

DISTANCE EDUCATION PROGRAM

(ME-0052)

EXECUTIVE SUMMARY

BORROWER: Nacional Financiera, S.N.C. (NAFIN)

GUARANTOR: The United Mexican States

EXECUTING AGENCY: Ministry of Education

AMOUNT AND SOURCE:

Borrower:	US\$114.8 million
IDB:	US\$171.0 million
Total:	US\$285.8 million

FINANCIAL Amortization period: 20 years

TERMS AND Disbursement period: 5 years

CONDITIONS: Interest rate: variable

Inspection and supervision: 1%

Credit fee: 0.75% annually on the undisbursed balance

Currency: U.S. dollars, Single Currency Facility of the ordinary capital

OBJECTIVES:

The purpose of the program is to make the upper grades of compulsory basic education (grades 7 through 9, referred to herein as middle school) more widely available to communities that are not being efficiently served by the formal education system, by strengthening distance learning media at that level.

The program's objectives are to (i) strengthen the *Telesecundaria* system of television-assisted middle school education and improve its quality, (ii) further cost-efficient ways of offering out-of-school education at that level, and (iii) strengthen institutions in charge of distance education.

DESCRIPTION:

The program will pursue the above objectives through three subprograms:

Subprogram I: *Telesecundaria* middle-school education (US\$217 million). This subprogram will benefit young people in remote areas who finish elementary school in the regular interval and wish to go on to study the compulsory grades of middle school. The subprogram will: (i) improve the quality of education and terminal efficiency, (ii) broaden and consolidate

schooling opportunities, (iii) furnish and upgrade equipment, and (iv) improve evaluation standards and procedures.

Subprogram II: Adult middle-school distance education (US\$41.6 million). This subprogram is targeted to people who left school at sixth grade or never completed middle school, and now need to complete the full basic cycle in order to be employable in today's labor market which is demanding higher levels of education. The adult education model envisaged will build on successful distance-learning experiences and take particular heed of the failings of formal education programs for people who are working.

The model is flexible as to the time requirement for attaining learning targets for each grade. With tests to pass in every subject but working more independently, students will be able to graduate in two years rather than the three it would take in the formal school system. Reinforcement programs will be available for students who need them, as will counselors in the various subjects and grades.

Subprogram III: Training and development of human resources and improvement of material resources for distance education (US\$22.9 million). This subprogram will strengthen the capacity of teachers and academic counselors engaged in any form of distance education, to ensure that effective use is made of electronic media in the distance-learning process. A National Video Library will be created to strengthen distance-learning resources.

**ENVIRONMENTAL
REVIEW:**

The Committee on Environment and Social Impact reviewed and approved the environment and social impact brief on June 9, 1997, and the present document on October 24, 1997. Its recommendations have been taken into account in this proposal (paragraphs 4.8 to 4.14).

BENEFITS:

The proposed project will have a strong social impact, supporting as it does efforts to raise the academic level of residents of very remote communities and adults with incomplete basic education. Most of the program beneficiaries fall into the bottom income deciles; education is crucial for their social advancement.

Impact on women: The program will provide an avenue for larger numbers of women to add to their schooling, making them more productive workers and

improving their lives. Subprogram I will give women living in remote communities (in which the education gender gap is most pronounced) an opportunity to continue their studies. Improvements in the quality of these education options also should bring down dropout rates, which are higher for women. Subprogram II seeks to remedy the aforementioned gender disparity by narrowing the middle-school education gap.

Indigenous communities: The program is expected to have a very beneficial impact on indigenous communities. Activities planned for subprograms I and II will provide a means for residents of these communities to continue their studies, to complete the full nine years of compulsory basic education. An important consideration here is that, in their elementary school programs, indigenous students acquire language skills in Spanish as well as their native language; hence, when the children finish elementary school, they are also equipped to continue studies in Spanish. Through the middle-school education statistics and evaluations envisaged in the proposed subprograms, information broken down into various classifications will be assembled, to produce meaningful diagnostic assessments.

RISKS:

A potential risk identified for this operation is that of effective demand for middle school on the part of persons who never attained that academic level. Their numbers are considerable, and a significant percentage have expressed a desire to continue their studies, but there is no way of accurately gauging how many will enroll in the program. To counter this risk, the program includes promotional activities to make prospective students aware of program offerings and encourage them to register. Moreover, subprogram II is geographically targeted to municipalities that are home to the highest numbers of people in this situation.

**EXCEPTIONS TO
BANK POLICY:**

The average monthly exchange rate may be used in accounting to the Bank for expenditures made with program funds only for consultant fees and small procurement items. Such payments will be made by the executing agency to purchase goods and services anywhere in Mexico, with documentation to be filed at various sites, mainly for inexpensive items. This exchange-rate arrangement will neither (i) entail an exchange risk for the Bank or the executing agency, the risk being borne by the guarantor, nor

(ii) adversely affect the program or skew its outcome in terms of costs (paragraph 3.11).

In light of the large number of individual consulting contracts the program will require (roughly 2,000 consultants across the country, with monthly fees of about US\$350.00 each), it has been agreed that Ministry of Education rules and procedures will be followed in awarding these contracts. Teachers currently working for the ministry may be hired for additional services, in accordance with ministry rules (paragraph 3.7).

The National Center for Higher Education Assessment (CENEVAL) may be engaged directly for the evaluation work proposed in the program. Consultants may be hired to supplement and reinforce the Center's work (paragraph 3.8).

**THE BANK'S
COUNTRY AND
SECTOR STRATEGY:**

In accordance with the principles of the 1995-2000 Education Development Program and the Mexico country paper, the Bank will continue to promote equity and efficiency, by helping to develop new educational avenues targeted to groups with low educational attainment. Efforts will be directed toward remote communities (including indigenous groups), young workers, and persons with low incomes who found it necessary to interrupt their studies at some point. IDB involvement in the proposed operation will be a means of extending middle school and high school education opportunities using distance learning media that can reach remote areas and groups who are unable to attend regular schools. The Bank will monitor such programs to ensure that they are flexible enough to encompass new groups and, in so doing, improve equity and efficacy in this sector.

**PROCUREMENT OF
GOODS AND CON-
SULTING SERVICES:**

Thresholds above which international competitive bidding will be required are US\$5 million for construction work, US\$350,000 for goods and services, and US\$200,000 for consulting services.

POVERTY-TARGETING:

According to a 1996 sample survey conducted by the Ministry of Education, 50% of the prospective beneficiaries of the proposed subprogram II are families with monthly per capita incomes of US\$38 (300 pesos), which therefore would be classified as poor by reference to the poverty line for Mexico established by the Bank at US\$256 monthly per capita. Furthermore, the lower a household's income, the more likely its members are to enroll in the two modes of distance education programs. Subprogram I is geographically targeted to rural communities in which

poverty correlates closely with rural emplacement. The *Telesecundaria* middle-school programs focus on areas reporting high unmet basic needs indexes, according to the National Population Commission yardstick. Accordingly, all three subprograms qualify as poverty-targeted investments - subprogram I on account of its geographical targeting, and subprograms II and III by virtue of the percentage of poor beneficiaries, according to the guidelines in document GN-1964-2.

