomy.

Among indigenous and remote area poor populations, it is expected that primary age children in the first and second grades should increase their attainment by 30%. These results will be confirmed by the fourth year of the project when pilot group results will be measured against baseline data.

Although the project is not specifically targeted at women, half of the children who would benefit from improved education are girls; their access to higher levels of education and, ultimately, work opportunities are expected to improve. With the reduction of the vocational element traditional sex role stereotyping will tend to disappear. Thus the performance of girls in the labor market should be commensurate with their slightly better than average performance in school. Moreover, research has shown that increasing the education levels of women has an important positive effect on the health status and the educational attainment of their children.

RISKS:

The main risk, delays in implementation, is mitigated by the priority assigned by the Government to the timely execution of this project, the involvement of stakeholders, strengthening MINEDUC's operational efficiency, and commitment of the Bank to provide continuous monitoring, support and guidance.

A second risk relates to a possible mismatch between existing skills and the skills needed by the new curricula, which will require not only a major training effort but assistance to redundant professions.

A third risk involves the coordination between MINEDUC, the Bank, and IBRD to develop and consolidate the assessment system. Considering that this coordination must occur at early stages of project implementation, the Bank would be in a position to recommend adjustments and other actions as the direction of the design of this assessment system becomes clearer.

A fourth risk is the lack of technical capacity in specialized areas. MINEDUC has successfully executed seven Bank-financed projects, but these were mainly school infrastructure. MINEDUC has strong technical staff but there are limits to its capacity in curriculum development, program planning, design and management, and evaluation. Technical assistance, training and research will help to build the expertise to overcome these limitations.

Transformations as extensive as the one envisioned in this project require leadership, political will and consensus building. To mitigate the risk that these elements may waiver during execution, the government has signed a pact with opposition parties, teachers organizations, parents, private sector leaders and

other stakeholders for a 10-Year Education Strategy for the Modernization of Panama's Education. In addition, the project will finance consensus building mechanisms, social marketing activities, change of incentives, and technical support to help guide the transformation process.

BANK STRATEGY: In line with the Eighth Replenishment, the Bank seeks to assist Panama in achieving sustainable growth with equity. By lending its support to education, the Bank will promote improved efficiency of public expenditure, greater relevance, efficiency and equity in Panama's schools. Students will be able to participate more effectively in the labor force. IDB support is vital in promoting the concept of participatory citizenship necessary to bring the modernization of education to fruition.

RETROACTIVE FINANCING: It is recommended to approve US\$2 million in retroactive financing for expenditures incurred in accordance with procedures substantially similar to IDB procedures and which have been reviewed and approved by the Bank. Said expenditures shall have been incurred within a maximum period of 12 months prior to the approval of this project.

PROCUREMENT: Established ceilings are US\$1 million for works and US\$350,000 for goods and related services, beyond which an international competitive bidding process will be required. The procurement of goods and services will be done according to Bank guidelines and regulations, and no exceptions have been requested.

EIGHTH REPLENISHMENT POVERTY TARGETING: As this operation supports pre-school and primary education it automatically qualifies as a poverty targeted investment (PTI) according to Document GN-1964-2, Review of poverty classification of IDB loans under the Eighth Replenishment.

SPECIAL CONTRACTUAL CONDITIONS: The following conditions will be incorporated in the contract:

a. Conditions prior to first disbursement

- Selection of a Director for the Project Executing Unit (par. 3.1)
- Submission of an annual operational plan (par. 3.5)

b. Special conditions for first disbursement of Components 1-5:

- Selection of international consultants and Bank approval of preliminary plan of action for each component (pars. 3.6 to 3.10).

c. Other conditions

- The commitment of project resources for further investments in learning resources under Component 2 subsequent to the pilot phase will be contingent on completion of this phase and on presentation of a satisfactory proposed text policy by MINEDUC (par. 3.7)

I. BACKGROUND

A. Socio-economic context

- 1.1 Panama's economy has traditionally been based on a strong service sector, primarily trade, banking and shipping, integrated with the world economy. During World War II, a policy of import substitution began and the economy and society were transformed by the growth of manufacturing. During the late 1970s and the 1980s the economy stagnated but in 1992 a growth rate of 8% was achieved. In 1994 the rate declined to 4% and to 2% in 1995 when unemployment reached 14%. A fiscal imbalance exists due to increases in, and inefficient allocation of, current account expenditures. Domestic business expects increased foreign competition following accession to the World Trade Organization in October 1996.
- 1.2 Despite these problems, Panama has social indicators and expenditures equal to countries with higher per capita GDP. The infant mortality rate of 2.17% and life expectancy of 72.4 years are second only to Costa Rica in Central America. The population of 2.6 million has a falling rate of growth around 2.0%, leading to a declining dependency ratio, which in turn presents a good opportunity to improve educational standards.
- 1.3 The spatial distribution of population goes against other advantages of Panama's demography. About 54% of Panamanians live in towns and cities, while the rest live in small, isolated communities at low densities of population. Inequality is worsening; the poorest 20% accounted for 4% of GDP in 1980 but only 2% in 1989. According to the Ministry of Planning and Economic Policy (MIPPE) 30% of Panamanians live in critical poverty, either in remote areas with limited potential, or in urban slums. Of these, half received a household income of less than \$850, about one-third the cost of feeding a family of five. In these communities infant mortality is between 5 and 7.5% and between 40 and 70% of 6-9 year olds suffer growth retardation compared with a national average of 24%. The 8% of Panamanians who belong to one of the seven linguistic groups, requiring special educational consideration, live mostly in isolated and disadvantaged communities.

B. The education sector

1. Overview

- 1.4 The educational system headed by the Ministry of Education (MINEDUC) comprises: (a) two years of pre-school; (b) primary (grades 1 to 6); (c) two cycles of secondary, an obligatory lower secondary (grades 7 to 9) and a voluntary upper secondary (grades 10 to 12); and (d) post secondary and higher education. Since 1995, education for all children between 6 and 15 years of age, that is primary grades 1-6 and lower secondary grades 7-9 were mandatory and free.

- 1.5 Enrollment in pre-school, which consists of one nursery year and one year of reading and writing preparation, increased by 8% a year during 1991-94, to about 10% of four-year olds and 47% of five-year olds. In addition, about 6% of three-year olds receive initial education, which is usually a low cost, non-formal community based activity.
- 1.6 Although net primary enrollment is high (98%), repetition is a problem. Gross primary enrollment is 104.5% and 15.4 years are required to complete an 11 year cycle. Desertion is low - the primary survival rate is 80%. Gross secondary enrollment is 76% of the cohort, while net enrollment runs at 53%. In poor areas and among indigenous groups it falls well below 53%. Thus while the rural population included 45% of all Panamanians, only 16% of secondary enrollment is in rural areas. For many children secondary school is too far from home. Boarding at one of the 50 boarding schools is the only option. There is insufficient boarding space to meet the demand for secondary schooling from rural communities and these schools are poorly equipped. The GOPN is evaluating ways to improve these schools and alternatives to boarding, including extension of primary programs, distance learning, and the refocussing of 1,500 primary and 8,000 secondary scholarships from merit based to need based criteria, to increase access.
- 1.7 Though the overall pupil to teacher ratio is 22:1, there is a marked difference between urban schools, which usually conduct classes with 35 pupils, and rural schools, many of which are tiny because of the small size and isolation of many communities. Primary schools have more pupils per teacher than secondary, especially private secondary schools, which average only 14 pupils per teacher. Three quarters of all primary schools are multi-grade. School lasts 5 hours per day, with a school year of 170 days, giving a nominal time in school of 850 hours, below the world average of 1,000 hours. MINEDUC has already remedied this situation by extending the school calendar from 200 to 210 days in 1997 and extending the school day to 6 hours.

C. The New Education Law

- 1.8 The passage of the new Education Law, Law 34 of July 1995, to replace Law 47- in force, substantially unchanged since 1946- provides the consensus and conditions to initiate a long overdue modernization of the education system. This law introduces: (i) a revised structure for basic and secondary education; (ii) decentralization and a reorganization of school districts; (iii) new program and policy planning requirements; and (iv) improving the quality of education including updating curriculum and providing bilingual and bicultural education to indigenous communities.
- 1.9 Compulsory education was extended from six years of primary school to 11 years of basic education (consisting of preschool, primary

and lower secondary, henceforth referred to as **revised structure**). The revised structure will require: (i) reorganizing and extending existing schools (ii) reassigning staff and retraining teachers to cover preschool and lower secondary grades; (iii) redesigning technical and material resources; and (iv) developing alternative delivery systems (such as distance learning) to resolve access problems.

- 1.10 **The decentralization** consists of: (i) a gradual delegation of administrative, budgetary control and technical decision-making toward regional and school levels ; and (ii) the formalization of community and parental participation to increase accountability. The change to a decentralized system will require the creation of new operational, planning, supervision and evaluation mechanisms and redistricting schools. School directors and parents' associations will have to develop local capacity to manage educational programs. **Program and policy planning** functions will be expanded at all levels. **Curriculum transformation** involves revising curriculum goals and programs, introducing higher standards to ensure a higher level of achievement, provide more relevant education to promote better articulation between education levels. Updating national curriculum, curriculum maintenance capacity and related testing and evaluation services is a massive undertaking, given the levels of coverage and duration of schooling already attained and the fact that any change must be pilot tested prior to full implementation.
- 1.11 Taking into consideration that full enactment of the new law will require leadership, political will and consensus building, the present administration has signed a pact with opposition parties, teachers organizations, parents, private sector leaders and other stakeholders for a 10-Year Education Strategy for the Modernization of Panama's Education. In addition, the government has already adopted measures to improve the financial management and operational efficiency of educational service and program delivery. These include rationalization of staff, the introduction of performance budgeting schemes, decentralizing budget controls, promoting school-based management of financial and technical resources more appropriately handled at the local level.

