VOCATIONAL EDUCATION REFORM PROGRAM

(BR-0247)

EXECUTIVE SUMMARY

BORROWER:	The Federative Republic of Brazil	
EXECUTING AGENCY:	The Ministry of Education and Sports	
AMOUNT AND SOURCE:	IDB:	US$250 million (OC)
	Local counterpart funding:	US$250 million
	Total:	US$500 million
FINANCIAL TERMS AND CONDITIONS:	Amortization period:	20 years
	Grace period:	6 years
	Disbursement period:	6 years
	Commitment period:	4.5 years
	Interest rate:	variable
	Inspection and supervision:	1% of the loan
	Credit fee:	0.75% of the undisbursed balance
	Currency:	Pool

OBJECTIVES:

To support the establishment of an effective vocational education system (job education), separate from secondary and university education, which will train young people and adults for the world of work through nonuniversity post-secondary courses, basic extension courses, and others.

To finance studies and consultancies to prepare for a reform of secondary education and disseminate a new curriculum and for the production of strategic plans to upgrade and expand secondary education by state departments of education in the states participating in the program.

These objectives and the more specific program objectives (paragraph 2.3) form part of the reform outlined by the government in its educational policy letter (Annex I-4).

DESCRIPTION:

The program will include the following subprograms: subprogram A, general policy implementation; and subprogram B, investment projects.

1. Subprogram A. General policy implementation (US$39 million)

The purpose is to provide the Ministry of Education with the tools and mechanisms it requires to support the reform of vocational education in states, municipalities, and technical schools (federal, state, and community) and to sensitize and inform the public about the objectives of the reform and progress in implementing it.

a. Administrative development, which includes the analysis and strengthening of the Department of Secondary and Technological Education; the development of a vocational education information system which includes monitoring the job market, following up on graduates and other aspects; and the development of a school management model.

b. Technical and pedagogical development, which includes studies of the job market to guide investments in technical schools; the design of basic curricular models for each vocational area; and support for skills certification.

c. Human resource development, which includes professional development for the teaching staff of technical schools in pedagogical areas and in technical know-how in different fields; courses related to curricular adjustments; training in school administration; and international seminars and technical visits abroad by principals and teachers to promote the exchange of ideas and knowledge.

d. Other, which includes a communications plan, a follow-up study on pilot schools, and central studies on secondary education.

2. Subprogram B. Investment projects (US$433.5 million)

This subprogram will finance preinvestment studies and investments in state plans and school projects to create approximately 200 technical schools through: (i) the transformation of existing federal, state, municipal, and community schools and others; and (ii) the creation of new schools on each of the levels in question, except on the federal level.

Brazil has cutting-edge technical schools which have been modernizing for some time through linkage with local companies for the purpose of: (i) programming

supervised internships for students; (ii) permitting reciprocal training, use of equipment, and infrastructure; and (iii) selling services such as the development of products or processes and the provision of training for employees. Apart from training high-quality technicians, these schools have become true agencies for technology transfers and business development and have been able to generate significant income of their own. The reform of the vocational education sector is partly based on these successful experiences. The program contains mechanisms to tap these and other experiences in order to promote the reform.

Also, both the reform of vocational education and the reform of regular secondary education involve the development and introduction of new teaching processes based on applied and inter-disciplinary education. In other words, theoretical principles will be learned through applied work in inter-disciplinary projects. Vocational education curricula and course materials will be based on job profiles and the skills required by the market, identified through studies of company production processes.

CESI APPROVAL: CESI approved the environment and social impact report on September 12, 1997, which was sent to the PIC on September 15, 1997.

BENEFITS: When the project is completed, consolidation of a modern system of vocational education will have begun, with new or stronger federal and state agencies responsible for its management, monitoring, and evaluation, and systems will have been established to link schools to markets. Two hundred technical schools will have been created, with 240,000 places in post-secondary technical education. Some 120,000 technicians and 600,000 graduates from short basic courses will be added to the workforce each year.

The project will help to improve the degree of self-financing of vocational education programs, thereby reducing their current relative dependency on the public purse, particularly on the federal level.

The social impact of the program will be seen in: (i) a future improvement in the attitude that society currently takes toward vocational education financed with federal funds; (ii) the creation of job alternatives and higher future incomes for young people and adults, by providing them with better

vocational skills; (iii) funding for new curricular guidelines for regular secondary education courses geared to the basic knowledge and skills required by the world of work; (iv) an improvement in the productivity and competitiveness of Brazilian workers and companies; (v) more participation by women in vocational areas; and (vi) a long-term contribution to better income distribution in Brazil.

RISKS:

Market linkage. There is a risk that the technical schools may fail to establish good market linkage, which would lead them to offer courses that do not respond to market demands. The risk will be mitigated by promoting the autonomy of the schools, making the system transparent through public access to information, and requiring the use of tools such as studies of demand, follow-up on graduates, advisory boards that include representatives from the private sector and labor unions, and for new schools, promoting the establishment of associations with the private sector.

Scale. There is a risk that the demand for funds will be below the forecast level. Some 30% of the funding is expected to go to establish new technical schools. The program will require states and municipalities to demonstrate their financial and institutional capacity to keep new technical schools operating. It is possible that on account of this condition, a significant number of states will not apply for project funding, except for studies. Further, the demand for community schools is not yet known because this is a new type of venture in which recurrent costs are guaranteed by the partners in an association. The precaution has been taken of using the conservative estimate that 50 state technical schools and community schools will be established in the 27 states.

Reversibility. Since (i) the legal instruments of reform are limited to a presidential decree and a ministerial decree and (ii) federal and state technical schools may not necessarily have completed their conversion to exclusively vocational schools by the end of program execution (since they may continue to offer regular secondary instruction), there is a risk that a new administration might reintegrate secondary and vocational education without much difficulty. To minimize this risk, the Operating Regulations include a system for prioritizing proposals which, *inter alia*, gives preference to projects involving (i) plans to convert schools to

exclusively technical schools during the program execution period; and (ii) technical/instructional proposals with a higher proportion of courses and vacancies that require high school diplomas for entrance to vocational education programs. Agreements may also be concluded for additional financing with schools wishing to place such conditions in effect in advance.

POVERTY AND SOCIAL CLASSIFICATION:

This program will chiefly benefit high-school graduates, which are a relatively favored group in Brazil, and therefore it cannot strictly be classified as having the focus on poor groups called for in paragraph 2.15 of document AB-1704, Report on the Eighth General Increase in the Resources of the Inter-American Development Bank. However under paragraph 2.13, the program can be classified in the category of "social equity and poverty reduction" since it involves actions and reforms in the education sector.

THE BANK'S COUNTRY AND SECTOR STRATEGY:

The Bank's strategy in Brazil stresses: (i) support for the reform and modernization of the federal and state public sectors; (ii) support for economic liberalization, partly through modernization of the productive sectors and rehabilitation of transportation infrastructure; and (iii) reduction in inequity and poverty through improvements in the efficiency and focus of social spending.

The project supports a reform that seeks to redirect public funds and use them more effectively in human capital formation linked to the country's current economic development efforts. The anticipated changes will focus public spending on vocational education more directly on the working class.

With regard to regular secondary education, the studies envisaged under the program will permit the Bank and the country to finance projects targeted to this education level in future operations.