**SPECIAL
CONTRACTUAL
CONDITIONS:**

a. Conditions precedent to the first disbursement

- Submittal of the Funds Transfer Agreement signed by the government, NAFIN, and the executing agency (paragraphs 3.1 and 3.2).
- Evidence that the coordinating group for the program has been formed (paragraph 3.2).
- Submittal of the initial action plan for year 1 of the project (paragraph 3.18).

b. The contract also will set out conditions for implementation and monitoring of the program (paragraphs 3.16 and 3.17), submittal of financial statements (paragraph 3.12), and retroactive financing and recognition of expenditures incurred for implementation of the program prior to its approval (paragraph 3.15).

I. FRAME OF REFERENCE

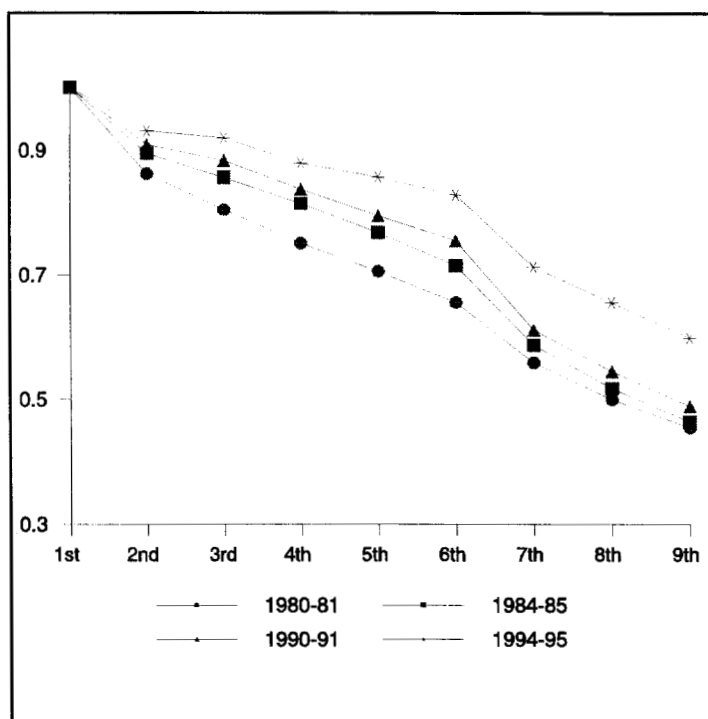
A. The education sector

1. Introduction

- 1.1 In 1992, under the terms of the National Agreement on Modernization of Basic Education, Mexico decentralized education to the states. The General Education Act lengthened the compulsory basic education cycle to take in grades 7 through 9. (These last three grades of basic education will be referred to herein as middle school.) Meanwhile, promotion rates from elementary school have been steadily rising, making for a much improved terminal efficiency rate: today, 81% of an elementary-school cohort will finish that academic level, up appreciably from 64% in 1980.

- 1.2 The end-result of rising elementary promotion rates and the lengthening of basic education from a total of six to nine years has been swelling grade 7-9 enrollments. According to demand forecasts, 500,000 additional children will be registered in those grades in the year 2000. Between 1991 and 1995 the government increased the supply of middle-school facilities by 11.2%. Given these trends, Mexico's elementary school system can be termed "mature",

i.e., a high percentage of the cohort finishes sixth grade, creating a strong demand for middle school, high school, and ultimately postsecondary studies. ^{1/}



- 1.3 In 1995, Mexicans aged 15 and over had an average of 6.7 years of schooling - up from 5.4 years in 1980. Nevertheless, a

^{1/} L. Crouch, *Financing Secondary Expansion in Latin America: An Estimation of Magnitudes Required and Private Decentralized options*. Washington, D.C.: The World Bank, 1995.

considerable number of people have not completed middle school, owing to the low absorption rate of that academic level in the past. According to flow analyses, a high percentage of the cohort drops out of the formal system after sixth grade. In 1980, only 56% of grade 6 completers went on to grade 7; the continuation rate had risen to 71% by 1994.

- 1.4 According to the 1990 population census, 10.6 million Mexicans did not have a middle-school certificate. By 1998, counting also the students who did, in each year, complete elementary school but did not go on to middle school and those who dropped out of middle school, there will be 12.1 million people in the country who have not finished the full nine-year basic education cycle. Subtracting those who are pursuing such studies under other types of nonformal programs, there will be, in that year, 10.7 million Mexicans without basic education who are not pursuing those studies – most of them living in cities. A 1997 Ministry of Education survey identified groups that would constitute the potential demand for nonformal middle-school education: (i) 78% of those surveyed wish to continue their studies; (ii) 87% feel that continuing studies is a way to improve their career prospects; and (iii) 21% say they would very likely be interested in enrolling in middle school.
- 1.5 Accordingly, there are two concurrent types of demand for middle-school education. The **first** pool consists of students working their way normally through the formal education system, more and more of whom are completing elementary school. The **second** pool is comprised of the many people who dropped out of school at some point to find work. These individuals need to be able to study outside the formal middle-school system, so they can continue to work while raising their average educational attainment.
- 1.6 Mexico has run successful distance education programs, offering high-quality education to targeted populations such as rural residents, a group for which the traditional education system has not been a cost-efficient option. The accomplishments to date of the distance learning approach now need to be built upon for the education system as a whole, and adapted to serve target populations like those described above as comprising the second prospective source of demand.

2. Organization and delivery

- 1.7 Educational establishments in Mexico are predominantly public. In 1995 there were 18.1 million children enrolled in public schools offering basic education, i.e., 93.6% of all students matriculated at that level. The basic education cycle consists of nine years of compulsory instruction – six years of elementary school (grades 1 through 6) followed by three years of middle school (grades 7 through 9). Grades 10 through 12 are high school (senior secondary school).

- 1.8 **Elementary education.** The elementary school system has a general curriculum, studied by 94% of all pupils at that level, and an indigenous curriculum taught by bilingual teachers and promoters in their native language and in Spanish, in communities in which only the native language is spoken. There also is a "community" curriculum, taught in communities that are home to more than 35 school-age children and have no preschool or elementary school facilities. That program is taught by middle-school graduates after receiving teacher training, whose hiring and salaries are arranged by the community, which provides them with room and board. Community schools come under the National Education Advocacy Council (CONAFE).
- 1.9 The government has extended elementary-school coverage to take in remote and indigenous communities. The net enrollment ratio today (enrollment as a percentage of the corresponding school-age population) stands at 89.6%. Meanwhile, owing to current population trends, the school-age population is shrinking; this, combined with improved elementary school promotion rates, will eventually mean a leveling off of elementary education offerings.
- 1.10 **Middle school.** This portion of the basic education cycle consists of a general stream, in which the bulk of students at this level are enrolled, and a technical/vocational stream designed to prepare students for high school and also for the job market. A third stream is middle school for workers, offering three school grades for workers 15 years of age and over who have elementary school diplomas; it is typically offered at night in middle schools. And, since 1967, the government has been running a television-assisted program (*Telesecundaria*) that brings middle school education to very remote communities.
- 1.11 Overall, middle-school offerings have increased in recent years. The government's focus has been to improve the rate of progression from elementary to middle school, but it also has addressed the expected rise in number of students wanting to attend middle school, particularly in isolated parts of the country that had no facilities for that academic level. In the last four years, enrollment in the *Telesecundaria* program has climbed 46.7%, far outstripping the growth in either the technical program (17.8% increase) or the general academic program (7.1% increase) in the formal system.
- 1.12 The middle-school programs that have been available at night for workers take three years to complete and are very formally structured. Such programs are very inefficient: only 51% of the cohort graduates. Students fail one subject after another and ultimately drop out. The grade 8 dropout rate is 10%; in grade 9 it more than doubles, to 23%. It would appear that programs available to workers for this academic level are not geared to client needs. People who work need flexible, accelerated options,

so they can continue their studies but also meet the demands of their jobs.