Table 1.1. Panama's School System, 1994

	Pre-school	Primary (g.1-6)	Secondary (g.7-9)	Secondary (g.10-12)	Total
STUDENTS					
Enrollment (No.)	38,402	358,367	123,391	68,687	588,647
Public (%)	73	91	83	82	87
Cohort (No.)	120,522	345,251	162,044	156,267	784,084
Gross Enroll't Rate (%)	32	104	76	44	75
Net Enroll't Rate (%)	28	98	52	33	65
SCHOOLS					
Total (No.)	961	2,793	201	141	4,096
Public (%)	72	94	66	50	86
TEACHERS					
Total (No.)	1,850	14,573	6,579	3,950	26,952
Public (%)	72	91	80	74	85
PERFORMANCE INDICATORS (%)					
Promotion	--	89	82	88	90
Repetition	--	9	12	8	10
Drop-out	--	3	6	5	11
a/ 1996 data Source: Ministry of Education, Department of Statistics					

1. Organization and administration

- 1.12 MINEDUC has four main functions: (a) policy, planning and budgeting; (b) operation of the different levels of education; (c) operation of special education for adults, youth, the disabled, nutrition and environmental education programs; and (d) administration of personnel, information, public relations and legal matters.

2. Education finance

- 1.13 During 1992-95, government annual expenditure averaged US\$370 million, among the highest per capita in Latin America, reflecting both the high levels of coverage and the high marginal costs of providing services in remote areas.

- 1.14 Direct public expenditure on education accounted for 5.5% of GDP in 1995 and 22% of the central government's budget. When expenditure by level is compared with enrollment the distribution between levels is more balanced than most countries. The distribution is as follows:

- pre-school and primary 28%(US\$104 mil)
- two secondary cycles 22%(US\$ 82 mil)
- higher education 24%(US\$ 91 mil)
- special programs, training, special education 26%(US\$ 93 mil)

- 1.15 The source and disposition of funds is as follows:

- Recurrent spending from general sources 84.4%
- Recurrent spending from earmarked payroll tax of 2.75% 6.1%

- Investment funded by general revenues 6.0%
- Investment funded externally 1/ 3.5%

- 1.16 Compared against GNP per capita of \$2,367, 1992 recurrent expenditures per student in public schools by level were \$192 in pre-primary, \$292 in primary, \$397 in secondary and \$1,439 in Universities. 2/ Per capita expenditure in private education by level was \$900 in pre-primary, \$1000 in primary, \$1,200 in secondary and in Universities 3/.
- 1.17 Under Law 34 the budget cannot be less than the previous year's nor less than 6% of GDP and municipalities contribute 20% of their revenues to support basic and physical education. In addition, more schools will be able to access supplemental funds derived from a portion of the payroll tax earmarked for the *Fondo de Seguro Educativo* (required by Ley 13). These funds which used to flow to the most attended secondary schools can now be provided to primary schools to support nutrition programs, equipment, materials and construction.
- 1.18 Of the 1995 education budget, 62% was assigned to services administered by MINEDUC, while 38% was distributed to autonomous institutions, including universities and other national institutes. About 74% of MINEDUC's expenditures in pre-school, primary and secondary education go to teachers' salaries, leaving a wider margin for non-payroll expenditures -texts, tests, investments etc.- than many countries.

3. The private sector

- 1.19 In 1992, expenditure on private education amounted to \$77.4 million or 25% of the total. About 29.3% of pre-schoolers, 8.5% of primary enrollment and 17.4% of secondary students are in private institutions. Though repetition and desertion are lower in private schools, mean expenditure per pupil is several times the level in public education as noted in paragraph 1.17 above. It can be assumed that selection is narrowly based and the influence of social class and parental income and education on school attainment is strong.

4. Analysis of the education sector

- 1.20 Pre-school Education Although the expansion of services has been steady, in 1994 only 47% of five year-olds attended pre-school and they were concentrated in urban areas. To meet demand, the GOPN strategy is to expand coverage to 70% through the non-formal community sector, which is being supported externally (IBRD). While a non-formal approach could reduce the marginal costs of

1/ Not including the funds devoted to education in the Fondo de Emergencia Social (FES).

2/ Fuente: Panamá en Cifras, Noviembre de 1993.

3/ Source - Panama: Issues in Basic Education. March 17, 1995, The World Bank (Report 13701-PAN)

expansion, it could be counterproductive if minimum standards of quality and pedagogic guidelines for curriculum content, teaching methods and quality indicators are not established. Both pre-school and initial education can contribute to the improvement of pupil performance in basic education. Extending the coverage of these programs, better teaching methods, materials and providing basic educational supplies and core texts to poor children could be a powerful instrument to reduce the gap in attainment between poor and better off children.

- 1.21 Primary Education Despite the high net enrollment, the employment of certified and well-paid teachers, and low student-teacher ratios, 75% of all primary schools are multigrade and their performance is relatively poor. Though well "qualified", most teachers do not receive specialized training or appropriate materials to equip them for multigrade classrooms. As most multigrade schools are located in remote rural areas they are unattractive to teachers. Rural children are additionally handicapped by the absence of local stimulus materials and a curriculum which is not conducive to building intellectual skills based on a rural child's daily experience. This triple disadvantage raises concerns about the equity of education. A first step to mitigate this problem, is to equip teachers currently in the system with better teaching materials. In the medium-term, adjustments to teacher incentive structures, placement and recruitment practices could help attract better teachers to rural areas.
- 1.22 The results of the inequitable access to high quality basic education are readily observed in the provincial illiteracy rates for those over ten-years old: Comarca de San Blas - 40%; Darien - 30.4%; Bocas de Toro - 30.1%. Provinces with the smallest total populations (between 24,000 and 63,000) a high percentage of rural dwellers (100% to 66%) have the highest illiteracy rates (40%-30%). The relative inactivity of Panamanian children, the failure to accommodate individual differences in the pace of learning, the emphasis on rote learning and low level skills, such as factual recall and comprehension, and the determination of learning intervals by an administrative timetable rather than by the attention span of the child largely explain deficiencies in primary school performance.
- 1.23 In the past, Secondary Education was viewed as a preparation for higher education for an elite, while primary education was regarded as terminal for the majority. Raising of the school leaving age means that a higher proportion of children who graduate from primary school will continue lower secondary before leaving. Increasing numbers will stay on to grade 12 without necessarily pursuing higher education. However, currently there is no integrated program from grade 1 to 12 with certifiable graduation at key ages - notably grade 9. Children now follow a primary course which does not prepare them for secondary schooling, which in turn does not properly equip the majority who will enter the labor

market . Higher education institutions also complain of declining standards in their applicants though evidence for this is mixed.

- 1.24 Moreover, there are serious and interrelated problems with both the structure of secondary education and the program content. The government anticipates streamlining and updating the academic and the vocational tracks, which present many challenges since not all secondary schools offer the same range of services. Some (35) are six-year schools offering a full range of academic and vocational subjects, many offer only academic subjects in grades 7-9, and others offer only academic or vocational subjects for grades 10-12.
- 1.25 Some elements of the curriculum have gone unchanged for 70 years. Most subjects are 20 years behind the times in both content and method, science and technology being especially behind in relation to the progress of those subjects in the world at large. Most vocational curricula were designed during the period of import substitution, are too occupationally specific, and are not appropriate for the kind of employment now emerging. Traditionally, there has been almost no linkage between the kind of skills which schools can produce cheaply and the vacancies in the labor market. Instructors in vocational subjects are usually artisans who lack the underlying intellectual skills to switch from specific trades to the more general technological, analytical and problem solving skills which young workers now need.
- 1.26 Nor is there much complementarity between the academic and vocational programs, making it difficult for students to exercise options as they progress through the system. Pupils currently in vocational programs are stigmatized as being at the lower end of the ability range and are not learning the technical and analytical skills such as computation and communication demanded in today's labor market. The kind of curricular revisions which took place in Europe and North America as the school leaving age rose were debated in Panama, but the proposals were presented until now with insufficient consultation, which united both progressive and conservative forces in opposition. There is currently general agreement that the revised program will offer a core basic education curriculum to all students, while upper secondary education would offer academic and technical programs. As will be explained in Chapter II Project Cost and Financing, the proposed project will finance dialogue activities to reach consensus on these issues, the design, pilot testing and implementation of these programs.
- 1.27 Teacher Capability, Employment and Evaluation Although teachers are well qualified -the majority (78%) of primary school teachers hold a Normal School certificate, 22% hold a Bachelor's degree and 0.3% hold a post-graduate degree- this does not guarantee effective classroom performance. Recent studies conducted by the Bank indicate a general lack of expertise in teaching methods and class management. Small schools and isolated institutions also demand higher levels of planning, managerial and administrative skills.