SPECIAL CONTRACTUAL CONDITIONS:

Prior to the first disbursement of the loan, the borrower, through the executing agency, will present evidence that the following operational documents agreed upon in advance with the Bank have been put into effect: (i) the Operating Regulations and model agreements for the transfer of funds; (ii) the program organizational manual; (iii) the strategic school planning manual; (iv) the strategic vocational education planning manual on the state level; (v) the strategic planning manual for the reform and expansion of secondary education; and (vi) the

procurement manual. They may only be modified with the Bank's nonobjection (paragraph 3.7).

The prospective loan contract will also include provisions regarding the presentation of annual operating plans, program monitoring and evaluation, audited financial statements, the methodology for conducting the ex post evaluation, recognition of expenses prior to signature of the prospective contract, the use of Bank procedures for procuring goods and services, hiring consultants, and maintenance.

PROCUREMENT OF GOODS AND SERVICES:

As established in Bank policy, international public bidding will be used whenever contracts paid for from loan proceeds are over the equivalent of US$5 million for works, US$350,000 for goods and equipment, and US$200,000 for consulting services. Contracting for lesser amounts will be governed, in principle, by national legislation. In such cases, when Bank funds are used there should be no restrictions on participation by suppliers from Bank member countries.

To streamline program implementation and facilitate the Country Office's supervisory activities, it is proposed that procurement for amounts of up to US$2 million in the case of works, US$350,000 in the case of goods, US$200,000 in the case of consulting firms, and US$50,000 in the case of individual consultants be reviewed ex post by sampling. The Bank reserves the right not to finance out of loan proceeds ineligible costs or procedures that do not conform to its requirements and to take whatever other steps are necessary.

I. FRAME OF REFERENCE

1.1 Brazil has a very low level of schooling compared to other middle-income countries. This has been pointed to as one of the factors responsible for excessive inequality in income distribution. Low levels of education act as a significant stricture on the country's economic growth, particularly in light of economic liberalization and the consequent need to create competitive advantages. 1/

1.2 Brazil's current exchange policy, which is intended to prevent new inflation, has led to an over-valuation of the real which has resulted in a deterioration in the trade balance. In this macroeconomic context, the importance of boosting the productivity and competitiveness of the workforce is clear.

1.3 Based on these and other considerations, the government's education policy gives priority to the development and expansion of basic education (grades 1 to 8), secondary education (grades 9 to 11), and to the reform of vocational education (job training). It also seeks to gear higher education to labor market requirements. 2/

1. National education policy

1.4 Changes in Brazil's national education policy have taken the form of legislation (passed or under debate) by congress and presidential and ministerial decrees.

1.5 The most important of these changes include: (i) the Fund for Maintenance and Development of Basic Education and Teaching Staff Enhancement, whose purpose is to provide more financing for education and teachers' salaries, ensure greater equity in the distribution of funding, encourage municipalities to take charge of primary schools, and assure minimum spending per primary school student in each municipality; and (ii) the National Education Guidelines and Standards Act, which clarifies the basic guidelines for education and its decentralized organization, spelling out the powers and responsibilities of the different levels of government. In addition, the bill on university autonomy currently before

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1/ This and other relevant subjects are dealt with in depth in *Opportunity Foregone: Education in Brazil*, 1996, ed. Nancy Birdsall and Richard Sabot, IDB. See also "Pobreza, Desigualdad y Formación de Capital Humano en América Latina 1950-2025, Juan Luis Londoño, World Bank, June 1996; and *Relatório Sobre o Desenvolvimiento Humano no Brazil 1996*, UNDP-IPEA. Although income distribution in Brazil has improved significantly since June 1994 with the stabilization plan, improvements are still needed in levels of education to achieve greater equity.

2/ See "Planejamento Político-Estratégico 1995-1998". Ministry of Education, May, 1995.

congress will grant universities independence in their curricula (study plans and programs), and in administrative matters as well, since they will be free to manage their staff and administer their government funding and the income they obtain from the sale of services, subsidies, donations, financial cooperation, and agreements with public and private entities.

1.6 The National Education Guidelines and Standards Act, as well as Presidential Decree 2208 and Ministerial Decree 646, which were promulgated in 1997, have established the government's vocational education reform policy. Among its reforms, the policy introduces administrative and curricular separation between vocational training and regular secondary education, with the latter focusing on cognitive and basic academic learning skills. The reform policy permits the institutionalization of modern vocational education linked to the job market, and encourages the development of post-secondary technical education.

1.7 The reforms and advances in basic education will soon receive additional funding from the government under the Fund for Maintenance and Development of Basic Education and Teaching Staff Enhancement. They will also receive funding from the World Bank for different programs for that level (paragraph 1.24). The act, which promotes the transfer of primary state schools to the municipalities, will free up funds for most of the states to use to expand secondary education. Secondary school reform and expansion plans are also being developed in some states. To supplement these efforts, the federal government has approached the Bank for additional funds to prepare the preinvestment studies for regular secondary education included in this proposal.

2. Vocational education

1.8 For a large percentage of Brazilians, vocational education is viewed as indispensable for moving from school (or unemployment) to the workplace. It includes education for the primary (agricultural), secondary (industrial) and tertiary (services) sectors, and also retraining for the unemployed. Today in Brazil, vocational education is offered through three systems:

a. The public system, composed of: (i) a federal network under the Ministry of Education that provides integrated education (regular secondary education plus technical education), of recognized academic quality; (ii) a state network of agricultural and industrial schools; and (iii) state and municipal schools which offer mainly accounting and teaching courses, of questionable quality. Under the proposed reforms, the latter would become regular secondary schools and cease to provide vocational training. Table I-1 shows the number of schools and the estimated coverage of the three public vocational education systems.

Table I-1

Public vocational education system

Vocational education public networks	No. of schools	No. of pupils (thousands)	Number of teachers (thousands)
1. Federal schools	133	154.0	12.0
1.1 Federal technology education schools	5	23.1	2.2
1.2 Federal technical schools	19	70.8	5.3
Decentralized units	33	28.5	2.0
1.3 Federal agricultural schools	46	20.0	1.4
1.4 Schools linked to federal universities	30	11.6	1.1
2. State industrial and agricultural schools	160	150.0	12.0
2.1 Paula Souza system in the state of São Paulo	99	88.0	7.0
2.2 Other	61	62.0	5.0
3. Nominally integrated state and municipal schools	1,900	2,000.0	25.0

b. The semi-public system is financed though payroll and sales taxes and is administered by businesses associations in each sector. As a whole, the system invests more than R$1.5 billion each year with enrollment of 4.5 million students. The system is composed of the National Industrial Apprenticeship Service (SENAI), the National Commercial Apprenticeship Service (SENAC), the National Transportation Apprenticeship Service (SENAT), and the National Rural Apprenticeship Service (SENAR), which offer informal courses of different lengths, and also train middle-level and senior technical staff. There are also social assistance institutions, including the Social Industry Service (SESI), the Social Commerce Service (SESC), and the Social Transportation Service (SEST) which offer vocational courses, including job training. The Brazilian Small and Medium-sized Business Service (SEBRAE) finances middle-level technical courses and extension courses for vocational training and development for employees, the self-employed, and microentrepreneurs. The Ministry of Labor is currently preparing a project to redefine financing for the system, channeling it as a function of demand.

c. The private sector supplements these efforts by providing training for middle-level and senior technical staff and extension courses for job certification and skills. Companies,

labor unions and NGOs also sponsor training schools. Under the tax legislation, companies that invest in education are exempted from payroll tax. Owing to the diversity of institutions, strategies, and mechanisms, no reliable statistics are available on the number of people served or the resources invested, although it is estimated that they are considerably less than in the semi-public system.