- 1.13 **High school.** Students choose among several tracks at this academic level as well, which is offered by federal, state, independent, and private establishments. The two main options are (i) a general program awarding a *bachillerato* certificate, and (ii) a vocational-technical track. *Bachillerato* students enroll in one of three streams: (i) the **university preparation** stream, connected to the Autonomous University and state university systems; (ii) the **general** stream, run by the *Bachillerato* Bureau and the Higher Education and Scientific Research Branch of the Ministry of Education; and (iii) the **technology** stream, under the Technological Education and Research Branch (SEIT). Vocational/technical education is the responsibility of the National College of Technical and Vocational Education, the National Polytechnic Institute, and the SEIT, among others; its primary aim is to equip graduates for the job market.
- 1.14 As the education system has improved, the demand for high school education has increased, and is expected to rise sharply by 2004. The bulk of this demand is centered in the cities.
- 1.15 **Delivery of education.** The Ministry of Education is in charge of education policy in Mexico. Under the terms of the National Agreement on Modernization of Basic Education, the state governments took over administration and operation of preprimary and elementary schools, special education centers, middle schools and teacher training institutes, through State Education Services (SEEs) or the state education ministries.
- 1.16 In addition to the federal Education Ministry or the SEEs, a number of agencies reporting to the ministry offer education support services. The National Free Textbooks Commission produces and distributes textbooks to all children enrolled in elementary grades 1 through 6 and to students in the *Telesecundaria* middle-school program. The Federal School Construction Management Committee began to deconcentrate its functions and resources in 1996. That same year the states signed agreements under the terms of which they took over programming and planning of school infrastructure. The National Adult Education Institute is also decentralizing its operations.
- 1.17 For basic education to be of high quality and for a decentralized system to be well coordinated, it is essential that there be accurate, timely information available on overall system performance. For the most part, assessments of student achievement in basic education are confined to the grades assigned by teachers. However, the Evaluation Bureau of the Ministry of Education has developed or is working on a series of important evaluation initiatives. First, the World Bank-funded "PAREB"

primary-education project is developing a historical series on educational outcomes in the various modes of elementary schooling. The Evaluation Bureau also administers a middle-school admission test, on the basis of which students are distributed among different urban education establishments.

- 1.18 The National Center for Higher Education Assessment (CENEVAL) was created in 1993 to measure, by reference to uniform national standards, the knowledge of students entering high school and the academic attainment of high school graduates. Testing has been done to date at the middle school and high school levels to assess the educational achievement of students wishing to move up to the next level. CENEVAL administers three tests: (i) EXANI1, for middle-school graduates wishing to go on to high school; and (ii) PREEEXANI2 and EXANI2, taken by high school graduates who wish to attend university.
- 1.19 The 1995-2000 Education Development Plan stands as evidence of the government's intention and commitment to develop a national performance evaluation system encompassing every level of the education system. To this end, the Ministry of Education has been trying out achievement testing for basic education, one such initiative being its 1994 exercise in elementary school testing.

3. Funding of education

- 1.20 Mexico boosted education spending as a percentage of GDP from 3% at the start of the 1990s to 4.9% in 1995. This compares favorably with other countries in the region; in Brazil, for instance, education spending is 4.6% of GDP, in Uruguay 3.1%, and in Jamaica 6.1%. The national education budget has grown steadily over the past decade, exceeding 5.4% of GDP in 1994. In 1995, in the wake of the crisis, education spending slipped below 5% of GDP, and has stabilized at around that figure. Education outlays as a percentage of total government spending are mirroring the ratio of education spending to GDP.
- 1.21 An increase in the percentage of students finishing school has gone hand in hand with a steady rise in per-pupil spending at every level and in every mode of schooling. The increase has been more pronounced in compensatory education programs 2/ than in general programs, and is concentrated in indigenous and community elementary school programs and in the *Telesecundaria* middle-school system. These broad trends indicate that capital outlays for these forms of instruction were significantly higher than for general programs.

2/ Indigenous and community schools in the elementary grades, and the *Telesecundaria* system for middle school.

- 1.22 The chief source of education finance is still the federal government, which transfers education monies to the states via the Ministry of Finance. Federal government outlays rose steadily, in real terms, until 1994, and then fell back to 1992 levels. The state share of education funding more than doubled in real terms between 1988 and 1990 and remained largely unchanged until 1994, when it dropped down to roughly the 1989 figure.
- 1.23 The apportionment of the federal education budget among the different education levels demonstrates the government's strong commitment to basic education, which comes in for 60% of total spending, compared with 13% for high school and 15% for postsecondary and graduate studies. Administrative expenses account for 1.7% of total education spending; the balance of the budget goes to nonformal education, science and technology, and culture and sports.

B. Distance education in Mexico

- 1.24 Successful distance learning programs address concrete, well-defined problems; they pursue a clear mission and have a reasonably identified market. Instructional materials, methods, teacher training approaches, and diplomas awarded all are in response to concrete needs. The *Telesecundaria* system of television-assisted middle-school education, for instance, was devised to fill a need for post-elementary schooling in rural areas where there is a shortage of teachers, and where the alternative — building traditional schools — would be far more costly. In this program, audiovisual aids built into the curriculum supplement the work of classroom teachers.
- 1.25 Such systems typically have high fixed costs and low variable costs; thus, the more students enrolled, the more the system's fixed costs are shared out, and the lower the average cost per student. The heavy fixed-cost element has to do with initial outlays for equipment to produce, distribute and broadcast audiovisual materials. However, recurrent costs are lower than in the traditional school system, since in the *Telesecundaria*-type programs there is a single teacher for each grade, compared with an average of 20 teachers giving instruction for a grade in the general-education system at that level.
- 1.26 Distance learning programs can be as efficient as traditional education systems. ^{3/} The percentage of the cohort graduating from the *Telesecundaria* middle-school system has risen considerably, from 70% in 1990 to 80% in 1994. It has become more efficient each year in absolute terms and also relative to other modes of middle-school instruction: the graduation rate for

^{3/} J. Oliveira, *Educación a distancia en América Latina. Análisis de costo-efectividad*. Washington, D.C.: World Bank (EDI), 1992.

general programs was 78%, for technical schools 56%, and for worker adult education, 51%.

- 1.27 There have been no systematic performance evaluations of these programs, but one study ^{4/} has found that, contrary to the traditional rural experience, *Telesecundaria* students possessed analytical skills superior to those of their urban peers. The lack of systematic data on the knowledge acquisition of these students is something that must be underscored, particularly in light of the rapid expansion of this system since the start of the 1990s.
- 1.28 In sum, distance education in Mexico has succeeded in making good-quality middle-school education available to scattered rural communities in which children and young people have traditionally been forced to leave school early for socioeconomic reasons. This has been achieved by producing high-quality audiovisual and printed materials to supplement classroom teachers' work, and by fostering more participatory and group learning methods that keep students interested. As it has developed its strong distance learning program, Mexico also has built up an infrastructure for producing and distributing educational materials, upon which the education system as a whole should now draw.
- 1.29 Mexico's experience in this area shows that distance learning can be a very effective option if it is carefully targeted, particularly toward people that the traditional school system cannot reach efficiently -- such as adults and young people who work. Such programs need to have flexible timetables and completion times, and instructors and teaching materials must be of high quality and suited to the target populations.