- 1.28 Teacher evaluation forms a part of general supervision and aims to stimulate professional development and showcase teachers' efforts. Effectiveness is judged by teaching qualities, administrative efficiency and interest. The process is not objective, nor is it linked directly either to in-service training or remuneration. Participation in training, almost without regard to its occupational relevance is rewarded with points which lead to promotion and transfer. Clearer indicators of teaching skills, techniques for identifying teachers' training needs, evaluation methods and more professional technical supervision are needed.
- 1.29 The recruitment of teachers is centralized and their subsequent placement is based on teacher preferences and their ability ranking. The best teachers can therefore choose the "best" schools with the best career prospects, usually well-endowed urban schools. Rural schools, with less access to training and therefore with lower earnings prospects for teachers are the schools most in need of trained and motivated teachers, and yet they are the least likely to attract them. Each year some 9,000 teachers are estimated to compete for transfers and 12,000 new teachers seek entry to the profession, imposing a heavy administrative work load on the MINEDUC. The new mandate to implement a gradual decentralization, improve program administration presents an important opportunity to MINEDUC to change current recruitment, selection, evaluation and promotion practices.
- 1.30 Texts, Libraries and Teaching Materials There is no standardization of texts; even within schools, teachers select texts from authorized lists. Pupils have to provide their own texts and for the poor this may not be possible as texts are expensive. Even when parents are willing to buy books, the recommended books may not be commercially available or parents resort to second hand or older editions, making class references difficult to harmonize. Teachers often do not know how to make the best use of texts, and resort to having the children copy notes instead of reading, interpreting and understanding the content. The absence of school libraries makes it impossible to develop individual research and bibliographic skills as well as the higher level intellectual skills of evaluating source material and assessing different interpretations and opinions. The Bank and the IBRD have recommended re-evaluating current policies and practices to achieve two things: (i) the optimum utilization of learning and teaching resources; and (ii) to devise ways for the poor to access, at least, core texts.
- 1.31 Educational Assessment, Evaluation and Research Student achievement is not systematically or objectively assessed. Program data are difficult to obtain and are therefore not used for program evaluation or planning. The World Bank (IBRD) is financing studies to measure current student attainment levels. This baseline data will provide a basis for developing attainment standards for the new programs. MINEDUC has also expressed an interest in participating in international attainment studies. A

thorough curriculum revision with criterion referenced instructional goals presents an excellent opportunity to develop both formative criterion referenced tests for classroom management and more summative, normative evaluation to give indications of system performance. Together these instruments would provide the educational assessments needed to both improve learning outcomes and introduce objective measures to gauge system performance as the system becomes increasingly decentralized. An integrated management information system is required but MINEDUC does not have the capacity to develop program evaluation and monitoring systems nor the necessary data processing capacity. Nor does MINEDUC have sufficient capability or resources for research that would allow for experiments with educational innovations through pilot exercises. Research has been undertaken on the basis of individual initiatives, and has been unrelated to policy.

- 1.32 Administrative and Legal Issues Panama's administrative system is antiquated. MINEDUC's financial planning is traditional (based on previous years level of expenditures) and current budget and program monitoring capability are especially weak. At the school level, the resources directors manage are so limited that there is little administrative capacity, if any. Few multi-grade schools even have directors. Parental involvement in the form of parent teacher associations is widespread but mostly limited to social functions and supplementary activities to aid schools. Parents raise funds, volunteer in schools and manage the distribution of the supplementary school funds from the payroll tax. However, they are not active in overseeing the administration or management of schools funds. Along with the decentralization efforts, schools, parents, and community representatives need to develop capabilities to take on new responsibilities.
- 1.33 The overall impact of the above factors is that Panama's school children spend much of their time in pedagogically inefficient activities, acquiring low level intellectual skills which do not permit them to make the transition from possession of, often irrelevant, information to the mastery of usable knowledge and the ability to become autonomous learners. A related problem is that the quality of schooling tends to decline with the remoteness and socio-economic status of the pupils until for many pre-school aged and secondary aged children, schooling is simply not available. In addition, MINEDUC is faced with the mandate to operationalize the revised structure of basic education while also plan and implement a strategy to support a gradual decentralization to increase overall efficiency.

5. Panama's education strategy

- 1.34 The central axis of the Government strategy ^{4/} is to improve quality, equity and efficiency in the provision of education. To improve **quality** the government is updating educational programs and teaching/learning processes and introducing methods of evaluating student attainment at all levels of education from initial to secondary education. The quality initiative includes (i) updating the skills of all teachers, directors and education professionals; (ii) strengthening administration, planning, organization and management capacity and service delivery systems; (iii) increasing the participation of families and the community in school management; and, (iv) the provision of educational materials, equipment and infrastructure. Moreover, the Government wishes to establish a permanent, dynamic capacity to maintain the process of modernization so that education keeps abreast of economic and social development and operational efficiency is a process of continuous improvement.
- 1.35 To achieve **equity** and close the gap between urban and remote area schools the government is introducing several initiatives: (a) specialized teaching methods and materials for indigenous and other children with special needs; (b) providing core texts and basic supplies to the economically disadvantaged children; (c) retooling teachers and introducing alternative modalities to bring best teaching practices to remote area schools including televised instruction when economically feasible; and (d) introducing policies and incentives to attract better teachers to schools in remote areas.
- 1.36 Finally, measures to improve the financial management and **operational efficiency** of educational service and program delivery are already underway. They include rationalization of staff, the introduction of performance budgeting schemes, decentralizing budget controls, promoting school-based management of financial and technical resources more appropriately handled at the local level. The decentralization of functions involves shifting day-to-day management responsibility to regional and school levels, as MINEDUC will take on more of a policy making and coordinating role. For example, rather than delivering teacher training services, MINEDUC will establish training guidelines but finance outside providers to actually deliver this training. In addition, processes that are currently centralized such as teacher selection, promotions and transfers are being decentralized to the regional level and proposals to tie labor mobility to performance will be designed. Communities will also have an increasing role in the selection of teachers and in evaluating their performance.

^{4/}

Enunciated in the 10 Year Education Strategy for the Modernization of Panama's Education, 1997 - 2006.

6. Recent initiatives: The World Bank Basic Education Project 1996.

1.37 In February 1996, the Government agreed upon a US\$58 million program (US\$35 million loan) with the IBRD to finance a number of remedies for the problems highlighted above. This operation will mainly finance construction and rehabilitation of school infrastructure (61%), and the remainder covers targeted activities to expand informal pre-school, improve efficiency in primary education, and to support select institutional strengthening activities within MINEDUC. With the exception of evaluating attainment of students in 6th, 9th and 12th grade, no activities in the IBRD operation are contemplated for secondary education or to promote overall curriculum transformation. The links between the IBRD and IDB loans are set out in Annex I-2 in the project files. The main activities of the IBRD program are:

- a. to expand coverage of non-formal pre-school education from 45.5% (26,000) to 70% (43,000) of the age group by opening 400 "Family and Community Education Centers" in poor communities, and to establish a pilot "Mother to Mother" child development program with radio assistance in remote areas: (total cost US\$5,690,000)
- b. to improve access to, and internal efficiency of primary and lower secondary (obligatory) cycles of education by training all 3,800 multigrade teachers in the appropriate pedagogy, development of class management materials, improving supervision, providing sets of core textbooks and libraries for schools to loan freely to the poorest 41% of zones, including all multigrade schools, reorienting the scholarship program and adding 3,500, three-year scholarships to the 9,500 which already exist ^{5/}, developing sample based, student assessment in grades 3, 6, 9 and 12 in core subjects, school reconstruction and renovation of about 2,000 classrooms (total cost US\$44,700,000, of which infrastructure is US\$21,300,000)
- c. to improve the planning and management capacity of the MINEDUC at central and regional levels and the development of a management information system. (US\$7,900,000)

7. IDB strategy and rationale for Bank involvement

1.38 In line with the Eighth Replenishment, the Bank seeks to assist Panama in achieving sustainable growth with equity. In education, a great deal of work remains to be done in the promotion of internal efficiency and external efficiency (relevance) and equity, most notably in the revision of the national curriculum and in

^{5/} Other changes in allocation of scholarships include inverting the correlation between female participation and the number of scholarships to girls, and awarding scholarships to poor but promising sixth graders so as to increase transition to secondary school.

improving teaching methods, the preparation of teachers, teaching materials and introducing evaluative instruments for the new programs, and the further devolution of education management to the schools as well as improving central management, planning and technical support functions. By lending its support, the Bank will promote improved efficiency of public expenditure and in the delivery of programs, greater equity in the spread of achievement of Panama's schools, and enhanced ability of students to participate effectively in the labor force. IDB support, not only financial but in terms of experience and expertise, is vital in promoting the structure, the systems and the concept of participatory citizenship and accountability necessary to bring the modernization of education to fruition.

- 1.39 The project recognizes the importance of having an appropriate legal, administrative framework, and national consensus to improve educational outcomes. MINEDUC expects that decentralization of the system, better performance measures and more accountability at all levels will improve operational efficiency. The proposed project seeks to influence the quality of education not only by supporting inputs known to improve achievement, but also provide technical assistance in the design of mechanisms to maximize educational investments, and to engage educators, parents and the community in a larger effort to determine the content, outcomes, strategies and inputs needed to modernize an education system that lags behind the changes in Panamanian society and the economy.
- 1.40 The Bank, through the MIF, is also currently processing a Labor Training Project with the active participation of the private sector, which will complement improvements in general education with a comprehensive effort to modernize the employment and training system.

D. Experience of the Bank and other organizations in the sector

- 1.41 The Bank has financed several operations in the sector, the focus of which has been the improvement and expansion of physical infrastructure for secondary, professional and technical education. Execution of these programs was delayed by the political crisis in Panama, but once reactivated these loans have disbursed as expected. Other donors, such as the United States Agency for International Development, the Government of Spain and the International Labor Organization, are supporting small projects in specialized areas such as technical education and sabbaticals for teachers.

II. THE PROJECT, COST AND FINANCING

A. Objectives

- 2.1 The global objective of the project is to improve the external efficiency or relevance, the internal efficiency, and the accessibility of education from pre-school to grade 12. Relevance will be achieved by adapting the content of education to the interests of rural, indigenous and other special populations and to the development needs of a modernizing state. Internal efficiency will be improved as a result of improving pedagogy and administration. Equity would be achieved by increasing access to higher-quality education and adopting measures to improve pupil performance in poorly served communities. These objectives are fully consistent with Panama's education strategy. The project expected results are to: (i) improve by 20% results of attainment tests at basic and secondary education levels; (ii) increase the percentage of students completing: (a) 6th grade from 78% in 1997 to 90% in 2002; (b) 9th grade from 61% in 1997 to 71% in 2002; and (c) 12th grade from 17% in 1997 to 26% in 2002; and (iii) decrease from 15.4 to 13.7 years for a child to graduate from basic education. Since access to pre-school and secondary education is limited for rural and poor children (44% and 52% respectively), the proposed project, together with a current IBRD project, should help increase coverage for 4-5 year olds from 44% to 75% and for 15-17 year olds coverage should increase from 16% to 44% by 2002. Detailed targets and activities are listed in Annex II-1, Logical Framework, to reflect the Government strategy and the objectives of the project.