1.9 The technical and vocational education offered by the public system (federal and state), with some notable exceptions, is marked by a rigid structure in the skills training and certification offered, that is poorly linked to the production system. Further, federal schools are criticized for being too expensive, with an average cost that can exceed US$5,000 per student per year. Most schools are also criticized for having deviated from their original purpose. Over the years, they have become academic centers of excellence that mainly serve local elites, with more than 50% of graduates continuing on to university. Their teaching staff belongs to the National Higher Education Association (ANDES), and receives much higher salaries than teachers in the state systems. Most state schools lack funding and offer poor quality education.

3. Technology, the labor market, and vocational education

1.10 A recent study indicates that many companies in the formal sector in São Paulo are investing in capital goods with a larger technology content, and therefore demand more highly skilled workers. 3/ From 1989 to 1996, when the absolute number of jobs in the formal sector dropped, there was a marked rise in the percentage of workers who had completed high school, which points to the replacement of less-skilled labor with higher-skilled workers.

1.11 New technologies clearly call for major changes in training for technicians and workers, since the new processes have a higher technology content and require more inter-disciplinary knowledge and better capacity to adapt and learn new skills. The recommendations on vocational education made by the companies considered in the study mentioned earlier can be cited by way of example:

a. In electricity, teach computer skills, place more stress on electronics, and introduce CLP know-how.

b. In electronics, teach the manufacture of circuit boards, promote modern technical and technological skills.

3/ "Referenciais do Mercado de Trabalho, FIESP, CIESP, SESI, SENAI, IRS". June 1997.

c. In mechanics, promote the amalgamation of skills (for example, driller/lathe operator/adjustor).

d. In electromechanics, offer a general course in electricity, electronics and mechanics, train all-round mechatronics technicians.

e. In textiles, introduce training in CAD/CAM, place more stress on specific technologies.

f. In graphics, teach computer skills and introduce technological specialization.

g. In footwear, update the course by introducing business management skills.

1.12 The above points to the need to modernize vocational education. However modernization cannot be based on a single pattern but should be tailored to the needs of the companies in each region or locality, which operate with different levels of technology. This means that technical schools must necessarily establish close ties with the companies for which they provide employees.

1.13 Brazil has cutting-edge technical schools which have been modernizing for some time through linkage with local companies for the purpose of: (i) programming supervised in-service training for students; (ii) permitting reciprocal training, use of equipment, and infrastructure; and (iii) selling services such as the development of products or processes and the provision of training for employees. Apart from training highly qualified technicians, these schools have become true agencies of technology transfer and business development and have been able to generate significant income of their own, amounting to as much as 50% of its budget in one case. The CEFET in Paraná and some SENAI centers in São Paulo and Rio de Janeiro are examples that stand out. The reform of the vocational education sector described below is based partly on these successful experiences. The program contains mechanisms to tap these (and other) experiences in order to promote the reform.

4. Reform of vocational education

1.14 Based on the needs and experiences mentioned above, and with the object of modernizing and rationalizing vocational education, the government embarked on a reform of the vocational education sector, through a presidential and a ministerial decree.

1.15 Presidential Decree 2208/97 in support of educational reform defines the powers and responsibilities of the federal and state governments and schools with respect to vocational education. It establishes that vocational education:

a. Has the objectives of: (i) promoting the transition between school and the working world; (ii) providing training on the intermediate, senior, and graduate level; (iii) providing technological specialization and upgrading for workers; and (iv) qualifying, retraining, and upgrading young people and adults for better jobs and performance.

b. Will provide training on three levels: basic (regardless of previous schooling), technical (for students enrolled in secondary school and graduates), and technological (higher).

c. Will organize regular secondary education separately, but with linkage to this system.

d. Will offer a curriculum organized by discipline with a content for each vocation depending on the job skills required, which will be modular in nature and will provide certification of skills (to facilitate entry and exit from the system, providing workers with flexibility in their educational strategies).

1.16 Ministerial Decree 646 regulates implementation of Presidential Decree 2208/97 for the federal vocational education system. It sets the following requirements over a four-year period: (i) to obtain enrolment in post-secondary technical courses of at least 120,000 students in the system; (ii) to reduce enrolment in regular secondary courses at each technical school to a maximum equivalent to 50% of enrolment in 1997; (iii) to offer technical courses for secondary school students and graduates, post-technical specialization courses, job-training courses in the diversified branch of secondary education, and qualification, requalification, and retaining courses; (iv) to establish permanent mechanisms for consultation with sectors interested in vocational education, follow-up on graduates, and studies on demand to identify vocational profiles and to gear courses to demand; and (v) to comply with all the stipulations of the Basic Education Guidelines Act and the Presidential Decree.

1.17 The educational reform promotes the development of post-secondary vocational education. It removes vocational education from the general education system and establishes a separate system for it. The new system would supplement general academic education but not replace it. In other words, for enrollment in technical and technological courses in the vocational education system, students would have to satisfy academic prerequisites previously or concomitantly in the general academic system. Vocational diplomas and certificates would only enable students to enter the labor market or continue with vocational courses on the next level.

1.18 To improve "employability", basic courses for worker training and retraining are given highest priority, as is apparent from the agreements between the Ministry of Labor and the Ministry of Education. The Ministry of Labor launched a national vocational

training plan (PLANFOR) in 1996, whose goal is to train 40 million workers by 1999 with financing from the Worker Assistance Fund. In 1996 the program spent US$330 million on courses for 1.3 million workers. The funds are being used exclusively for the purchase of services and not for direct investments, and therefore involve the use of vocational education systems, including the private sector, universities, and federal, state, and municipal schools. This program, which is similar to worker retraining projects financed by the Bank in other countries, is an important move by the Ministry of Labor towards demand-based financing. The ministry's program and the Bank's projects are limited in time and finance relatively short job entry or retraining courses. In view of the results, which have not been fully satisfactory, the Ministry of Labor is evaluating its program to propose changes that would bring it more into line with the Bank's programs in this field.

1.19 The government's strategy with respect to federal schools is to decentralize them and give them autonomy under other types of legal status. The measures include: (i) ensuring that the increase in the number of technical and vocational educational establishments takes place only through the states, federal district, or municipalities, independent of or in association with the private sector or through private nonprofit institutions independent of or in association with the public sector; (ii) encouraging the adoption of flexible forms of hiring based on current legislation; (iii) promoting contractual ties between the schools, state institutions, the local private sector, and others, to reduce financial dependency on the federal government and encourage school independence (one of the mechanisms already being used by federal schools is selling services to the Ministry of Labor with financing from the Worker Assistance Fund, and to companies): (iv) establishing greater autonomy in the schools, within the current legal limits, through foundations and other mechanisms that allow for more flexible contracting of teachers and other staff; (v) gradually introducing systems for financing training in the case of public funds; and (vi) submission of a bill to Congress to make schools effectively and fully autonomous.

1.20 Item (i) is guaranteed by Provisional Measure 1549-28 of the Executive Branch. To be eligible for financing, a school investment project will have to include proposals with respect to items (iii) and (iv). Items (ii), (v) and (vi) are covered in the policy letter (Annex I-4) and will be monitored by the Bank.

5. Reform of secondary education

1.21 The separation of vocational education from regular secondary education is the first step in the reform of secondary education. Various states have adopted the reform of vocational education as their own, and in advance of the new national guidelines, some have already embarked on the separation between the contents of regular secondary education and purely vocational contents. There is

agreement that the current secondary school curriculum is fragmented and out of date.