C. Mexico's education strategy

- 1.30 As a result of Mexico's policy of bringing education to its most remote rural populations and indigenous communities, rises in enrollment are strongest in CONAFE and indigenous early education, preschool and elementary programs. Emphasis also has been placed on strengthening educational technology and distance learning approaches.
- 1.31 One affirmation in the 1995-2000 Education Development Program is that the system does not have enough instruments to systematically measure academic achievement and adjust policies and decisions in light of the findings. The current education indicators are insufficient to assess the education system overall, notably as concerns quality measurement. The Education Development Program thus calls for establishment of a national evaluation system in the medium term.

^{4/} *La Telesecundaria Mexicana*. Stanford University, Institute for Communication Research. 1973.

D. The Bank's education sector strategy

- 1.32 In keeping with the principles embodied in Mexico's 1995-2000 Education Development Program and with its country paper for Mexico, the Bank will continue to promote equity and efficiency through the development of new education media and options, targeted to groups that have not had access to schooling. Efforts will focus on remote communities, young workers, and members of low-income groups that have found it necessary to interrupt their education. IDB involvement in the proposed operation will be a means of expanding middle-school education opportunities using distance learning media that can reach remote areas and groups who are unable to attend regular schools. The Bank will seek to ensure that such programs are flexible enough to encompass new groups quickly and, in so doing, make education more equitable and more effective.

E. The Bank's experience with the Mexican education sector

- 1.33 The Bank has funded, and now has in process, a number of operations to support Mexico's education sector. Operation 846/OC-ME is supporting CONAFE efforts to expand elementary school coverage in remote areas. The essential social services program (868/OC-ME) had the objective of protecting social spending during the peso devaluation crisis, US\$180 million being earmarked to safeguard basic education spending. Technical-cooperation funding under operation ATN/5333-ME is supporting innovations in job skills development, and will also help ease rigidities in the education system. Another technical-cooperation project is being prepared for the Autonomous University of Guadalajara, to develop shorter, more flexible higher education programs that have proved to be more relevant to the job market.
- 1.34 The World Bank also has helped in the advancement of different levels of education in Mexico, by way of the PRODEI early education project approved in 1992, two projects approved in 1991 and 1994 (PARE and PAREB, respectively) to support compensatory elementary schooling, and three projects carried out through the National College of Technical and Vocational Education, approved in 1981, 1985, and 1991, to support technical/vocational secondary education.

II. THE PROGRAM, ITS COST AND FINANCING

A. Purpose and objectives of the program

- 2.1 The purpose of the program is to make middle-school education more widely available to communities which the traditional education system has been unable to serve efficiently, by strengthening distance education offerings.
- 2.2 The program's objectives are to (i) strengthen the *Telesecundaria* system and improve its quality, (ii) further cost-efficient modes of out-of-school learning at the middle-school level, and (iii) strengthen the institutions in charge of distance education.

B. Program structure

- 2.3 The above-mentioned aims will be pursued through two main subprograms, targeted as described below, and a third subprogram to provide the material resources required by distance education and develop distance-learning human resources. The following is a breakdown of content and cost of the three subprograms.

SUBPROGRAM I <i>Telesecundaria</i> middle-school system US\$217 million	SUBPROGRAM II Adult middle-school distance education US\$41.6 million	SUBPROGRAM III Training and development of human resources and improvement of material resources for distance education US\$22.9 million
<ul style="list-style-type: none"> • Consolidation (US\$62.2 million) • Expansion (US\$138.9 million) • Monitoring and evaluation (US\$8.3 million) • Educational research (US\$6.7 million) • Institution-strengthening (US\$900,000) 	<ul style="list-style-type: none"> • Coverage (US\$39.6 million) • Evaluation and monitoring (US\$2 million) 	<ul style="list-style-type: none"> • Teacher training (US\$16.3 million) • National Video Library (US\$6.6 million)

- 2.4 The subprograms' target populations are as follows:

- a. **Subprogram I (*Telesecundaria* middle-school system):** young people living in remote areas who complete elementary school in the normal interval and wish to go on to study the compulsory middle-school grades.
- b. **Subprogram II (Adult middle-school distance education):** adults who dropped out at sixth grade or finished only part of middle school and now need to complete their basic education to be

employable in today's job market, which is demanding more educated workers.

- c. Subprogram III (Training and development of human resources and improvement of material resources for distance education): for teachers and academic counselors working in any form of distance education.

1. Subprogram I: Telesecundaria middle-school system
(US\$217 million)

- 2.5 Specific objectives: (i) improve the quality of education and terminal efficiency under the subprogram; (ii) expand and consolidate *Telesecundaria* offerings; (iii) furnish and upgrade equipment; and (iv) improve evaluation standards and procedures. The following four activities will be funded under this subprogram:

(i) Consolidation of the Telesecundaria middle-school program (US\$62.2 million)

- 2.6 The shortfall of *Telesecundaria* school equipment will be made up by replacing 23% of existing television sets with more modern equipment. The number of schools with libraries will be increased so every *Telesecundaria* establishment has this resource. Likewise, the number of books comprising a library will be increased from 294 to 500. As part of the strengthening of this education-delivery model, two new elements will be introduced: (i) video libraries and (ii) laboratory kits. The video libraries are a resource that can be used by teachers and students to review material broadcast by TV at any time, and thereby reinforce what is taught in the classroom. With the laboratory kits, students will be able to experiment with scientific concepts that to date have been studied only as theory.

(ii) Projected growth of the Telesecundaria system
(US\$138.9 million)

- 2.7 The proposed funding will help increase human resources and stocks of materials to satisfy the year-2002 demand forecast of about 250,000 additional students (5.6% average growth). This will mean opening about 4,500 additional establishments, for which the community will continue to provide the infrastructure. Apart from the inputs mentioned above, the total cost for this component includes costs of textbooks, teacher manuals, television sets, libraries, laboratories, video libraries, and satellite dishes. Also included in the total cost is the increase in number of teachers, to be funded by the local counterpart (about 10,800 additional teachers).

(iii) Evaluation of academic performance, and monitoring system (US\$8.3 million)

2.8 Support will be given to the Ministry of Education to develop and administer academic achievement tests in the different forms of middle-school education, to measure student learning in the *Telesecundaria* system. Items to be funded are technical assistance, training, test printing and distribution, and computer hardware and software needed to evaluate and monitor the academic performance of the *Telesecundaria* program and other forms of middle-school education. The evaluations will be done, in 1999 and 2001, of a representative sample of grade 7 and grade 9 students in each middle-school subsystem, looking at two subjects. Included in the comparative performance analysis will be a study of the socio-economic profile of students enrolled in each type of program.

2.9 The Ministry of Education's Evaluation Bureau, working closely with the *Telesecundaria* Office, will ensure that: (i) data yielded by the monitoring system and performance testing are duly evaluated and the findings made available nationally, so that programs can be adjusted by the authorities; and (ii) psychometric standards are used in the achievement testing, to be able to identify groups most likely to fall behind in schooling.

(iv) *Telesecundaria* research studies and pilot projects
(US\$6.7 million)

a. Education project funds to be awarded by competition
(US\$1.9 million)

2.10 The monitoring and evaluation envisaged will require active input from students, teachers, and education officials, to design and carry through educational research projects intended to improve the quality of education. To that end, a program called "PROPONE" has been devised, under which the different schools will compete for funds to help carry projects that they put forward.