B. Project components and project description

- 2.2 The project will consist of five interrelated components, which together will improve educational output and the operational efficiency of the educational delivery system. Overall, the project and its components will support a three-phase process: (a) dialogue and design; (b) piloting and evaluating new programs and systems; and (c) implementation throughout the delivery system. A more detailed description of the activities for each component is found in Annex II-2 in the Project Files.
- 2.3 Technical assistance in all project components will involve external and national experts working with local counterparts to ensure transfer of capacity. Training will include, among others, workshops, , manuals and administrative guidelines, , technical studies, and public education campaigns. Most training will be performed by local universities, the Executing Agency and local specialists , supported by international experts.

Component 1. Curriculum transformation (US\$14.7 million)

- 2.4 This component will finance activities to support: (i) the development of a new curriculum and its implementation; and (ii) the design of a system for keeping curriculum up-to-date. To increase relevance, equity and efficiency the component will include activities to: (a) establish new, integrated curricula for pre-school, primary and secondary schools with clearly defined objectives and attainment expectations; and (b) institutionalize a national system to maintain quality and relevance, equitably for all, throughout the country. Improved content and teaching methods will be introduced in all schools: in particular, disadvantaged schools will derive their attainment standards from clearly defined attainment expectations, a program of studies, pedagogical, teaching guidance and evaluation of performance against nationally established norms. Local variations in content will build on children's own experience while aiming to build the same intellectual and affective skills that emerge in the better endowed schools.
- 2.5 The project will fund pilots in 25 upper secondary and 99 pre-school, primary, and lower secondary schools, as required by law, prior to applying the results to all schools. The pilot schools will implement the new curriculum programs, the teachers will be provided with training to apply new programs and better methods, teaching and pedagogical tools to lessons. In addition, teachers will be training on how to utilize libraries, laboratory kits and computer aided learning facilities to support classroom learning.
- 2.6 The main features of the curriculum transformation are to introduce: (a) a simplified preschool program to better prepare students for primary education; (b) a core basic education curriculum which integrates primary and lower secondary and applies the same academic standards to all students; (c) streamlined upper secondary curriculum objectives that allow students to specialize but apply the same standards and requirements to all students. The absence of objective measures to evaluate attainment levels or monitor the achievement of curriculum goals will be resolved with the introduction of formative, classroom administered criterion-reference tests to measure achievement in relation to the curriculum.
- 2.7 To support the development of these programs, this component will finance a process of nation-wide consultation, policy dialogue and dissemination campaign to establish consensus on broad curriculum objectives and content. The participants in this dialogue will include, amongst others, education specialists, universities, MINEDUC, parents' associations, teachers and their unions, employers, community groups and political representatives. Items to be funded include regional workshops, "expert opinion", communication, dissemination and secretariat services to support the reform dialogue. Based on the pilot results, new study programs and related actions will be expanded throughout the system. A final

outcome will be the establishment of a continuous system for curriculum updating.

Component 2. Teaching and learning resources (US\$18.1 million)

- 2.8 This component will finance: (i) the development and distribution of new teaching and learning materials; and (ii) new programs and the establishment of policies and mechanisms for updating and distributing texts and making these accessible to low-income and indigenous students. The objective is to improve the quantity and quality of learning that will result from the new curriculum. It also aims to reduce the variation in pupil performance which arises from differences in teacher quality by promoting the efficient use of learning resources by pupils and teachers.
- 2.9 The following four main activities will be undertaken:
- (a) the provision of learning resources includes: core texts on loan for students in the basic education system; free texts and workbooks for 50% of low-income students; science kits for science and technology instruction, and instructional games; and 20 pilot computer-aided learning facilities to complement classroom learning. Indigenous groups will receive bilingual materials and in their mother tongue in the lower grades. Lower and upper secondary schools will receive books for libraries, science materials and education kits for mathematics, art, and physical education to support the new programs.
 - (b) Executing Agency and school personnel, including librarians, will be trained in the use of the new learning resources the project will introduce. Observation tours will be provided to learn best practices in the management and application teaching and learning resources.
 - (c) Studies to evaluate, among other subjects: (i) alternative ways to finance and provide textbooks and learning resources; and (ii) the impact of education technology on classroom learning.
 - (d) The establishment of a computerized stock accounts, accounting and distribution systems to support the management of teaching and learning resources.

Component 3. Teachers, directors and supervisors' professional development (US\$6 million)

- 2.10 This component will finance three main lines of activities: (i) one-time in-service training to prepare educators in new programs, new teaching methods and how to use new teaching resources and administer assessment tools; (ii) decentralize the in-service training which involves reshaping the MINEDUC training unit to take on more the role of policy making, coordinating and contracting, purchase more training from regionally dispersed university campuses and other training institutions, introducing

non-course alternatives for in-service training; and (iii) change existing training policies and incentives to encourage teachers, supervisors and directors to take more relevant and priority training. The objectives are to establish national training policies and incentive mechanisms to orient teacher, school director, and supervisor training towards educational priorities.

- 2.11 Project resources will be used to: (a) institute a more effective, decentralized structure for in-service development, based on local research and evaluation by universities, among others, to ensure needs are met at the national, regional and school levels; (b) provide specialized in-service training to support the implementation of new programs to 70% of pre-school teachers, all 14,000 primary school teachers and directors, all 11,000 secondary teachers; (c) retrain MINEDUC staff who will manage staff development including outsourcing of training services; and create incentive structures to link teacher training to pupil needs, educational priorities and new performance measures.
- 2.12 Specific activities include: studies of training needs; best practice observational tours; the incorporation university regional extension campuses in an in-service teacher training network ; and in the promotion of professional associations of teachers.

Component 4. Educational evaluation (US\$5.8 million)

- 2.13 This component will finance three main activities: (i) new assessment tools to evaluate student attainment of curriculum objectives; (ii) development of indicators and databases to track education system performance (IBRD finances hardware/IDB software and analysis functions); and (iii) the design of a national assessment system which would combine classroom assessments with national testing (MINEDUC will coordinate the design with technical support from the Bank and the IBRD). The project will: (a) provide training for teachers in classroom-based criterion-referenced testing techniques; (b) establish the capacity within MINEDUC and other institutions to design evaluation linked to revised curriculum , educational innovations and in-service training; (c) enhance MINEDUC's capacity to collect educational performance statistics to be used for decision-making; (d) strengthen the capacity of MINEDUC and selected universities to design, implement, analyze, interpret and disseminate results of evaluation studies; and (e) integrate the IDB- financed national, classroom-based criterion referenced and statistical evaluations with the sample based achievement tests, financed by the IBRD, which allow MINEDUC to periodically evaluate educational outcomes. Together these systems will establish comprehensive, formative and summative performance measures. The project will also support MINEDUC's efforts to participate in an international student attainment study.

- 2.14 The component will establish a classroom-based, criterion referenced evaluation system. The result will be to improve pupil performance by informing both learners and teachers of student progress which, in turn, helps to identify the teachers' professional development needs, provides a valuable instrument of system management and curriculum evaluation. By linking all these activities to the programming and administration of education, a continuous system of educational evaluation will be established.

Component 5. Improving operational efficiency (US\$10 million)

- 2.15 This component will finance activities aimed at improving operational efficiency: (i) technical assistance and system design to improve personnel management, planning, evaluation capacity and establish performance-based budgeting ; (ii) studies and technical assistance to guide the decentralization and related institution building (training directors and parents' associations to adopt new management responsibilities); (iii) assessments to identify required adjustments to installations and teacher allocations; (iv) support to examine non-traditional alternatives to accommodate the expansion of basic education (from 6 to 11 years) and improve access; and (v) the development of management information data to improve MINEDUC's capacity to manage the system as schools attain more autonomy. The objective is to increase MINEDUC's capability to plan, manage and administer the restructuring (basic education) and reorganization (decentralization) of the education system at the national, regional and school level.
- 2.16 To identify expansion needs the project will carry out an analysis using school maps and an inventory of school infrastructure and its current use. This will enable MINEDUC to propose ways to reorganize existing schools and staff and propose cost-effective alternatives to achieve the expansion of pre-school and lower secondary coverage. Should the mapping study recommend some class-room expansion and/or rehabilitation of schools in rural areas, an estimated US\$500,000 have been set aside for this purpose.
- 2.17 The planning, programming and budgeting system will enable MINEDUC to operate performance-based budgeting systems at both the school and regional levels. This component will also support the gradual transition to school-based management by equipping primary and secondary school directors and parents with the capacity to plan, implement, evaluate and manage the school budgets. As schools demonstrate competence in the management of their affairs, increasing responsibility will be transferred to them. By the end of the pilot phase, it is hoped that 95% of schools will have legally recognized parents' associations, actively participating in the administration of publicly allocated school funds and not simply the supplementary finance obtained from the payroll tax. MINEDUC has already transferred non-payroll budget resources to 30 schools to test capacity to manage budgets and analyze cost implications (how much more administrative staff is needed to

ensure proper management and controls are in place). The MINEDUC has agreed to conduct similar experiments with the 124 pilot schools the project will support. As these schools are a representative sample of the wide range of schools in the system (including single-teacher and multigrades schools) the evaluation results should help shape the necessary guidelines for decentralizing administrative responsibilities.

- 2.18 This component will also finance: (a) the development of plans for short and long-term management of education; (b) training for MINEDUC technical staff in budgeting, programming and monitoring of funds; (c) train primary and secondary school directors and representatives of parents' associations in educational planning and management ; (f) mount an awareness program to involve parents and parents' associations in school and community affairs; (e) studies to support the decentralization and modernization, the revision of selection and promotion procedures for teachers, and the redistricting of schools; (f) observational tours for MINEDUC staff see best operational practices in countries such as El Salvador; and (e) provide a special fund to support school and teacher initiated innovations.

C. Project cost, sources and conditions of Bank financing

- 2.19 The total cost of the project has been estimated at the equivalent of US\$73,254 million. The Bank will finance, through the Single Currency Facility of the Ordinary Capital (OC) resources in U.S. dollars, a loan for US\$58,126 million. The total local counterpart, US\$15,128 million, will be provided by the Government. Details are presented in Table II-1.