1.22 The Ministry of Education recently presented a policy on reform of regular secondary education to the National Education Council, which focuses on establishing curricular guidelines, marked by: (i) definition of abilities and skills in three basic categories - codes and languages, science and technology, and society and culture; and (ii) applied and interdisciplinary education, i.e. the learning of theoretical principles through practical studies in interdisciplinary projects. Based on these concepts, the Ministry of Education will be responsible for defining 75% of the curriculum offered by states and schools, while the latter will be responsible for the other 25%.

1.23 As a consequence of the improvement in the coverage and quality of primary education, and in response to increasing demands by employers, the number of secondary school students is expected to grow and that level is expected to expand. The program will not only support vocational education, but will also promote the reform and expansion of secondary education by financing studies and consultancies by the Ministry of Education and preinvestment studies in secondary education for the states, which are mainly responsible for this level.

6. Experience of the Bank and other institutions in the sector

1.24 Brazil has extensive experience with the World Bank in technical and basic education (2366-BR, 2810-BR, 3604-BR, 3663-BR, and 2412-BR) and with the IDB in higher education (Ministry of Education-IDB programs I, II, and III). The IDB also has experience with technical and vocational education in other countries. It should be noted as well that the project to improve secondary education in the state of Paraná (950/OC-BR) approved by the Bank in 1996 included a pilot plan to reorganize technical education, making it consistent with the reforms proposed by the federal government.

1.25 The main lessons learned from the projects in general education are: (i) supplying textbooks and rehabilitating schools are effective investments; (ii) teacher training should focus on improving pedagogical techniques and classroom management; and (iii) better administration of education on the different levels of government is a crucial aspect. In the field of technical and vocational education, the Bank's experience 4/ points to the need to conduct studies on the demand for skilled labor, the importance of developing links between schools and employers, the

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4/ Summary of evaluations of secondary technical-vocational and university education projects, Operations Evaluation Office, GN-1543, 1985.

advantages of multiple-use spaces, and on-going curricular review to ensure that it is consistent with changing market conditions.

1.26 Last, federal project implementation has been hampered by a lack of familiarity on the part of local authorities with bidding procedures agreed upon with the Banks. The experiences and lessons learned from earlier projects have been taken into account in preparing this operation.

7. Bank country strategy

1.27 The Bank's strategy in Brazil stresses: (i) support for the reform and modernization of the federal and state public sectors; (ii) support for economic liberalization, partly through modernization of the producing sectors and rehabilitation of transportation infrastructure; and (iii) reduction in inequity and poverty through improvements in the efficiency and focus of social spending.

1.28 The project supports a reform that seeks to redirect federal and state public funds and use them more effectively in human capital formation linked to the country's current economic development efforts, which is fully consistent with the Bank's strategy. The anticipated changes will focus federal and state vocational education spending more directly on the working class. Growth in the vocational education system, based on state and community initiatives, will benefit young people and adults from the poorer classes by teaching them new skills, which will upgrade the quality of the country's human capital.

II. THE PROGRAM

A. Objective

2.1 The general objective of the program is to support the introduction of vocational education reform. It is specifically intended to establish an effective vocational education system (job education), separate from secondary and university education, which will train young people and adults for the workplace through nonuniversity post-secondary courses, basic extension courses, and others, to provide Brazil with a better-trained workforce.

2.2 Studies and consultancies will also be financed to prepare the reform of secondary education and to disseminate a new curriculum as well as to produce strategic plans to upgrade and expand secondary education by the state departments of education in the states participating in the program.

2.3 The objectives of the program are:

a. To strengthen the Ministry of Education and the state education departments responsible for vocational education in their functions of regulating, supporting, coordinating, monitoring, and evaluating the performance of the system, and keeping the public informed.

b. To create a network of approximately 200 technical schools using existing federal, state, municipal and other schools and building new schools.

c. To use surveys of market demand and studies of trends to decide on what courses will be offered.

d. To ensure that courses are organized on the basis of modules and that their content is consistent with the occupational skills required for each vocation.

e. To encourage mutual support and joint efforts to promote cooperation and participation by all vocational education institutions, public institutions, companies, and labor unions, in order to share successful experiences, develop and introduce integrated policies, and support the management and financing of technical schools.

f. To promote autonomy in the management of schools and encourage better performance through: (i) financing and participation in management by the community; (ii) gradually implementing systems for financing training when public funds are involved; and (iii) public access to information on the performance and effectiveness of the schools.

g. To promote the creation of skills certification systems to allow the labor market to operate more smoothly and facilitate worker entrance and exit from the education system through the adoption of a flexible education strategy.

h. To attend to demands for retraining of the unemployed, through programs to purchase courses for public and private entities, particularly those financed under PLANFOR.

i. To encourage the conversion of federal schools financed with the proceeds of the program to schools that attend to the objectives of technical and vocational education, and gradually reduce enrollment in regular secondary education.

j. To ensure that the number of technical and vocational educational establishments is increased only through the states, federal district, or municipalities, independent of (except in the case of municipalities) or preferably in association with the private sector or through private nonprofit institutions independent of or in association with the public sector.

k. To encourage the adoption of flexible forms of hiring based on current legislation.

B. Description

2.4 Two subprograms have been designed to attain the program's objectives: subprogram A, general policy implementation; and subprogram B, state and school investment projects.

1. Subprogram A. General policy implementation (US$39 million)

2.5 The main purpose is to provide the Ministry of Education with the tools and mechanisms it requires to support the reform of vocational education in states, municipalities, and technical schools (federal, state, and community), and to sensitize and inform the public about the objectives of the reform and its implementation. The subprogram is structured into the following projects and components.

a. Management (US$3.8 million)

(1) Strengthening of the Ministry of Education (US$300,000)

2.6 An institutional analysis will be performed of the structure, functions, and requirements for strengthening the Secondary Education and Technology Branch (SEMTEC) to enable it to guide, monitor, and evaluate the vocational education system, and to formulate policies and propose related legislative changes.

(2) Vocational education information system (US$2.9 million)

2.7 The design and introduction of a vocational education information system will be financed, to compile, process, and divulge information on vocational education institutions and the labor market in order to facilitate public and private decisions, thereby improving the quality of vocational education. The system will provide information on the central, state, and school levels, and will include the following subsystems: (i) institutional evaluation; (ii) follow-up on graduates; (iii) labor market demand; (iv) curricula; (v) monitoring of income and spending. Items (i) to (iv) will provide information for evaluating gender content.

(3) Development of school management models (US$600,000)

2.8 The following will be financed: (i) proposals for new legal and regulatory frameworks to provide vocational education schools with financial, administrative, and pedagogical autonomy; (ii) preparation of strategic and operational management tools in the fields of human resources, budget and financing, and the teaching process, intended to continually improve quality and productivity; and (iii) mechanisms for integrating schools and businesses.

b. Technical-pedagogical development (US$11.4 million)

(1) Labor market studies (US$7 million)

2.9 Initial studies on demand and methods for keeping them continuously up to date will be designed and implemented in states and schools. The component includes: (i) an initial study of changes in employment levels by job category and gender, with the results broken down on the microregional level, which will be used as input to identify areas where new job opportunities are concentrated, and will serve as a guide to help states and schools identify vocational education requirements; (ii) development and application of methodologies for research in industrial, commercial, and agricultural companies in order to determine the levels and types of investment in companies and human resources recruitment; and (iii) development and application of methodologies for determining job profiles and identifying the necessary skills based on labor processes in companies, all with a view to designing appropriate school curricula. The program's strategy will be to transfer responsibility for conducting these studies to the states as they develop the capacity to do so.