2.11 Between 1998 and 2002 the program will fund about 640 PROPONE projects, which will take place in about 5% of *Telesecundaria* system schools. Following are the three premises of the PROPONE program: (i) the schools come up with projects and carry them through; (ii) the cost of the projects is defrayed from a funding facility; and (iii) a central monitoring and support system will be in place.

b. Studies (\$460,000)

2.12 **Social impact of the *Telesecundaria* program.** The study will examine the impact of the *Telesecundaria* model on economic development in communities where it operates. The two focuses will be (i) how relevant the knowledge attained by students is to local

economic development and (ii) whether the availability of the *Telesecundaria* system makes for greater social mobility.

- 2.13 **Teacher profile.** This study will analyze the qualifications, socioeconomic profile, and income level of *Telesecundaria* teachers, comparing them with teachers in the formal school system. The program will provide technical support for the Ministry of Education to assess the *Telesecundaria* program's human resources needs and effectiveness.
- 2.14 **Expansion of the *Telesecundaria* system to marginal urban areas.** Since education was decentralized, the states have been asking the Education Ministry to bring *Telesecundaria* programs to other target populations, such as marginal urban communities. The program will give support to the Ministry of Education to assess the need, viability, and efficacy of making this type of program available in cities. Technical assistance will be provided to produce a study including a diagnostic profile of the supply and demand.
- 2.15 ***Telesecundaria* summer school.** The *Telesecundaria* system has been operating a summer program for students who have failed one or more subjects during the year and need to sit for make-up exams before they can move on to the next grade. The program appears to be working well, since there now is a demand for it from middle-school students in the general program who need to catch up. However, the Ministry of Education has not done any in-depth analysis of the scope, impact, or internal efficiency of this program. Technical assistance will be provided for an evaluation to be performed with a view to adjusting, where necessary, the corresponding education policies.

c. Technology innovation pilot project (US\$4.3 million)

- 2.16 Mexico has been bringing in instructional technologies to strengthen the classroom learning model used in general middle-school studies. This includes: (i) use of computer labs where a student can review concepts studied in selected subjects (mathematics and science); (ii) installing Internet facilities and educational software for students and teachers to do relevant research in certain subjects; and (iii) using video libraries as a basic resource for children to have access to learning materials as often as they need. Evaluations already have been performed of different experiences, and adjustments have been made in how these tools are used, generally and by subject, and in teacher training. One concern here is that the most important mode of compensatory middle schooling has been ignored in technological innovation: the *Telesecundaria* system does not have these inputs, and it is precisely the system that would gain the most from such instructional resources, since its teachers are less experienced.

- 2.17 The program will provide funds and technical assistance to expedite the introduction of this technology in 3% (400) of *Telesecundaria* schools, in two stages: (i) design and validation of tools and contents in the 400 schools, and (ii) evaluation and development of a plan to make this technology available in 30% of all *Telesecundaria* schools.

(v) Institution-strengthening (US\$900,000)

- 2.18 The *Telesecundaria* Office will receive technical assistance to build institutional capacity to carry through the activities envisaged in this subprogram, particularly those pertaining to the monitoring and evaluation of academic achievement.

2. Subprogram II: Adult middle-school distance education
(US\$41.6 million)

- 2.19 Specific objective: To introduce a flexible, nonformal middle-school model that can make up, in cost-efficient fashion, the overall gap in middle-school completion. This subprogram involves activities on two fronts:

(i) Coverage (US\$39.6 million)

- 2.20 The object is to introduce an adult education model that draws on successful distance-learning experiences and takes particular heed of the failings of in-school programs for people who are working. The model is flexible as to the time requirement for attaining learning targets for each grade. With tests to pass in every subject but working more independently, students will be able to graduate in two years rather than the three it would take in the formal school system. Reinforcement programs will be available for those who need them, as will counselors for each grade.
- 2.21 According to conservative estimates, some 2.2 million people might be interested in this form of study. In all, approximately 10.7 million Mexicans have this gap in their education; 47% of the prospective target population said they likely would enroll in adult distance-learning programs. By the end of the proposed operation, this subprogram would have left in place installed capacity to graduate 240,000 students a year. In five years, then, the ranks of those who in 1998 had not completed middle-school studies would have shrunk by 6%.
- 2.22 The above-mentioned demand would be addressed through 667 assistance offices. Private companies can become involved if they satisfy the program requirements. Offices will be selected by reference to two sets of criteria: technical criteria having to do with human and material resource requirements for each office, and an educational deficiency index at the municipal level. Program funds will be used to pay for academic counselors, the development and production of instructional and learning materials, equipment,

support technology, and administrative services. Included in the program are publicity activities to make certain that prospective students learn what is available and how to register.

(ii) Evaluation and monitoring (US\$2 million)

- 2.23 The terminal efficiency of this form of distance education will be assessed, comparing it to other programs such as formal middle-school studies for workers. Technical assistance will be funded for this activity, including tracking of students and assessment of learning achievement, to yield the data needed for the evaluation.

3. Subprogram III: Training and development of human resources and improvement of material resources for distance education (US\$22.9 million)

- 2.24 Specific objective: To strengthen the capacity of teachers engaged in all distance education programs, to make effective use of electronic learning media. A National Video Library will also be established to bolster distance education resources. The following two activities will be funded:

(i) Teacher training (US\$16.3 million)

- 2.25 The program will pay for training workshops and seminars for teachers who will be teaching in any of the distance education services described above, to show them how to use the various media and impart student counseling skills. Funds also will be furnished for developing audiovisual, printed, and computer materials to strengthen the distance learning system.
- 2.26 **Telesecundaria** system. Financing will be provided to train teachers joining this system (about 17,700 teachers). Teachers involved in the technology innovation subcomponent (paragraph 2.15) also will be trained in the use of the new instructional resources (1,400 teachers).
- 2.27 **Adult middle-school distance education.** In the course of the program about 4,700 counselors will be trained to help students learn.

(ii) National Video Library (US\$6.6 million)

- 2.28 The program will fund development of a National Educational Video Library to preserve and disseminate audiovisual products to support distance learning as well as in-school education programs in Mexico. A new Video Library meeting climate-control specifications for materials storage will be built with program funds, at a cost of US\$1 million. Also to be funded are special conservation facilities, including a documentary video-record access system,

video scanner and integrated management system (US\$1.9 million), and equipment for the Video Library (US\$3.2 million).

C. Cost and financing of the program

- 2.29 The total estimated cost of the program is US\$285.8 million (see breakdown in Table II), to be funded as follows: (i) an ordinary-capital loan of US\$171 million from the Bank, in U.S. dollars from the Single Currency Facility; and (ii) US\$114.8 million from the Mexican government. Since the distance-education program will be providing education services for segments of the population living in poverty, the percentage of Bank financing will be increased by 10 percentage points.

Table II
COST AND FINANCING
(in millions of U.S. dollars)

ITEM OF EXPENDITURE	IDB	MEXICO	TOTAL
1. SUBPROGRAM I <i>Telesecundaria</i> middle-school system	112.0	105.0	217.0
1.1 Consolidation	62.2		62.2
1.2 Expansion	33.9	105.0	138.9
1.3 Assessment of educational attainment	8.3		8.3
1.4 Studies and pilot initiatives	6.7		6.7
1.5 Institution-strengthening	0.9		0.9
2. SUBPROGRAM II Adult middle-school distance education	31.8	9.8	41.6
2.1 Coverage	29.8	9.8	39.6
2.2 Evaluation and monitoring	2.0		2.0
3. SUBPROGRAM III Human and material resources	22.9		22.9
3.1 Teacher training	16.3		16.3
3.2 National Video Library	6.6		6.6
4. AUDITS	2.5		2.5
5. FINANCING COSTS			
5.1 Inspection and supervision charge	1.7		1.7
Total	171.0	114.8	285.8
Percentage	60.0	40.0	100.0

D. Financial costs

- 2.30 The only financial-cost item budgeted is inspection and supervision (US\$1.7 million), since by virtue of an agreement reached, interest and the credit fee will be paid to the Bank directly by the Government of Mexico.