TABLE II-1 Cost and financing (in US\$000)				
COMPONENTS	IDB	LOCAL	TOTAL	%
1. Curriculum transformation	14,699	1,891	16,590	22.6
2. Teaching and learning resources	18,155	1,599	19,754	27.0
3. Teacher and director prof.development	6,032	587	6,619	9.0
4. Educational evaluation	5,778	701	6,479	8.8
5. Improving operational efficiency	10,068	2,368	12,436	17.0
6. Recurrent costs	0	900	900	1.2
6.1 Recurrent costs	0	900	900	1.2
7. Project Administration	2,528	2,524	5,052	6.9
7.1 Operating costs	0	2,524	2,524	3.4
7.2 Auditing costs	120	0	120	0.2
7.3 Monitoring costs	308	0	308	0.4
7.4 Evaluation costs	1,000	0	1,000	1.4
7.5 Supervision costs	1,100	0	1,100	1.5
8. Contingencies	285	53	338	0.5
9. Financial Costs	581	4,505	5,086	6.9
9.1 Commitment fees (0.75%)	0	436	436	0.6
9.2 FIV (1.0%)	581	0	581	0.8
9.3 Interests	0	4,069	4,069	5.6
TOTAL	58,126	15,128	73,254	100.0
Percentage	79.3	20.7	100.0	

NOTE: All components include the hiring of consulting services and related activities. US\$500,000 have been included in Component 5, to support expansion and/or rehabilitation of schools in rural areas.

2.20 The terms and conditions will be as follows:

Amortization period: 25 years
Grace period: 6 years
Disbursement period: 6 years
Interest rate: variable
Inspection fee: 1%
Credit fee: 0.75 annually on undisbursed balance
Currency: US Dollars from the Single Currency Facility

III. PROJECT EXECUTION

A. Overall execution and administration

- 3.1 The borrower and guarantor of the loan will be the Government of Panama who would be responsible for the debt servicing associated with the loan, and the executing agency will be the Ministry of Education (MINEDUC). Overall authority for project management and execution would be vested in the Minister of Education, who will rely on two outside advisory bodies that have a broader representation of sector experts and stakeholders to guide the dialogue and educational reforms the project will help implement (see par. 3.4 below). A Project Execution Unit will have lead responsibility for the daily management and administration of the project, including the coordination and supervision of all project activities, the technical, administrative and financial aspects of the project, and the submission of progress reports and documentation for loan disbursements to the Bank, as well as the purchase of goods and services required by the project. As a condition prior to first disbursement, MINEDUC will have to select a Director for the Project Executing Unit.
- 3.2 The proposed project extends over a six-year period to ensure continuity between three key stages : (a) one year to complete sector dialogue and design of new programs; (b) a three-year pilot and evaluation phase; and (c) two years to support the extension of the program through the system. Careful consideration was given to allow ample time for the implementation of each phase and component, evaluate progress and make adjustments where needed 6/.
- 3.3 To build capacity and ensure the sustainability of the systems which the project will help to implement, the executing unit will assign technical specialists directly to the MINEDUC technical departments listed below which have lead responsibility for executing project components. The first four components listed below (par. 3.6-3.9) will be under the direct responsibility of MINEDUC's Central Department for National Education, and the fifth component (par. 3.10) will be under MINEDUC's National Planning and Institutional Development Department. In addition to the executing unit, the project will finance the contracting of short-term consulting services to provide design support for the dialogue, pilot and expansion phases and short-term expert assistance in areas such as social marketing and the design of assessment instruments at critical stages of project development.
- 3.4 As indicated in paragraph 3.1, two advisory bodies assigned to MINEDUC will also help guide project activities: (a) the Modernization Commission, already established, will be responsible

6/ A detailed chronology of lines of activity is included in Annex III-1 in the project files.

for advising MINEDUC on the implementation of modernization activities; and (b) other present and future advisory groups to help orient and direct the curriculum transformation dialogue and process at the national level .

- 3.5 Finally, and as a condition prior to first disbursement, the Executing Agency will be required to present an annual operational plan for all components , which will be based on the action plans for each component already reviewed and approved by the Bank 1/.

B. Administration of Component 1. Curriculum transformation

- 3.6 The General Directorate for Curriculum and Educational Technology, with continuous inputs from school directors, teachers, and parents' associations, supported by the Project Executing Unit and external experts, will be responsible for: (a) establishing a technical working group on curriculum transformation within MINEDUC, and providing pertinent training; (b) organizing meetings to initiate dialogue and create consensus at all levels of the curriculum transformation process, between teachers, administrators, experts, policy makers, community and parent groups, and other stakeholders; and (c) creating, coordinating curriculum development training and communication activities. An international education expert will be assigned to assist this division in the coordination of this effort for the first four years of the project. At the end of the fourth year, all activities under this component will be the sole responsibility of the division. The selection of the international consultant and Bank approval of a preliminary action plan for this component will be a condition to use resources from this component.

C. Administration of Component 2. Teaching and learning resources

- 3.7 The Teaching and Learning Resources Division, supported by the Project Executing Unit, will be responsible for establishing a technical working group on teaching and learning resources within MINEDUC, and managing the provision of all project related teaching and learning resources. Both international and local consultants will be hired to assist MINEDUC in developing: (a) new policies and procedures for resource management and distribution; (b) new texts and resources during the pilot phase; and (c) the design of programs to expand resource distribution activities to all schools after completion of the pilot phase, by the fourth year of project execution. These consultants will also receive feedback from school directors, teachers, and parents' associations. Disbursements of resources from this component will be contingent upon the selection of the consultants and Bank approval of a preliminary action plan to support the implementation of this component. Funding to support further investments in learning resources after

1/ Annex III.2 in the Project Files contains Action Plans for all project components

the evaluation of the pilot phase will be contingent on Bank approval of text policy implemented by the MINEDUC.

D. Administration of Component 3. Teachers, directors and supervisors' professional development

- 3.8 The Professional Development Division, assisted by the Project Executing Unit, will be responsible for establishing a technical working group on professional development within MINEDUC to develop new training policies and propose a new incentive system to tie staff development and mobility to educational priorities. This working group, with the continuous inputs from school directors, teachers, and parents' associations, will be responsible for: (a) designing a proposal for a professional development network; and (b) coordinating and supervising the training activities of the directors of educational centers in professional development. One international consultant will support national counterparts for the first four years of the project. Disbursement of resources from this component will be contingent upon the selection of this consultant and Bank approval of a preliminary action plan to support the implementation of this component.

E. Administration of Component 4. Educational evaluation

- 3.9 The Educational Evaluation Unit, supported by the Project Executing Unit and expert assistance to be provided through an international firm, will be responsible for establishing a technical working group on educational evaluation within MINEDUC, which will include internal (MINEDUC staff) and external (Universities and the National Educational Institutes) groups working on developing a new educational evaluation system. With the guidance of the working group, and feedback from school directors, teachers, and parents' associations, this Division will: (a) provide training and advice on educational evaluation theory and practice to teachers, school directors and project staff; (b) design a proposal and implement a national evaluation system; (c) design training activities in conjunction with the Teacher Preparation and Professional Development Division of MINEDUC to support the implementation of classroom-based evaluations to support curriculum objectives and measure student progress; (d) design an evaluation of data collection systems at the school, regional and central levels to support program related evaluations; (e) coordinate and supervise all training related to implementing evaluation activities throughout the life of the project; and (f) provide technical support to the Project Executing Unit's Director in all evaluation activities, including the review and analysis of evaluation studies and research proposals. One international consultant will be assigned to the Educational Evaluation Department to support national counterparts for the first four years of the project. Resources from this component will be contingent upon the selection of this consultant and Bank approval of a preliminary action plan to implement this component.

F. Administration of Component 5. Improving operational efficiency

- 3.10 The National Directorate for Finance and Institutional Development will be responsible for the implementation of new mechanisms, processes and practices that will improve the overall operational efficiency of MINEDUC. The department will be supported by one local consultant assigned by the Executing Unit to help coordinate the technical assistance, studies and training activities financed by this component. Resources from this component will be contingent upon the selection of this consultant and Bank approval of a preliminary action plan to support the execution of this component.

G. Terms of reference for consultancies

- 3.11 The terms of reference for all the above-mentioned consultancies (par. 3.3 and 3.6-3.10) have already been prepared, reviewed and agreed upon between MINEDUC and the Bank 8/.

H. Procurement of goods and services

- 3.12 Procurement of goods and services will be done according Bank guidelines, set forth in Annex B of the loan contract, and will be carried out by MINEDUC at the central level. MINEDUC has substantial experience executing IDB-financed projects and has therefore been using bidding procedures accepted by the Bank for several years.
- 3.13 The schedule for contracting of goods and services for the first year of project implementation has already been established. The procurement schedule for subsequent years will be agreed upon and approved during the annual IDB-supervision missions and will be based on implementation status and budgetary availability.
- 3.14 Established ceilings are US\$1 million for works and US\$350,000 for goods and related services, beyond which an international competitive bidding process will be required. Procurements below these amounts will be governed by national legislation which require national public bidding or competitive procurement methods established by national regulations.
- 3.15 The contracting of studies and consulting services will be carried out according to the guidelines and procedures set forth by the Bank.

I. Execution period and disbursement calendar

- 3.16 The proposed period for project implementation and loan disbursements is six years. The cost estimates prepared for the various components would serve as a basis for project

8/ Terms of reference for all consultancies are listed in Annex III-3 in the project files.

implementation planning and would be updated annually by MINEDUC in preparation for the Bank's annual supervision reviews. The tentative disbursement schedule is presented in Table III-1.