(2) Curricular development (US$3.4 million)

2.10 This component will finance: (i) the preparation of national curricular guidelines for technical and vocational courses for industry, agriculture, commerce, and services through

(a) identification of basic and specialized occupations; (b) identification and updating of the required skills profiles; (c) definition of curricular guidelines and the minimum number of hours for the different courses; (d) development and dissemination of work methods for designing curricula by states and schools; and (e) the procurement and distribution of educational materials, software, and reference works, under the new guidelines; (ii) support for preparing state and school curricular guidelines; and (iii) the establishment and dissemination of interactive mechanisms for developing curricula. Gender equality aspects and labor safety will be included as cross-cutting subjects.

(3) Skills certification (US$1 million)

2.11 The following will be financed: (i) design of a skills certification and standardization system; (ii) an international seminar and study trips for selected staff from the Secondary Education and Technology Branch (SEMTEC) to learn about relevant experiences in other countries; (iii) a pilot certification project in one industrial area and in two service areas in order to validate the certification mechanisms, including a data bank for the areas selected for the pilot project; and (iv) a seminar to discuss the pilot project and the proposal for continuity. 5/

c. Human resource development (US$15.3 million)

2.12 The following activities will be financed: (i) short courses on updating pedagogical skills for the management of teaching aids, evaluation processes, use of educational resources, and upgrading of technical knowledge in industrial, agro-technical, mining, civil construction, services and other areas, through hands on methodologies and supervised in-service in companies for a total of approximately 15,000 teachers; (ii) courses involving in-service training in companies for some 4,000 teachers to develop their knowledge in the pedagogical and technological areas mentioned in the preceding item; (iii) courses for about 260 administrators of federal and state institutions in data analysis and processing; (iv) courses for some 1,260 teachers on curricular modules; (v) state seminars for a total of approximately 1,000 heads of education departments or areas, in order to evaluate implementation of the curricular guidelines; (vi) specialization courses for some 60 federal school principals in curricular management and market adaptation strategies; and (vii) three international seminars on: (a) vocational education reform; (b) vocational education institutions; and (c) technological progress and changes in the labor market, and others; and (viii) technical visits by principals and teachers to learn international experiences. Gender equality

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5/ The results of the prospective technical cooperation project entitled, "Certification of basic skills" (TC-96-07-09-7-BR-MIF) will be used for this component.

and labor safety will be included in the curriculum as cross-cutting subjects. For the courses mentioned in (ii) a monetary incentive will be provided to encourage participation by working women with children under 10 years of age.

d. Communications plan (US$2.7 million)

2.13 The following will be financed: (i) organization of national seminars and meetings to heighten awareness among representatives from the vocational education program (PROEP), the states, entrepreneurs, and the press of the objectives of the reform (ii) publication of articles by opinion makers who support the reform; (iii) interviews with the Minister of Education and other ministry officials in the country's main mass media; (iv) institutional campaign to publicize the reform using different instruments to obtain public support for it (logo and visual identity, publications, computer aids, videos, radio broadcasts, and events). This component will include materials intended to eliminate stereotypes regarding participation by men and women in careers that are not traditional for their gender, and the plan will ensure that institutions working with ethnic minorities are properly informed of the program.

e. Follow-up study on pilot schools (US$1.3 million)

2.14 The program will finance follow-up on eight pilot school projects to examine the process of introducing the reform in schools. Follow-up will be performed during the planning, execution, and operating stages of each project. The activities will include: (i) preparation of evaluation indicators, and for each school: (ii) initial evaluation of the school and the team; (iii) evaluation of use of the manual and the approved project; (iv) semiannual evaluations during the project on compliance with the project implementation agreement and the technical, pedagogical, and management principles of the reform; and (v) final evaluation, one year after disbursement in full of the funds.

f. Support for the reform of secondary education (US$4.5 million)

2.15 This component will finance: (i) the establishment of a team in the Secondary Education and Technology Branch to coordinate studies and monitor and evaluate implementation of the reformed secondary education curriculum; and (ii) the following studies: (a) identification and analysis of national and international curricular models, with stress on experience in applied and inter-disciplinary teaching; (b) description of classroom teaching practices; (c) identification of learning patterns by young people attending night school; (d) study of the main variables that determine the internal efficiency of secondary education; (e) identification of teacher training requirements under the reform; and (f) quantification of growth in secondary education and identification of

alternative methods of financing; and (iii) seminars to discuss the curricular guidelines. The initial studies and actions will include gender considerations.

2. Subprogram B. State plans and school projects (US$433.5 million)

2.16 This subprogram will finance preinvestment and investment projects in states and schools.

a. State technical and vocational education plans

2.17 Preinvestment financing will cover the design of vocational education and secondary education plans. The vocational education plans will be designed with participation by the different stakeholders in the sector and are intended to determine how vocational education should develop in a given state, in accordance with the program guidelines, including the need for legislative changes, the strengthening or establishment of regulatory and management bodies to support, coordinate, monitor, evaluate, and inform the public about the vocational education system, and actions to encourage participation by women in vocational training. Also included is identification of training needs and schools that are priorities under the reform.

2.18 The secondary education plan, which is a strategic, operating approach for the state secondary education, will cover: (i) current enrolment and a five-year projection; (ii) inventory and profiles of principals and teachers; (iii) profiles of current and future students; (iv) description of existing physical infrastructure, equipment, and materials; (v) investigation of alternative sources and mechanisms for financing the initial and recurrent costs of expansion; and (vi) a preliminary proposal to upgrade and expand education, including a new model for school organization that includes autonomous management and components intended to improve school administration, train teachers, develop curricula, provide teaching materials and equipment, infrastructure and furniture, and adjust the regulatory and institutional framework.

2.19 With respect to investment, financing will be provided for vocational education plans to strengthen management on this level.

b. School projects

2.20 Funding will be provided for preinvestment studies to prepare strategic school plans whose purpose is to define a technical school project as per paragraph 2.25, including organizational and technical-pedagogical proposals in line with the program's eligibility requirements (see chapter III). The strategic school plans should be based on participative planning processes. Advisory services for preparing the plans will involve mentoring,

through the hiring of national or international institutions with recognized experience in the field of vocational education.

2.21 School project investments refer to implementation of the strategic school plans for establishment of technical schools. This can be done through: (i) the transformation of existing federal, state, municipal, or community schools; or (ii) the creation of new schools on each level, except the federal level. Project eligibility is described below.

1. Federal schools

2.22 These projects will involve transforming existing federal schools into technical schools. They should include organizational and technical-pedagogical proposals that are geared to the program's objectives. The following investment categories will be eligible: modernization of management; information and evaluation systems; purchase of educational materials; training; curricular development; purchase of equipment; and remodelling of infrastructure. Project design should make for a reduction in recurrent costs financed with public funding. The physical spaces and installations in the schools and their management should be designed to permit them to continuously adapt to regional market conditions, based on studies of demand and other requirements.

2. State schools

2.23 These projects will involve transforming existing state schools into technical schools or building new schools. The eligibility requirements will be similar to those for federal projects. However, unlike the federal schools (which have ample operating and maintenance budgets), projects on this level will normally require an increase in recurrent public spending. To gain access to this financing, the states must have prepared a vocational education plan as described above, the proposed school must be consistent with that plan, and the capacity must exist to finance the recurrent costs.