E. Source of funds and terms and conditions of the Bank's loan

- 2.31 The Bank will provide funding for the proposed project in the form of a loan of US\$171 million equivalent from the ordinary capital, in U.S. dollars under the Single Currency Facility. The following are the terms and conditions of the loan:

Amortization period:	20 years
Grace period:	5 years
Disbursement period:	5 years
Interest rate:	variable
Inspection and supervision:	1%
Credit fee:	0.75% per annum on the undisbursed balance
Currency:	U.S. dollars, Single Currency Facility

III. PROJECT EXECUTION

A. The borrower, the guarantor, and the executing agency

- 3.1 The borrower will be Nacional Financiera, S.N.C. (NAFIN), which will act as financial agent of the Government of the United Mexican States. The executing agency will be the Ministry of Education. The program will have no effect on NAFIN's finances, since the funds needed to service the debt and make the local counterpart contribution will come from federal budget appropriations. NAFIN and the government will enter into a funds transfer agreement stipulating each party's obligations and responsibilities as well as procedures for channeling the loan proceeds to the executing agency. The first disbursement will be conditional on presentation of that agreement to the Bank.

B. Project execution and administration

- 3.2 General responsibility for administration and execution will lie with the Ministry of Education, through its Planning, Program and Budget Bureau (DGPPyP). The Latin American Institute for Educational Communications (ILCE), a nonprofit international organization that advises the ministry under an agreement with the government, will provide technical support for the design, preparation and distribution of audiovisual materials. Presentation of the instrument providing for ILCE participation in the program will be a condition precedent to disbursement of the financing. In executing each of the subprograms, the Ministry of Education will have the support of its Finance and Material Resources Bureaus and of the State Education Services (SEEs). Although the ministry has experience in executing externally-funded projects, appointment of the coordinating group for the program will be a condition precedent to the first disbursement.
- 3.3 Under the education decentralization arrangement, the states are taking on greater responsibility for education planning and programming. Their participation in the program is therefore subject to the conclusion of participation agreements stipulating the obligation to allocate budget funds to maintain the assets acquired using program funds. The Ministry of Education and the states have extensive experience in drawing up such agreements, and they have been used efficiently in other Bank-financed projects.
- 3.4 Below is an execution plan detailing the institutions in charge of each subprogram, which will form an integral part of the Education Ministry organization chart and have staff qualified to carry out the project activities. The program cost includes institutional strengthening for these units.

SUBPROGRAM I Telesecundaria system	SUBPROGRAM II Adult middle-school distance education	SUBPROGRAM III Training and development of human resources and improvement of material resources of distance education
<p>Telesecundaria Office responsibilities: (i) coordinate development of teaching standards, contents, programs, teaching methods and materials; (ii) help the states promote and develop this education service; (iii) coordinate annual budget and operating program; (iv) design teacher training and support programs; (v) provide technical assistance for monitoring and evaluation; (vi) upgrade equipment; (vii) coordinate opening of 4,500 establishments; (viii) design, administer and evaluate academic achievement tests; (ix) coordinate centrally and in the states the Education Project Fund to be apportioned by competition; (x) produce reports required in the contract; (xi) prepare annual budgets; (xii) arrange procurement; and (xiii) coordinate commitments with states and administrative units.</p> <p>Perform the studies described in paragraphs 2.14-2.17.</p>	<p>Basic Education and Teacher Training Department responsibilities: (i) design and implement the adult distance education model; (ii) draw up agreements with the states; (iii) with advisory support from ILCE and the Educational Television Unit, produce TV programs, videos, and instructional technology; (iv) coordinate with private adult distance-education providers; (v) ensure that assistance offices are equipped to Ministry of Education technical standards; (vi) develop programs to publicize distance education; (vii) evaluate terminal efficiency of this distance education service; (viii) design systems to track students and assess academic achievement; (ix) produce reports required in the contract; (x) draw up annual budgets; (xi) arrange procurement; and (xii) coordinate commitments with states and administrative units.</p>	<p>Basic Education and Teacher Training Department responsibilities: In coordination with the other two subprograms, design and deliver, through workshops and seminars, teacher training programs for distance-education instructors.</p> <p>This department will also (i) produce reports required in the contract; (ii) draw up annual budgets; (iii) arrange procurement; and (iv) coordinate commitments with states and administrative units.</p> <p>With advisory support from ILCE and the Educational Television Unit: (i) strengthen distance education resources by setting up a National Video Library; and (ii) fund the development of audiovisual, printed, and computer materials to strengthen the distance learning system.</p>

C. Procurement

- 3.5 Agreement was reached during the analysis mission on the procurement of goods, construction work, and consulting services for year 1 of the project. The procurement program for subsequent years will be agreed on during annual supervision missions, based on progress under the program and the availability of budget funds.
- 3.6 For goods and works procurement, the loan proceeds will be used in accordance with Annex B to the loan contract. International competitive bidding will be required over the thresholds of US\$5 million for works, US\$350,000 for goods and services, and US\$200,000 for consulting services. International calls for tenders will not be required for procurements under those amounts, and bidders from all the Bank's member countries will be eligible to participate.
- 3.7 Contracts for studies and consulting services will be arranged in accordance with Annex C to the loan contract. In light of the large number of individual consulting contracts (roughly 2,000

consultants across the country, with monthly fees of about US\$350.00 each), it has been agreed that Ministry of Education rules and procedures will be followed in awarding those contracts. Teachers now working for the ministry may be hired for additional services, in accordance with ministry rules, which are consistent with the Bank's procurement policy.

- 3.8 The National Center for Higher Education Assessment (CENEVAL) may be engaged directly by the executing agency for the evaluation work proposed in the program. The loan proceeds may also be used to hire consulting services for this purpose, in accordance with terms of reference agreed upon in advance with the Bank.

D. Execution period and disbursement schedule

- 3.9 The execution and disbursement periods will be five years, and the loan will be eligible for disbursement once the conditions precedent have been satisfied. The cost estimates prepared for the various subprograms will serve as a basis for planning project execution, and will be updated yearly by the Ministry of Education in preparation for annual supervision reviews and the annual action plan. The preliminary disbursement schedule (Table III-1) is compatible with the execution capacity and availability of local counterpart funds.

Table III-1
TENTATIVE DISBURSEMENT TIMETABLE
(In millions of U.S. dollars)

SOURCE	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	%
IDB/OC	11.0	39.5	35.5	40.4	44.6	171.0	60.0
LOCAL	23.2	23.2	22.7	22.8	22.9	114.8	40.0
TOTAL	34.2	62.7	58.2	63.2	67.5	285.8	100.0
%	12.0	21.9	20.4	22.1	23.6	100.0	

E. Revolving fund

- 3.10 A revolving fund of up to 5% of the total loan amount will be made available, in accordance with the Bank's current regulations.