Table III-1 (US\$000)

Source	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	TOTAL	%
IDB/OC	13,125	12,243	10,141	9,875	8,128	4,614	58,126	79.3
Local	1,325	1,858	1,991	2,750	3,183	4,021	15,128	20.7
Total	14,450	14,101	12,132	12,625	11,311	8,635	73,254	100.0
%	19.7	19.2	16.6	17.2	15.4	11.9	100.00	

J. Retroactive financing

- 3.17 Retroactive financing of eligible expenditures for key activities of all components would be required to finance some actions that, at the request of the Bank, are necessary to avoid delays in the execution of the project. To this effect, it is recommended to approve US\$2 million in retroactive financing for expenditures incurred in accordance with procedures substantially similar to IDB procedures and which have been reviewed and approved by the Bank. Said expenditures shall have been incurred within a maximum period of 12 months prior to the approval of this project.

K. External auditing

- 3.18 During project implementation, the financial statements of the project will be audited by Panama's General Controller.

L. Monitoring, control and follow-up

- 3.19 Monitoring will be continuous. Its purpose will be to monitor and evaluate progress by component, and the effectiveness of the activities performed. This will allow the Bank and MINEDUC to evaluate lessons learned, help foresee needed changes and adjust implementation, whenever appropriate and necessary.
- 3.20 The project will be subject to both internal and external monitoring and evaluation. These evaluations will measure impacts on: (a) learning processes; (b) educational outputs; (c) the progress and/or efficiency of key systems the project seeks to implement and the project's impact on operational efficiency. A mid-term evaluation is contemplated to take place after the fourth year (or completion of pilot phase) of the project.
- 3.21 Given the nature and special characteristics of the project, the following evaluations will be conducted by MINEDUC with the technical support of the consultants hired for this project, during the first five years of the project:

- 1) At the end of the first year, an evaluation will focus on the results of the curriculum reform process and the proposed design and action plans for implementation of pilot programs and new operational guidelines.
- 2) During the third year, and after completion of the pilot program for primary grades (1-6) in the previous two years, an evaluation to assess the results of the pilot experience will be conducted. This evaluation will provide a basis for designing the extension of the new programs to all primary schools.
- 3) During the fourth year, and after the secondary (lower and upper) pilot programs have been in execution for three years, an evaluation will be conducted to assess the results of the pilot experience and will recommend a comprehensive strategy for implementing new programs at the lower secondary and upper secondary level.
- 4) During the fifth year, a comprehensive evaluation will be conducted to measure the viability and sustainability of the systems created through the project, paying special attention to: (a) program and curriculum planning and development; (b) training, supervision, and evaluation of teachers; (c) educational evaluation; (d) program-based budgeting and evaluation; and (e) learning resources management and administration.

M. Bank supervision

- 3.22 The Bank will supervise the progress and execution of the project, through its Country Office in Panama (COF/CPN) and through, at least, one review mission per year by the Project Team and technical consultants when needed, to be carried out jointly with specific authorities responsible for the project implementation.

IV. VIABILITY, BENEFITS AND RISKS

A. Political and institutional feasibility

- 4.1 With the support of the IBRD and the IDB, Panama is simultaneously undertaking profound transformation in three of the most important but least tangible domains of education, the contents of schooling, the methods of teaching and the governance of the system. In addition, the quantity of schooling from which Panamanian children will benefit is set to rise by increasing the number of days in the school year to 200 in 1997 and subsequently to 210, and raising the number of years of obligatory schooling from six to eleven. Despite the high level of resources devoted to education, the levels of coverage attained, it is widely acknowledged that the outcomes have not been commensurate with the effort expended. The symptoms and their causes have been described in Chapter I, the proposed solutions and the benefits the project is expected to generate have been described in Chapter II. Chapter IV outlines why the project is deemed feasible and the risks inherent in such an ambitious operation.
- 4.2 After almost two decades of bitter disagreements between teachers, parents, the church, employers, and the political parties, agreement has been reached on the framework for modernizing the education system. The framework has been codified in the new education law, Law 34. The degree of political commitment can be gauged by a number of measures. There has been a constitutional enactment of a legal minimum share of 6% of national income to be devoted to education. A ten year accord on the education plan has been reached between the MINEDUC on one side and the representatives of the teachers' union, the student association, the parents organization, the employers' unions and all political parties, including the present administration on the other side. This pact will guarantee that support for the modernization plan will transcend changes of government during project execution.
- 4.3 Two important forces have helped to build consensus on the key changes required to modernize Panama's education. The first has been the range and intensity of debate leading to the new law. The second is the realization that the considerable progress achieved by countries in Eastern and Southern Europe and East Asia, which were the equal of or inferior to Panama at the time of the great ferment in popular education following World War II, has left Panama relatively behind in comparisons of attainment.
- 4.4 MINEDUC plans to engage universities, educational institutes and other groups in improving education, specifically in the provision of technical services for curriculum development, educational evaluation and testing, policy analysis and training of teachers and other educational professionals. Communities and parents will participate in the management of schools. With the introduction of performance based budgeting, improved measurement of performance,

increased capacity for policy and program development, and greater accountability at the regional and school level, dissatisfaction can be more readily translated into evaluative and constructive criticism and remedial action.

- 4.5 Clearly, the single most important source of support for the project must come from the teachers, without whose participation any profound change is doomed. Teachers' intrinsic motivation will be enhanced by the improved availability of teaching materials, the observability of pupil progress, the increased valorization of education by parents, and the recognition accorded to teachers through their participation in the design of the transformation. At the same time, increased access to relevant training, and its subsequent impact on teachers' job opportunities, promotion and earnings will increase extrinsic motivation and help reestablish the professionalism of Panama's teachers.
- 4.6 The degree of parental participation foreseen by the reform should, with help, be easy to sustain, given the generally high standards of education which have long prevailed in Panama and the near universality of parent-teachers organizations which, as proposed by the new law will have a more active role in school management and in guiding sector policy in general.

B. Technical feasibility

- 4.7 The main strands of the modernization have all been carried through successfully in many countries. Ironically, the lack of change in Panama has allowed it to benefit from the experience gained over several decades, in Western Europe and North America, in introducing learner-centered, humanist, and constructivist curricula. Similar reforms have occurred or are in train in neighboring Costa Rica and El Salvador. Among the lessons learned are that consultation is vital, that the transformation of the system should support teacher professionalism and autonomy, not replace them, and that student testing should not become so dominant that test administration occupies too much of the teachers and pupils' time.
- 4.8 The difficulty of integrating eleven years (grades) of education presents perhaps the major challenge to the project. A six year execution period is required in order to guarantee the continuity needed to lay the foundations for a curriculum which will only come to full fruition in about thirteen years. The current core primary curriculum will form the basis from which the main streams of pre schooling and secondary education will be developed.

C. Financial and fiscal impact

- 4.9 The projections of expenditures in the education sector took as basis the executed budget as of December 31, 1995. These projections include the costs of the projects financed by both the Bank and the World Bank. The impact of these project-related

expenditures will be minimal on a year-to-year basis, representing 0.9 % of the non-financial public sector accounts or 0.2% of GDP. The additional project-related recurrent costs are also small, representing about 0.25% of the budgeted counterpart during execution.

- 4.10 Although the direct financial impact of the IDB and IBRD projects may be small, the overall government program for education is relatively ambitious and has been given a strong commitment of funding through the requirement that a minimum of 6% of GDP be invested in education. The main budget item, teachers' salaries, was projected using the estimated demand for teachers and assuming that teachers' compensation increases at the same rate as inflation (expected to be 1.77% annually over the six-year period). Other budget items are projected to grow at the same real rate as GDP. Using the high and low estimates of projected teacher requirements, the share of MINEDUC spending in GDP will rise from 5.1% of GDP in 1995 to approximately 5.3% in 1998. By the year 2000 or 2001, spending would decline to near 5.0% as a consequence of savings generated by the program which will reduce the number of students who repeat grades, improve the allocation of expenditures, and rationalize the use of facilities and teachers. As part of the Government's financial programming, these savings and the additional 1% of GDP will go toward further increases in access, quality, and special programs.
- 4.11 The specific budgetary procedures which will produce savings include the introduction of objective measures to monitor efficiency gains; more efficient supervision, management, planning and budgeting systems based in the schools; and improving fiscal control. In the medium-term, the move to performance budgeting will ensure sector that spending results in higher quality education as resources are reallocated to more cost-effective alternatives. In addition, MINEDUC's commitment to increasing the efficiency expenditures in other subsectors of education will improve the allocation of resources between levels and subsectors of the current system.
- 4.12 Government fiscal policy is to assign priority to the provision of counterpart funds to multilateral loans as the expansion of multilateral debt is an integral part of its debt servicing strategy.
- 4.13 The Government will also gain from: (a) restructuring and improving its debt profile; (b) savings in the servicing of external debt; (c) reducing public sector salary costs with new budget controls and pension reforms; d) the agreement with the IMF to reduce public sector payroll levels in proportion to GDP; and e) eliminating the

practice of automatically increasing teachers salaries at rates that exceed inflation, - "incremental creep". 9/

- 4.14 The projections indicate that over the medium term, the public sector's education program will not face any particular financial restrictions as long as the requirement to spend 6% of GDP on education is upheld. However, in order to assure that the additional funds have the desired impact on educational status, the analysis indicates that during the next five years the government will have to pay special attention to those factors which significantly affect financial efficiency, many of which are part of the current project such as rationalizing the utilization of teachers. Other factors will also have to be carefully monitored during the project's annual review meetings, such as restricting wage increases to the pace of inflation, and limiting increases in other parts of public education sector spending to rates comparable to that of GDP growth.

D. Socioeconomic Impact

- 4.15 The socioeconomic impact of the program may be quite substantial. To the degree that the project supports government efforts to improve both the internal and external efficiency of the school system, it will have the following benefits: (i) reduce time spent by children in schooling due to repetition; (ii) increase the number of graduates; and (iii) increase the relevance of schooling for subsequent levels of education and the demands of the labor market. Furthermore, the increases in efficiency when combined with a projected demographic decline in school age population should make it possible to achieve a more equitable distribution of education and apply more resources to secondary and pre-school education. The curricular reform, by incorporating bilingual and bicultural elements for specific localities, should also increase the demand for and efficiency of education in rural areas. It is expected that the combination of improved quality, greater access, and more relevant curriculum will have a greater than proportional impact on the social mobility of children from low-income and indigenous families.