3. Community schools and others

2.24 Community projects involve the creation of technical schools or the transformation of existing schools whose management and recurrent costs are, or will be, the shared responsibility of stakeholders in the public (states, federal district or municipalities), semi-public (foundations, joint ventures) and private (business associations, labor unions, and NGOs, etc.) sectors. This type should be the main avenue for expanding the vocational education system. Municipal and not-for-profit private schools able to demonstrate that they can cover the projected recurrent costs are also eligible. For municipal schools, city governments must demonstrate that they are complying with their obligations regarding primary education.

2.25 The features of the technical schools are:

a. Determination of the courses to be offered in function of demand studies.

b. Continuous updating of the curriculum based on the occupational skills required by the market.

c. Adoption of systems of in-service training in which students are supervised in the workplace.

d. Training for teachers through in-service training in companies.

e. Use of job placement systems for graduates.

f. Establishment of systems to follow up on graduates.

g. Participation by the private sector in decisions.

h. Market integration under partnership agreements with companies and other employers on in-service training, use of equipment, teacher training, sale or purchase of services, etc.

i. Coordination with other vocational education institutions with respect to supply, teacher training, technical assistance, etc.

j. Adoption of cost accounting systems.

k. Generation of significant own income.

l. Autonomy in financial and human resource management.

C. Scaling

2.26 The cost of subprogram A has been calculated at US$39 million to cover the needs of implementing national policy as described in this chapter.

2.27 Subprogram B, for US$433.5 million, has been scaled on the following basis: there are about 280 vocational education schools in existence today that could potentially benefit from the program (133 federal, 140 state, and others that fall into the community category). An exercise to classify those schools by size, using the conservative assumption that only schools with a student body of over 500 could comply with the eligibility requirements, determined that approximately 150 existing schools would be eligible.

2.28 Based on the cost structure for existing schools of different sizes and characteristics and a preliminary sample of new school projects, probable demand was calculated by types of eligible schools, as shown in table II-1.

Table II-1

Demand for funds by type of school (US$ thousands)

Type	Enrolment	Area (M^2)	Infrastructure*	Equipment	Other	Total/school
A	4,500	9,000	450	2,000	950	3,400
B	2,000	4,000	320	1,250	500	2,071
C	700	1,500	400	900	300	1,600
New	1,700	3,000	1,400	800	800	3,000

* Demand for infrastructure by type B school is lower than that by type C, since federal schools which are in better condition predominate in type B.

2.29 Table II-2 shows probable demand by existing schools. When additional demand estimated by the Ministry of Education as a minimum of 50 new state or community schools is added, total demand for funding under subprogram B would be US$450 million equivalent, which is similar to the amount proposed for the subprogram.

Table II-2

Estimated total demand (US$ thousands)

Type	Number of schools	Infrastructure	Equipment	Other	Total/school
A	15	6,750	30,000	14,250	51,000
B	70	22,400	87,600	35,000	145,000
C	65	26,000	58,500	19,500	104,000
New	50	70,000	40,000	40,000	150,000
Total	200	125,150	216,100	108,750	450,000

2.30 The system that will exist at the end of the program, with a minimum of about 200 technical schools will allow 150,000 students a year to enter the post-secondary courses, which is a reasonable figure in view of the projected 2.2 million high school graduates each year. Further, the system could offer up to 600 places in extension courses annually.

D. Program cost and financing

1. Program cost

2.31 The program will cost a total of US$500 million. The Bank will finance the equivalent of US$250 million while the local contribution of US$250 million will be provided in equal parts by the Ministry of Education and the Worker Assistance Fund. The

investment categories and sources of funds are shown in the following table.

Table II-3

Costs by investment category and source of financing (US$ millions)

Category: Subprogram	Local	IDB	Total	Percentage
1. Administrative costs	25.0	—	25.0	5.0
2. Implementation of general policies	25.0	14.0	39.0	8.0
2.1 Equipment	-	0.4	0.4	
2.2 Consultants	9.9	2.5	12.4	
2.3 Training	8.0	7.3	15.3	
2.4 Specialized services	7.1	3.8	10.9	
3. State plans and school projects	200.0	233.5	433.5	86.5
3.1 Civil works	50.0	70.0	120.0	
3.2 Equipment and furniture	82.9	117.4	200.3	
3.3 Training	20.0	10.0	30.0	
3.4 Consultants	17.4	17.4	34.8	
3.5 Specialized services	9.7	-	9.7	
3.6 Contingencies	20.0	18.7	38.7	
4. Inspection and supervision	—	2.5	2.5	0.5
Total	250.0	250.0	500.0	100.0

2. Financing plan

2.32 The Bank will provide financing of US$250 million from the ordinary capital resources, to cover 50% of total requirements. The loan conditions are presented in the following table.

Table II-4
Loan conditions

Amortization period:	20 years
Grace period:	6 years
Commitment period:	4.5 years *
Disbursement period:	6 years
Interest rate:	variable
Inspection and supervision:	1% of loan amount
Credit fee:	0.75% of the undisbursed balance

* With respect to subprogram B

3. Local contribution

2.33 The Ministry of Education's budget for 1997, which has been approved by Congress as part of the federal government's budget, already includes an item for the program of US$32 million as counterpart funds. In June of this year, the Worker Assistance Fund confirmed its agreement with the Ministry of Education to provide 50% of the local counterpart.

III. PROGRAM EXECUTION

A. Implementation strategy

3.1 Since the program consists of financing an institutional reform and innovation effort, a flexible implementation strategy is proposed which will allow the government and the Bank to jointly review its progress each year and to agree upon an action plan for the following year.

3.2 The actions and goals will be set forth in annual operating plans which are consistent with the program's main objectives and the lessons learned during implementation.

3.3 The Ministry of Education will use strategic planning as a tool for coping with a changing situation. This methodology will be used on the federal, state, and school levels to define investment projects and execution modalities.

B. The executing agency

3.4 The Ministry of Education and Sports will execute the program. It has established a program coordination unit (PCU) which reports to the Secondary Education and Technology Branch (SEMTEC).

3.5 The board of directors of the program will be chaired by the Secretary of SEMTEC and composed of the Secretary of Vocational Training and Development of the Ministry of Transport, the President of the Worker Assistance Fund, the Director of SEMTEC's Institutional Development Department, and the executive director of the PCU. The institutional development and technical-pedagogical management offices will supervise the projects in subprogram A and provide support for the coordination units responsible for the monitoring and ex ante evaluation of school projects. The administration and financial management office will be in charge of managing financial resources, providing logistical support for the PCU, and monitoring the physical and financial progress of the projects. The operations committee will act as an advisory body and will be composed of middle managers from the PCU and chaired by its executive director. The planning advisory office will prepare and monitor the PCU's strategic plan,

Structure of the program coordination unit

Board of directors

Executive Director
Operations Committee
Planing Advisory Office
Legal Advisory Office
Administration and Finance Manager
Institutional Development Manager
Technical-Pedagogical Development Manager
Coordinator of Federal System Operations
Coordinator of State System Operations
Coordinator of Community School Operations

the annual report, and the annual progress reports, and the legal advisory office will prepare the contracts and monitor compliance with contractual conditions.

3.6 The project will be carried out following operating and financial procedures established in: (i) the loan contract between the Bank and the borrower; (ii) the agreements transferring funds from the Ministry of Education to the states and to the schools; and (iii) the program Operating Regulations.