F. Exchange rate for disbursements

- 3.11 The average monthly exchange rate may be used in accounting to the Bank for expenditures made with program funds for some cost items, namely consultants' fees and small procurement items in the states. Such payments will be made by the executing agency to purchase goods and services in scattered localities, with documentation filed at different sites, generally for small amounts. Cumulative outlays as shown in periodic cash-basis accounting reports are to

be strictly for eligible expenditure items as agreed on in advance with the Bank; supporting documents (payment vouchers) will be kept at the respective office of the executing agency, in accordance with its procedures. It should be underscored that this exchange-rate arrangement will neither (i) entail an exchange risk for the Bank or the executing agency, the risk being borne by the guarantor, nor (ii) adversely affect the program or skew its outcomes in terms of costs. For less complicated items, the Bank's current exchange rate policy will apply. The Bank's Finance Department has been consulted on the use of this mechanism and has no objection.

G. External auditing

- 3.12 The Office of the Comptroller and Administration will audit the program's financial statements during execution, through independent public accounting firms, in accordance with the agreement with the Bank.
- 3.13 Given the features of the proposed program and the workload involved for the independent auditing firms, the cost of these services will account for a large amount (US\$2.5 million) in the total program cost. Accordingly, funds from the Bank's loan will be used to defray these costs.

H. Retroactive financing and recognition of expenses

- 3.14 It is recommended that retroactive financing and expense recognition be approved for up to US\$18 million in expenditures, already reviewed by the Bank, incurred for: (i) text production (US\$10 million); and (ii) design and production of materials (manuals) and instructional programs and teacher training and refresher courses, and equipment needed to reach the targets under subprograms I, II and III (US\$8 million), following procedures substantially similar to those of the Bank.

I. Monitoring and evaluation

- 3.15 The monitoring and evaluation system will be an ongoing one, designed to ascertain and measure the effectiveness and efficiency of activities carried out under each subprogram. Annual reviews by the government and the Bank will pay special attention to execution of the program as a whole, and agreement will be reached on any changes required to ensure optimal execution.
- 3.16 As a condition precedent to the first disbursement, the executing agency will present an initial action plan to the Bank for year 1 of the program. Within the first three months of each calendar year, the executing agency will present a work plan for the program that year. During annual supervision and evaluation meetings, the Ministry of Education, the borrower and the Bank will analyze progress achieved, by reference to the program's monitoring

benchmarks and targets. In addition, a midterm review will be conducted about three years into the program or when 50% of the program funds have been disbursed, to assess target attainment.

J. Bank supervision

- 3.17 The Bank will supervise the program's execution and track its progress through the Country Office in Mexico and by means of yearly technical monitoring missions by the project team to review progress and the achievement of the program's targets.

IV. VIABILITY AND RISKS

A. Institutional viability

- 4.1 The Ministry of Education has a great deal of experience in project implementation, and its technical units have solid technical and operational capacity for managing the proposed subprograms. Likewise, the support agencies involved in producing television programs, selecting educational technology, and broadcasting programs have a long history of working with the ministry and providing technical support services to the states and to schools. Decentralization of these programs began in 1992, so administrative and operating responsibilities at the various levels are already well established. This will allow the expansion and consolidation efforts provided for in this operation to go forward successfully.

B. Socioeconomic viability

- 4.2 The logical framework for the program is set out in Annex IV. The socioeconomic viability of the subprograms was analyzed as follows: (i) for subprogram I (*Telesecundaria* middle-school system), the cost-effectiveness of this education service was assessed; and (ii) for subprogram II, the proposed activities were analyzed using least-cost criteria, since they are new and their educational effectiveness is not known. However, for illustration purposes a calculation was done of the hypothetical efficiency that would be needed for the proposed approaches to be successful.
- 4.3 **Subprogram I, *Telesecundaria* system.** This television-assisted middle-school system is efficient: it uses a single teacher per grade and requires a modest capital investment. Even when the costs of television production and programming are factored in, its per-student cost is roughly half the cost of general middle-school education in the same geographical area.
- 4.4 The *Telesecundaria* system loses 19 million pesos each year on account of students who fail their grade and 220 million pesos because of dropouts. It is hoped that the actions proposed herein will improve those indicators, raising the efficiency of this form of study and reducing financial losses.
- 4.5 **Subprogram II. Adult distance education.** Because this is a new approach, its true efficiency is not known. However, it is expected that its internal efficiency will be superior to that of worker middle-school completion programs, and that it will be more effective. Traditional adult education programs have a very low terminal efficiency (51% of the cohort graduates), because of the high (23%) dropout rate in the third year (grade 9). This means that the middle-school program for workers loses 79 million pesos a year, 72 million pesos of this on account of dropouts. If the

subprogram achieves the proposed graduation and dropout targets, some 40 million pesos should be saved each year. Least-cost alternatives have been carefully specified. For one thing, existing school infrastructure and equipment will be used, to lower initial outlays for the program. Special care also has been taken in devising student/counselor ratios, to keep recurrent costs to a minimum.

C. Financial viability

- 4.6 The financial impact of the proposed subprograms was analyzed, comparing the additional expenses that would be generated each year of the project with 1996 budgeted expenses for middle school, basic, or high school education, as applicable. Subprogram I will increase total *Telesecundaria* costs during the five years of the program by 28.6% per annum over 1996 figures. Of this increase, 59% are capital outlays and the balance are recurring expenses. The incremental recurrent expenses generated by subprogram I will be on the order of 175 million pesos annually.
- 4.7 Subprogram II would entail an additional 53.4 million pesos a year in recurring expenses. Comparing aggregate subprogram I and subprogram II costs with the total middle-school budget, the recurrent-expense increase would be just 2.7% of total recurrent costs for middle-school education. Counting the aggregate expenditure for both subprograms, the total middle-school budget would rise each year by 4.1% (capital and operating). The change in the overall basic education budget would be a mere 1.05%.

Table IV
FINANCIAL IMPACT ON MINISTRY OF EDUCATION BUDGET
(amounts in thousands of pesos)

Education system	Subprogram expenditures (annual average)			Budget impact (average percent increase)			Recurrent costs
	Current	Capital	Total	Current	Capital	Total	Total incremental
Basic				62.33%	37.67%	1.05%	
Middle school	257,850	155,813	413,663	62.33%	37.67%	4.10%	
General							
Technical							
<i>Telesecundaria</i> middle (subprog. I)	204,411	142,737	347,147	58.88%	41.21%	28.55%	175,403.8
Adult distance education (subprog. II)	53,440	13,076	66,516	New	New	New	65,768.9

D. Environmental impact

- 4.8 The Committee on Environment and Social Impact (CESI) reviewed and approved the environment and social impact brief for this project

on June 9, 1997, and the present document on October 24, 1997. It should be noted that Mexican national curricula already contain a strong environmental education component. The resources used in the distance education model include videos and television programs that give students a deeper understanding of environmental issues. This proposal takes into account the CESI's comments and recommendations as to the program's impact on the environment, women, and indigenous groups, as outlined in the following section.