E. Project Benefits

- 4.16 Component 1, Curriculum Transformation. It is expected that, by the end of the project's fifth year, at least 80% of all schools will be implementing new curriculum programs. In addition to modernizing content and improving related methods, the project will pay particular attention to resolving a number of chronic causes of

9/ Teacher salaries fluctuate around 1.85 and 2.91 times GDP/Capita, only Jamaica, Brazil and Costa Rica maintain a higher ratio. (Source Lockheed & Verspoor: "Improving Primary Education in Developing Countries" World bank, 1991. Teachers' monthly salaries in July 1994 ranged from \$338 for a primary debutante to \$774 for a special secondary teacher with 28 years of experience. Earnings are thus commensurate with other wages in the economy, reducing the likelihood of using salary demands as a pretext for disrupting reform.

inefficiency and inequity such as: (a) static curricula will be replaced with broad curriculum objectives, which guarantee more flexibility; (b) the introduction of core subjects and predefined core skill competencies to create the necessary space to address local needs holding all education to the same universal standards; and (c) the updating of teaching methods will eliminate current reliance on memorization and the passivity of students in learning.

- 4.17 Component 2. Teaching and Learning Resources. It is expected that: (i) a plan to implement educational resources and equipment in 124 pilot schools will take place during the first year; (ii) a new system of text distribution and information management will be implemented by the end of the second year; and (iii) a new resource management policy, plans and procedures, will be implemented throughout the system by the end of the fifth year. The impact of this component will be to overcome weaknesses in current text selection policies, which result in too much variation in prescribed texts, reduces the ability of parents to purchase books with confidence in their utility, thereby limiting pupils' access to books.
- 4.18 Component 3. Teachers and Directors Professional Development. It is expected that: (i) new staff development policy and systems delivery will be functioning effectively and training decentralized by the end of the third year; (ii) 70% of teachers will have completed the retraining and are equipped to effectively use new teaching tools, and execute and benefit from new assessment instruments by the end of the sixth year; and (iii) 90% of MINEDUC staff and regional directors will have attained the basic skills and tools to facilitate the implementation of new programs and contribute to on-going curriculum development and updating. The component seeks to address a number of the causes of wastage in the allocation of resources in education. Teacher selection, promotion and transfer procedures that are more adaptable to the new requirements of the project and the overall reform (decentralization) will generate, will have been implemented. New training policies and delivery mechanisms will have helped change MINEDUC's focus from provision of in-service training to guiding training policy and facilitate the outsourcing of training. Moreover, increased access to training and teaching resources will mitigate the imbalances between urban and rural schools.
- 4.19 Component 4. Educational Evaluation. It is expected that by the end of the project's fifth year: (i) a new assessment system, based on the new curriculum, will be implemented; and (ii) objective standards to measure educational attainment will be used. The activities financed under this component will overcome a number of weaknesses in the current and recently proposed system. By developing objective attainment measures, improving the collection and analysis of educational indicators and building the capacity of schools, regional, and central staff to systematically administer and analyze relevant data, these problems will be significantly minimized.

- 4.20 Component 5. Improving Operational Efficiency. It is expected that, by the end of the project: (i) at least 85% of schools with four or more teachers, with the support and participation of parent's associations will be able to manage their non-payroll budget; and (ii) at least 90% of all schools in the system will have achieved some level of autonomy.
- 4.21 An overall benefit will be that improved teaching methods, basic learning resources, more appropriate materials, better prepared teachers and improved educational facilities are expected to increase attainment rates of special groups at a faster rate than the 20% anticipated for the population as a whole. It is expected that primary age children in the first and second grades should increase their attainment by 30% at least amongst the indigenous and remote area poor populations. Nevertheless these results will cannot be effectively measured until the fourth year of the project where pilot group results could be measured against baseline data.

F. Project risks

- 4.22 The main risk relates to possible delays in the implementation of the proposed project, which could lead to disillusionment with, and abandonment of the transformation process. The risks of delay will be mitigated by: (a) the priority assigned by GOPN to the timely execution of this project; (b) the continuous dialogue with stakeholders; (c) strengthening MINEDUC's operational capacity; and (d) the commitment of the Bank to provide continuous supervision, support and guidance for at least six years of the reform.
- 4.23 A second risk relates to a possible mismatch between existing skills and the skills needed by the new curricula, which will require not only a major training effort but assistance to redundant professions.
- 4.24 A third risk is that the coordination that should exist between MINEDUC, the Bank, and IBRD to develop and consolidate the assessment system, be less than optimal. Considering that this coordination must occur at early stages of project implementation, the Bank would be in a position to recommend corrective actions as the direction of the design of this assessment system becomes clearer.
- 4.25 Although MINEDUC has successfully executed seven IDB projects, these have mainly been school infrastructure. MINEDUC has good technical staff but there are gaps in its capacity in critical areas such as curriculum development, program planning, design and management, and evaluation. To mitigate these the project will finance technical assistance to provide training and research expertise for the execution of each component. These extra specialists will join existing teams in the MINEDUC with the complementary aims of carrying out the reform and inculcating the necessary skills in the staff of the Ministry.

- 4.26 Transformations as extensive as the one envisioned in this project require leadership, political will and consensus building. To mitigate the risk that these elements waiver during execution, the government has signed a pact with opposition parties, teachers organizations, parents, private sector leaders and other stakeholders for a 10-Year Education Strategy for the Modernization of Panama's Education. In addition, the proposed project will finance consensus building mechanisms, social marketing activities, change of incentives, and technical support to help guide the transformation process.

G. Environmental issues

- 4.27 The Bank's Environmental Committee classified this project as Category II in its meeting of July 23, 1996, because most of the activities are concentrated in curriculum transformation, training, studies, and policy and institutional strengthening.

H. Project impact on women

- 4.28 Although the proposed project is not specifically targeted at women, half of the children to benefit from improved and expanded education would be girls, whose access to higher levels of education and, ultimately, work opportunities would thus improve. In addition, the vocational content of secondary education has been based on traditional crafts with their inherited sex role stereotyping. With the new curriculum content, based on more general technological education, such stereotyping will not arise.
- 4.29 Additional benefits can also be expected given that increasing the education levels of women improves the health at birth and subsequent educational attainment of their children.

LOGICAL FRAMEWORK

SUMMARY	VERIFIABLE INDICATORS (OVI)	MEANS OF VERIFICATION (MOV)	IMPORTANT ASSUMPTION
<p>ist the Government in roving the efficiency, essibility and relevance the education sector in ama.</p>	<p>1.1 Improve by 20% results of attainment tests at basic and secondary education levels</p> <p>1.2 Increase by 30% results of attainment tests for primary age children in 1st and 2nd grades in indigenous and remote area populations.</p> <p>1.3 Together with the IERD project, coverage in rural and poor areas should increase from 44% to 75% for 4-5 year olds, and from 16% to 44% for 15-17 year olds.</p> <p>1.4 Increase the percentage of students completing: (i) 6th grade from 78% in 1997 to 90% in 2002; (ii) 9th grade from 61% in 1997 to 71% in 2002; and (iii) 12th grade from 17% in 1997 to 26% in 2002.</p> <p>1.5 Decrease from 15.4 to 13.7 years for a child to graduate from basic education</p>	<p>1.1 MINEDUC official statistics</p> <p>1.2 MINEDUC official statistics</p> <p>1.3 MINEDUC official statistics</p>	<p>1. GDP growth is reasonable</p> <p>2. Families and students adapt to changes in education system by dedicating time and resources to schooling</p> <p>3. Government and social partners are accountable for results from its investment spending.</p> <p>4. Timely implementation of measures to measure current levels and subsequent implementation of the Assessment system.</p>

Component 1	Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
OVERALL EFFICIENCY			
Improve personnel management	1.1. By the 2nd year, a proposed action plan for a new personnel management scheme will be presented to the Bank and the new system will be fully adopted by the 5th year (for more details see Activities)	1.1 MINEDUC official statistics and evaluations from school directors, teachers and parents' associations. Annual Supervision Mission Reports.	1. National budget re during project exe 2. Support from educa Government to enac Education Law and Strategy for Modern Education in Panam (2006)
Capacity and rationalization	2.1 The costing and plans to expand capacity and implement non-traditional alternatives to classroom expansion will be presented to the Bank in the 2nd year and 80% implemented by the 4th year. Rationalization will be ongoing. (For more details see activities)	2.1 MINEDUC official statistics and evaluations from school directors, teachers and parents' associations. Annual Supervision Mission Reports.	
Establish performance-based budgeting	3.1 By the end of the project, at least 85% of schools with more than 4 teachers, and with the support and participation of parents' associations will manage their non-payroll budget.	3.1 MINEDUC official statistics and evaluations from school directors, teachers and parents' associations. Annual Supervision Mission Reports.	
Develop parents' associations in pilot schools	4.1. By end of the project at least 90% of schools, with the support and participation of parents' associations will have achieved some level of institutional autonomy	4.1 MINEDUC official statistics and evaluations from school directors, teachers and parents' associations. Annual Supervision Mission Reports.	