C. Operating regulations

3.7 The Operating Regulations for the program will contain: definitions of eligible entities and projects; eligibility criteria for national, state, and school institutions and projects; and the program implementation mechanism. Annexes to the regulations include the model agreements to be signed with program beneficiaries and the parameters for evaluating school projects. Other guidelines that have been prepared for program operations are: (i) the program organizational manual; (ii) the strategic school planning manual; (iii) the strategic vocational education planning manual on the state level; (iv) the strategic planning manual for the reform and expansion of secondary education; and (v) the procurement manual. As a condition precedent to the first disbursement of the loan, the borrower, through the executing agency, must submit evidence that it has placed the Operating Regulations and annexes into effect, as well as the manuals mentioned in (i) to (v) above.

1. Program participants

3.8 On the federal level, the main participant is the Secondary Education and Technology Branch (SEMTEC), which will receive institutional strengthening and be involved in developing the curricular studies, strategies for the certification systems, and the assessments and recommendations regarding secondary education. The state education departments will also play a very important role as demanders and consumers of vocational and secondary education plans and as sponsors of school projects, either alone or in partnership with others, and they too will receive institutional strengthening and reorganization. The schools themselves, particularly the federal schools, will also play a prominent role, since the reforms can only take shape in this setting. The federal and community schools will bear the greatest responsibility as project designers and executors. Since the administration of state schools is generally not autonomous, the executing agencies are expected to be the state departments of education or other agencies responsible for vocational education on that level.

2. Eligibility criteria

3.9 The regulations define the eligibility requirements for states and schools to gain access to program funding and set forth the selection criteria for national, state, and school projects, which are closely linked to the specific objectives of the reform.

3.10 Key aspects such as the separation of secondary education from vocational education, gearing curricula to market demand, halting growth in federally funded budgets, demonstration of the long-term sustainability of schools, gradual increase in enrolment in technical schools, independent administration of schools through associations of public and private institutions, participation by entrepreneurs and workers on advisory boards, in-service training in companies for students and teachers, minimum operating efficiency requisites, and others, form part of the eligibility requirements established in the Regulations. Tables III-2 and III-3 present the main institutional and project eligibility requirements.

3.11 The Operating Regulations also include a mechanism for according priority to projects on the basis of a point system that gives preference to projects presenting: (i) plans to bring about the conversion of their schools into technical schools during program execution; and (ii) a technical and pedagogical proposal in which the supply of courses and vacancies requiring certificates of completion of secondary education for admission to the technical and vocational education.

3. Project approval

3.12 The components, plans, and projects included in subprograms A and B must comply with the Operating Regulations and will require the Bank's nonobjection. When projects are presented or, at any rate, prior to calling for bids on goods and services, the Bank must indicate its nonobjection to the terms of reference or technical specifications (including plans and metric measurements for civil works), budgets, and model procurement notices and invitations to submit bids and the bidding documents. Once a component, plan, or project has been approved, the corresponding agreement will be signed with the authorities, based on the model agreements agreed upon with the Bank, except when they are implemented directly by the Ministry of Education.

D. Financing limits

3.13 The financing limits for national projects under subprogram A will be set out in the budget. Financing for state plans and school projects will be subject to the following ceilings expressed in dollars:

Table III-1

Ceilings per type of project

Type of project	Ceiling
Formulation of vocational education and secondary education plans	250,000
Execution of vocational education plans	500,000
Formulation of school strategy plans	150,000
Execution of school strategy plans	5,000,000

3.14 The above limits may be changed with the approval of the board of directors of PROEP and subject to the Bank's nonobjection.

E. Procurement of goods and services

1. Goods and services

3.15 As established in Bank policy, international competitive bidding will be used for contracts paid for from loan proceeds are over the equivalent of US$5 million for works, US$350,000 for goods and equipment. Contracting for lesser amounts will be governed, in principle, by national legislation. In such cases, when Bank funds are used there should be no restrictions on participation by suppliers from the Bank's member countries.

3.16 It is expected that most of the school projects will be carried out individually, and therefore most of the works contracted will be under the limits established above. However, a state may decide to execute more than one school project, in which case it would be more suitable to group the works into a single bid. International competitive bidding may be required in such cases, if the total value of the works is over US$5 million. The same situation could occur with packaged bids for the supply of equipment.

2. Consulting services

3.17 The selection and contracting of services from loan proceeds will be done in accordance with Bank procedures, and international competitive bidding is required when contract estimates are over US$200,000 equivalent.

3.18 The program procurement plan is presented in Annex III-3.

Table III-2. ELIGIBILITY CRITERIA

1. Institutional eligibility criteria. The following eligibility requirements apply to entities that wish to obtain financing under the PROEP:

1.1 Brazilian states. Demonstrate that they support the principles of vocational education reform by submitting a policy letter.

1.2 Federal schools. Present a plan of action to: (i) gradually reduce the number of places in regular secondary school courses, (ii) admit preferably high school graduates or students enrolled in secondary education on the basis of their second last year; and (iii) grant technical diplomas only upon completion of technical studies only to those who have also satisfactorily completed secondary education.

1.3. State schools: (i) The state government must have presented its vocational education plan to the PCU and issued the necessary legislation approving it, and have signed a framework agreement with the PCU for financing the state vocational education plans; (ii) be included in the state's secondary education plan and, for new schools, be established as an entity under private law; (iii) demonstrate the economic capacity to cover the recurrent costs of the project; (iv) be in the process of reducing the number of regular secondary courses from the school.

1.4 Community schools and others: (i) For new schools, be established as an entity under private law; (ii) for existing schools, be registered with the state department of education or equivalent agency as a teaching institution in operation; (iii) present an initial action plan for activities to be carried out and the objectives set, including preliminary market studies, consistent with state plans; (iv) have preferably formed alliances with the producing sector to carry out integrated actions; (v) demonstrate the economic capacity to cover the recurrent costs of the project; (vi) for municipal schools, the city government must demonstrate that it is complying with its primary education obligations and provide the PCU with information on its institutional and financial situation.

2. Project selection requirements. National, state, and school projects must meet the following conditions:

2.1 National projects: (i) Correspond to the projects described for subprogram A (see paragraph 2.4) with regard to content, and have strategic and operational plans, terms of reference, costs and timetables agreed upon with the IDB; (ii) have an executing agency in the Ministry of Education.

2.2 State Secondary education plans: (i) The state institution responsible for secondary education must have presented a policy letter to the PCU; (ii) the secondary education plan must have the following minimum content: (a) current enrolment and a five-year projection; (b) inventory and profiles of principals and teachers; (c) profiles of current and future students; (d) description of existing physical infrastructure, equipment, and materials; (e) investigation of alternative sources and mechanisms for financing the initial and recurrent costs of expansion; and (f) a preliminary proposal to upgrade and expand education, including a new model for school organization that includes autonomous management and components intended to improve school administration, train teachers, develop curricula, provide teaching materials and equipment, infrastructure and furniture, and adjust the regulatory and institutional framework.

2.3 State vocational education plans. The state vocational education plans presented to the PCU must: (i) describe the state vocational education system and the existing organizational structure for its management, including the current legal framework and policies and guidelines for its reform; (ii) present an analysis of the current status of the state system, including data on the quality of schools, skills offered, enrolment, teachers, and performance indicators; (iii) identify state job market supply and demand and demonstrate that the courses offered in the plan are responsive to the market; (iv) determine the time needed to consolidate the state system of vocational education and to separate the academic and technical-vocational curriculums; (v) establish autonomous administrative models in the state technical schools in association with the private sector; (vi) plan actions to reform vocational education in the following areas — (a) legislative changes; (b) institutional organization and management, including the design and introduction of information, certification, and graduate follow-up systems; (c) technical teaching development, including state studies on the job market and the updating of curricula; (d) human resource development; (e) state vocational education requirements; and (f) reform priorities in state schools; (vii) present the detailed costs and timetable for implementing the vocational education plan; (viii) include the terms of reference and estimated costs of consulting and training services to be contracted, technical specifications and budgets for equipment, and bidding documents for goods and services based on the program's standard rules.