E. Beneficiaries

- 4.9 The project will have a strong social impact, supporting as it does efforts to raise educational attainment among residents of very remote communities and those segments of the adult population which are furthest behind academically. Most of the program beneficiaries are in the lowest income deciles, and education is for them a crucial element for social advancement.
- 4.10 **Low-income beneficiaries.** Fifty percent of the potential sub-program II beneficiaries were those classified in the 1996 Ministry of Education sample survey as households with monthly per capita incomes of US\$38 (300 pesos). Those beneficiaries therefore are classifiable as poor by reference to the Bank-established poverty line for Mexico of US\$256 per capita per month. Furthermore, the lower the household income, the more likely its members are to enroll in the two forms of education. Subprogram I is geographically targeted to rural populations where the correlation between rural emplacement and poverty is high. *Telesecundaria* schools are concentrated in areas with high unmet basic need indexes, according to the National Population Commission yardstick. Accordingly, all three of the proposed subprograms qualify as poverty-targeted investments - the first by virtue of its geographical focus and the other two on account of the percentage of the prospective beneficiaries who live in poverty.
- 4.11 **Impact on women.** Although access to education by women has become more equitable, the 1990 Census figures indicate that the percentage of women not attending school rises in groups aged 12 or older. Between the ages of 5 and 11, nonattendance rates are identical for girls and boys; but in the age 12 to 14 group, for every male not attending school there are 1.22 females not enrolled or attending. This inequality translates into intergenerational educational disadvantages, given mothers' vital role in educating their children.
- 4.12 The program will enable more women to add years of schooling, since the programs will be better geared to their interests, skills, and needs. Subprogram I will give girls in remote communities in which the above-described disparity is pronounced an opportunity to continue their studies. Additionally, improvements in the quality of education offerings at this level are expected to bring down the

dropout rate, which is higher for females. Subprogram II seeks to make up the education gap at the middle-school level and narrow the gender disparity mentioned. The Ministry of Education survey provides information disaggregated by sex on the reasons that prompted those who would benefit from the proposed program to leave school, as well as on potential demand, time availability, educational offerings, etc., of most interest. All of this information has been used to devise the criteria that would govern education centers. Also, the evaluations and information systems planned in each subprogram will produce information broken down by sex and ethnic origin, to be able to pinpoint problems and adjust designs.

- 4.13 **Indigenous communities.** The Ministry of Education runs early childhood, preschool and elementary education programs for children of the different indigenous peoples of Mexico. These courses promote bilingualism in indigenous communities and encourage the preservation and use of native languages. Table 1 of Annex I gives an overview of these education services. The number of early childhood education centers increased more than fivefold from 1986 to 1996, and the population served tripled. In the space of one decade, indigenous preschools came to serve 46.5% more children, and elementary schools nearly 40% more children. Some 3,000 brochures were distributed during the last school term in support of early education and preschool courses, and one million free elementary-school textbooks were distributed, in 46 languages and dialects. Also produced were 9,400 copies of phonetics games in 21 different languages, as teaching resources for reading and writing, and 32 videos in 20 languages and dialects for teacher refresher training.
- 4.14 The program is expected to have a very positive impact on indigenous communities. Subprogram I will enable them to continue their studies and complete the nine compulsory years of basic education. Since the indigenous elementary-school curriculum fosters bilingualism, when children graduate from elementary school they possess language skills that enable them to pursue their studies in Spanish. Middle-school statistics and the evaluations provided for in the proposed subprograms will gather information broken down and classified in various ways, in order to yield meaningful diagnoses.

F. Risks

- 4.15 A potential risk identified for this operation is that of effective demand for middle school on the part of persons who never attained that academic level. Their numbers are considerable, and a significant percentage have expressed a desire to continue their studies, but there is no way of accurately gauging how many will enroll in the program. To counter this risk, the program includes promotional activities to make prospective students aware of

program offerings and encourage them to register. Moreover, subprogram II is geographically targeted to municipalities that are home to the highest numbers of people in this situation.

- 4.16 **Program targets and benchmarks.** Since some of the activities being proposed are new approaches, interim targets and benchmarks have been devised to gauge progress on the different subprograms and make adjustments as necessary.

LOGICAL FRAMEWORK
Distance Education Program

Summary of objectives	Verifiable indicators	Means of verification	Assumptions
Goal: Increase the percentage of the population with complete basic education (to the end of middle school)	Average years of basic education (grades 1 through 9) exceeds 6 years for adults and school-age population in rural areas.	National Household Survey	Nonformal programs are cost-efficient and achieve sufficient coverage.
Objectives: (i) Strengthen the <i>Telesecundaria</i> middle-school system and make it available to more people; (ii) explore cost-efficient ways of delivering nonformal middle-school education; and (iii) strengthen human and material resources for distance education	<p>(i) Mathematics and language achievement is superior to or on a par with general middle-school system achievement in those subjects.</p> <p>(ii) Percentage of students graduating through subprograms I and II rises from current 51% to 70%.</p> <p>Performance is comparable to the formal system (achievement tests).</p> <p>Costs are held to levels defined ex ante</p>	<p>Information, achievement testing and evaluation systems developed as part of each subprogram</p> <p>Costs incurred in project execution, and compiled by the Planning, Program and Budget Bureau (DGPPyP) of the Ministry of Education</p>	The government continues to give priority to compensatory and adult education programs.

LOGICAL FRAMEWORK
Distance Education Program

Summary of objectives	Verifiable indicators	Means of verification	Assumptions
Activities: <u>Telesecundaria system</u> Consolidation Expansion Monitoring and evaluation Studies	I.1 10,213 TV sets replaced 4,947 libraries distributed 14,118 video libraries set up 14,118 laboratory kits distributed I.2 4,500 schools equipped and operating 10,800 teachers hired I.3 Achievement tests developed Testing of a sample of students in each system Evaluation of effectiveness of the different education modes I.4 Terms of reference agreed upon, consultants hired	I.1 Information on project progress produced by DGPPyP I.2 Ministry of Education (DGPPyP) statistics I.3 Printed tests and operating manuals ready Preliminary achievement test results Report of Ministry of Education's Evaluation Bureau on test results, and policy recommendations I.4 Reports delivered to IDB Mexico Country Office by the <i>Telesecundaria</i> Office	Budget funds are available each year for implementation as planned.

LOGICAL FRAMEWORK
Distance Education Program

Summary of objectives	Verifiable indicators	Means of verification	Assumptions
<u>Adult middle-school distance education</u> 1 Coverage	II.1 Agreements with states and companies signed and in effect 667 assistance offices equipped Installed capacity to serve about 480,000 students Total enrollment: 1,200,000 students	II.1 Ministry of Education statistics DGPPyP provides agreements	Promotion campaigns elicit sufficient interest for this form of education. Companies remain interested in participating in the program.
2 Evaluation	II.2 Information system in place Achievement testing done	II.2 Printed tests and operating manuals ready. Preliminary achievement test results. Report of Ministry of Education's Evaluation Bureau on test results, and policy recommendations	
<u>Human and material resources</u> 1 Teacher training	III.1 Teachers trained: <i>Telesecundaria</i> : 17,400 Adult distance education: 4,700	Ministry of Education (DGPPyP) statistics	Teachers stay in the distance education system.
2 National Video Library	III.2 Building constructed and equipped Training workshops and seminars held		

Original signed
RGII-ME079P
ME-0052
Original: Spanish

PROPOSED RESOLUTION

**MEXICO. LOAN ___/OC-ME TO NACIONAL FINANCIERA S.N.C.
(Long-Distance Education Program)**

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 Nacional Financiera, S.N.C., as Borrower, and the Estados Unidos Mexicanos, as Guarantor, for the purpose of granting the former a financing to cooperate in the execution of a Long-Distance Education Program. Such financing will be for the amount of up to US\$171,000,000, which are part of the resources of the Single Currency Facility of the Ordinary Capital, and will be subject to the "Special Contractual Conditions" and the "Terms and Financial Conditions" of the Executive Summary of the Loan Proposal.