Component 2	Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
<p>CURRICULUM</p> <p>Transformation and improvement of curriculum</p> <p>Establishing system for updating curriculum up-to-date</p>	<p>1.1 80% of all schools will be implementing new curriculum programs by the end of 5th year</p> <p>2.1 System will be designed in 3 years, and fully implemented in the 4th year.</p>	<p>1.1 MINEDUC official statistics and evaluations from school directors and teachers.</p> <p>2.1 Annual Supervision Mission Reports.</p>	<p>1. Interest and motivation of teachers, school directors, supervisors and MINEDUC to implement new curriculum</p> <p>2. MINEDUC totally committed to carry out required actions to implement new curriculum</p> <p>3. Teachers accept and implement new curriculum</p> <p>4. Project Executing Agency positively accepted by educational stakeholders in order to carry out transformation of new curriculum</p>
<p>Component 3</p> <p>NATIONAL EVALUATION</p> <p>Establish classroom-based criterion-referenced evaluation</p> <p>Develop indicators of educational system's performance</p> <p>Design national assessment system for pupil performance</p>	<p>1.1 A new assessment system, based on the new curriculum, will be implemented by the 5th year of the project.</p> <p>1.2 Objective standards to measure educational attainment will be used by the 5th year of the project.</p> <p>2.1 Education indicators and related monitoring systems will be implemented in 2nd year and fully operational in 3rd year.</p> <p>3.1 Fully implemented in 5th year</p>	<p>1. MINEDUC official statistics and evaluations from school directors, teachers, and parents' associations.</p> <p>2. Annual Supervision Mission Reports.</p> <p>3. National Assessment Plan</p>	<p>1. MINEDUC promotes new training programs and new curriculum.</p> <p>2. Teachers accept new reform and new evaluation procedures for the performance</p> <p>3. MINEDUC technical staff continuously evaluates and follows up and adopts pertinent actions and adjustments</p>

COMPONENT 4	Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
<p>DISTRIBUTING RESOURCES</p> <p>Contribute new teaching materials to match new curriculum</p> <p>Establish system for allocating of materials and distribution</p> <p>Text policy</p> <p>Policies and procedures for learning and teaching resources</p>	<p>1.1 Plan to distribute educational resources and equipment to 124 pilot schools. Completed and implemented during 1st year of the project.</p> <p>2.1 A new system of text distribution and information management will be tested by the end of 2nd year and fully adopted by 5th.</p> <p>2.2 Resource management policy, plans and procedures will be implemented throughout the system by the end of the 5th year.</p>	<p>1. MINEDUC official statistics and evaluations from school directors, teachers and parents' associations.</p> <p>2. Annual Supervision Mission Reports.</p>	<p>1. MINEDUC promotes new distribution system for new curriculum.</p> <p>2. MINEDUC allocates resources for purchase and distribution of new materials.</p> <p>3. Teachers and parents' associations support the new distribution system.</p> <p>4. MINEDUC, with feed-back from stakeholders, designs a new system for material distribution.</p> <p>5. MINEDUC allocates resources for continuous consultation and update of the system.</p>

IVE COMPONENT 5	Verifiable Indicators (OVI)	Means of Verification (MOV)	Important Assump
<p>ER DEVELOPMENT</p> <p>-time upgrade training to pt to new curriculum tem</p> <p>nge training policy</p> <p>entralize in-service elopment</p>	<p>1.1 New staff development policy and systems delivery are functioning effectively and training has been decentralized by the end of 3rd year.</p> <p>2.1 New policies implemented and 70% of teachers will have completed the retraining and are equipped to effectively teach new programs, use new teaching tools, and execute and benefit from new assessment instruments by 6th year</p> <p>3.1 70% of MINEDUC central and regional directors have attained the basic skills and tools to facilitate the implementation of new programs and contribute to on-going curriculum development.</p>	<p>1 MINEDUC official statistics and evaluations from school diectors, teachers and parents' associations</p> <p>2. Annual Supervision Mission Reports, policy statements and action plans</p>	<p>1. MINEDUC conducts c promote training t curriculum</p> <p>2. Teachers support a new training syste</p> <p>3. MINEDUC, upon cons with stakeholders, changes in training</p> <p>4. Teachers support n policy and proposed system</p> <p>5. MINEDUC promotes, universities accept decentralized syste training provision</p>

ACTIVITIES COMPONENT 1			Activity to output
Study of promotion, selection, transfer and evaluation	1.1 Proposed plan of action in 2nd year, tested in 3rd year and fully adopted by end of 5th year.	1. MINEDUC budgetary execution information	1. Sufficient and timely budgetary allocations for program implementation
Definition of new profile of teachers	1.2 Proposed in 1st year and adopted by end of 3rd year.	2. Supervision missions	2. Stakeholders support and timely execution of project activities
Study of retraining and conversion requirements (e.g. Voc. Tech.)	1.3 Designed in 1st year, tested in 2nd and 3rd years and implemented nationally by end of 4th year.		
Study of school mapping.	2.1 Starting in 1st year and completed by 2nd year.		
Organize use of existing schools and staff.	2.2 Starting in 1st year and nationally implemented by 4th year.		
Expansion to 6-11 year olds	2.3 Proposed in 1st year, tested in 2nd year for basic and secondary services to go from 25,000 to 56,000 students by 2002		
Plan to design performance management system, incorporating schools, regional centers, administrators' capacity, school size	3.1 Proposed by middle of 1st year, tested in 2nd year and fully implemented by end of 4th year.		
Training of MINEDUC, school staff, parents' associations.	3.2 Designed in 1st year, tested in 2nd year and implemented by end of 4th year.		
Support implementation in pilot schools (about 124)	3.3 Designed in 1st year, tested in 2nd year and implemented by end of 3rd year.		
Training	4.1 Designed in 1st year, tested in 2nd year and implemented by end of 3rd year.		
National campaign through universities	4.2 Starting by middle of 1st year and continue throughout life of project.		
Training directors and management groups to manage.	4.3 Designed in 1st year, tested in second year and implemented by end of 4th year.		

ACTIVITIES COMPONENT 2			Activity to output
<p>Establish new, broad, national curriculum objectives</p> <p> nationwide process of dialogue and consensus.</p> <p>Implementation of new curriculum programs</p> <p>Develop in parallel with new curriculum training for MINEDUC, supervisors, directors, teachers and outside experts.</p> <p>Establish the maintenance structure for the new curriculum with the know-how from MINEDUC</p>	<p>1.1 Designed in 1st year and tested in 2nd year</p> <p>1.2 Starting in 1st year and continue throughout life of the project.</p> <p>1.3 Implemented by end of 3rd year for basic education and by the end of 5th year for secondary education.</p> <p>2.1 Designed in 1st year and implemented by end of 3rd year.</p> <p>2.2 Designed in 1st year, tested in 2nd year and implemented by middle of 3rd year.</p>	<p>1. MINEDUC budgetary execution information</p> <p>2. Supervision missions and progress reports</p>	<p>1. Sufficient and timely budgetary allocation for program implementation and stakeholder support</p>

ACTIVITIES COMPONENT 3			Activity to out
<p>Develop evaluation system based on curriculum objectives</p> <p>Develop new evaluation system (test/feedback)</p> <p>Implement and expand new evaluation system</p> <p>Develop (with T.A.) to develop indicators of student flows, attainments teachers' performance (IBRD finances hardware)</p> <p>Develop (with T.A.) national assessment system at the national level using IBRD's testing for 6, 9, and 12 grades.</p>	<p>1.1 Designed in 1st year, tested in 2nd year.</p> <p>1.2 Designed in 1st year, tested in 2nd year.</p> <p>1.3 Implemented by end of 4th year</p> <p>2.1 Starting in 1st year and fully implemented by end of the project</p> <p>3.1 Proposed in 1st year and fully implemented by end of 5th year.</p>	<p>1. MINEDUC budgetary execution information, supervision missions and progress reports</p> <p>2. Program indicators, attainment measures and statistical reports.</p>	<p>1. Sufficient and timely budgetary allocation program implementation</p> <p>2. Technical capacity expected rates</p> <p>3. Stakeholder support transformation</p>

ITIES COMPONENT 4			Activity to oup
duce/purchase books, s, computers, games and tance teaching materials	1.1 Designed in 1st year and tested in 2nd year	1. MINEDUC budgetary execution information, supervision missions, program data and progress reports.	1. Sufficient and tim budgetary allocati program implementa stakeholders' supp
tribute books, maps, puters, games and tance teaching materials	1.2 Starting in 2nd year and continue throughout life of the project		
ining in use of books, s, computers, games and tance teaching materials	1.3 Starting by middle of 1st year and continue throughout life of the project		
ine core texts	2.1 Designed in 1st year, and implemented by end of 3rd year		
ablish "book lending" gram in poor schools	2.2 Designed in 1st year, tested in 2nd year and implemented by end of 4th year		
dy (with T.A.) to ablish definition of ponsibility for materials o? what?)	2.3 Designed in 1st year, and implemented by beginning of 3rd year		
rt and complete stock ounts	2.4 Designed in 1st year and completed by end of 3rd year		

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Appendix I

PROPOSED RESOLUTION

PANAMA. LOAN ____/OC-PN TO THE REPUBLICA DE PANAMA
(Educational Development Project)

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the República de Panamá, as Borrower, for the purpose of granting it a financing to cooperate in the execution of an Educational Development Project. Such financing will be for the amount of up to US\$58,126,000 from the Single Currency Facility of the Ordinary Capital resources of the Bank, and will be subject to the "Terms and Financial Conditions" and the "Special Contractual Conditions" of the Executive Summary of the Loan Proposal.

ITIES COMPONENT 5			Activity to oup
in for new curriculum in for active learning hniques in for new role essment tools) in for contribution to riculum development	1.1 to 1.4 Designed in 1st year and start in 2nd year for pre, primary and secondary schools	1. MINEDUC budgetary execution information, supervision missions and progress reports	1. Sufficient and tim budgetary allocati program implementa technical capacity anticipated levels
EDUC defines relevant ining	2.1 Designed in 1st year and implemented in 2nd year		
EDUC defines priorities training	2.2 Designed in 1st year		
nt system changed to rove existing system fects mobility)	2.3 Designed in 1st year, tested in 2nd year and implemented in 3rd year		
EDUC training unit haped	3.1 Plans of action designed in 1st year and implemented during 2nd year		
EDUC purchases more ining from regional persed universities	3.2 Designed in 2nd year and implemented in 3rd year		
ablish alternative (non- rse) in-service training.	3.3 Designed in 1st year, tested in 2nd year and implemented in 3rd year		