Table III-3. ELIGIBILITY CRITERIA (continued)

2.4 School projects. The projects contained in the school strategy plans must demonstrate that:

In general: (i) They are intended to introduce or improve the functioning of a vocational school, as defined in the regulations; (ii) have been drawn up following the methodology established in the program's school strategic planning manual; (iii) comply with the institutional eligibility criteria; and (iv) attain or exceed the parameters established in Appendix I of the Operating Regulations.

In technical-pedagogical aspects: (i) Offer courses and places in function of demand studies conducted following the methodology recommended by PROEP; (ii) comply with national and state curricular guidelines when pertinent, and have adjusted or be intending to adjust their curricula to the skills profiles required by local employers; (iii) intend to implement, increase and/or diversify the supply of basic level vocational courses; (iv) consider measures to encourage participation by women in nontraditional jobs.

In economic aspects: (i) Optimize the use of existing and planned space, equipment, and human resources; (ii) the cost of site preparation must not exceed 20% of building costs; (iii) the cost per m^2 of physical infrastructure must not be above: R$300 for renovations, R$450 for expansion works, or R$550 for new works; 6/ and (iv) the efficiency indicators for physical design, investment costs, and future operation of the vocational school must correspond to the efficiency standards indicated in Appendix 1 (Reference Parameters) of the Operating Regulations.

In institutional aspects: (i) Establish an independent model in each school with participation by entrepreneurs and workers on their advisory boards and administration; (ii) the applicant institution must have the capacity to execute the project, and the proposed management model should make for growing integration with the producing sector through joint agreements for training, the sale of services, and other arrangements; (iii) establish mechanisms for accountability to the community and partner institutions regarding management, including performance of students in the market, the costs incurred, and satisfaction by students and companies with the results of the courses; and (iv) establish mechanisms to monitor and evaluate school demand and graduates.

In financial aspects: (i) Have the capacity to generate income of their own from courses and services sold and have projections to reduce reliance on the public purse; (ii) the proposal is financially sustainable over time, and public schools have the budget resources to finance the recurrent costs of the first year of operation; and (iii) execution of the school strategy plan does not require an increase in federally funded recurrent costs.

In technical aspects: (i) Include the terms of reference and estimated costs of the consulting and training services to be contracted, technical specifications and budgets for civil works based on the program's standard rules; (ii) propose least-cost technical solutions and have legal ownership of the land on which the works are to be built and, if necessary, rights-of-way; (iii) the physical spaces and installations of the schools should be designed to allow them to adapt continuously to market conditions, based on studies of demand and other instruments.

In environmental aspects: (i) New schools are not located in natural or environmental risk areas or on lands that are part of the cultural or historical heritage; (ii) there is compliance with health codes and school construction standards and federal, state, and municipal legislation; (iii) the property has drinking water, sewerage and trash collection and solid and liquid waste disposal services that do not harm the environment or neighboring communities; and (iv) steps have been taken to ensure the safety of students and teachers, particularly in laboratories and machine rooms, and hazardous wastes and greases are disposed of in an environmentally safe manner.

3.19 Owing to the decentralized nature of the operation and the large number of contracts that can be expected, to streamline program implementation and facilitate the Country Office's supervisory duties, it is proposed that an ex post review by sampling be done for procurement in amounts of up to US$2 million in the case of

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6/ The prices have been calculated as of August 1997 and include the costs of architectural and engineering designs and of supervising execution of the works; they may be readjusted based on changes in the ICUB construction price index.

works, US$350,000 in the case of goods, US$200,000 in the case of consulting firms, and US$50,000 in the case of individual consultants. The Bank reserves the right not to finance out of loan proceeds ineligible costs or procedures that do not conform to its requirements and to take whatever other steps are necessary.

3.20 The borrower has informed the Bank that it intends to let a contract for approximately US$1.6 million from counterpart funds to hire an international agency to administer consulting contracts. Also, with respect to the program's communications plan, under the system established by the Department of Communications of the Office of the President of the Republic, which stipulates that a single company will provide institutional publicity services for each ministry, the borrower will provide about US$2.7 million in counterpart funding to hire the firm McCann-Erickson Publicidade, Ltda., which previously won a contract to provide similar services to the Ministry of Education. The borrower has also indicated that, under national legislation which allows qualified public institutions to be selected, it will use counterpart funds to hire the State Data Processing System Foundation (SEADE) to perform the labor market study subcomponent, costing approximately US$7 million. Last, also from counterpart funds, it will enter into agreements with: (i) the National Education Studies and Research Institute (INEP), which comes under the Ministry of Education, to perform secondary education studies, for about US$500,000; and (ii) federal technical schools and universities to carry out specialized training activities, also for about US$500,000.

F. Disbursements

3.21 Considering the nature of the operation, the volume of transactions that will result from the procurement of goods and services, and the features of a general program, an efficient and rapid mechanism has been planed to streamline disbursements of program funds.

3.22 Disbursements will be made following Bank rules, except in cases of reimbursements for payments made, for which the executing agency will simply present a disbursement request to the Bank's Country Office, accompanied by a cost breakdown and the local disbursements and contributions control form, with the executing agency retaining the supporting documentation.

3.23 During its inspection visits, the Country Office will review a sample of the documentation supporting the disbursements. During technical and/or financial inspections, sampling will performed to ensure that the supporting documentation for the requests is on file and that the funds mentioned in the reimbursement requests have been used as stipulated in the loan contract. If errors are found, a larger percentage of the documentation will be checked and the executing agency will be notified to make the corresponding deductions from future requests.

G. Revolving fund

3.24 Given the nature of the program and the variety of actions to be financed, it is recommended that a revolving fund be established equivalent to 5% of the prospective loan.

H. Cost recognition

3.25 The executing agency estimates that it will have spent up to US$32 million of the local counterpart between the date of the analysis mission and the date on which the prospective loan contract is signed, as follows: (i) up to US$10 million on preinvestment studies, particularly for the 27 state plans for vocational education and for secondary education; (ii) up to US$8 million on activities for subprogram A; (iii) up to US$12 million on implementation of about 12 projects; and (iv) up to US$2 million on program administration.

I. Program monitoring

1. Annual progress reports

3.26 The borrower, through the executing agency, will present annual progress reports to the Bank setting forth the actions and activities carried out, products and targets achieved, the main problems that have arisen, and proposed solutions. The reports will also show the funds used per component and will compare actual spending to programmed spending. The reports are to be presented within 90 days after the end of each calendar year during the program.

2. Annual reviews and operating plans

3.27 Based on the annual progress report, program reviews will be performed in the first quarter of each year, with the executing agency and the Bank examining the headway made. The reviews will serve to establish the annual operating plan for the year in progress, which will adjust activities and targets. The annual reviews and the operating plans will be measured against the policy letter and the logical framework (see Annexes I-4 and III-4).

J. Accounting and auditing

3.28 The Federal Auditor's Office or a firm of external auditors acceptable to the Bank will perform annual audits of the PCU. The unit will keep records of program costs, in accordance with the accounting plan approved by the Bank. The program's financial statements are to be presented within 120 after the end of each financial year during the program.

K. Inspection and supervision

3.29 The Bank, through the Country Office, and with support from the project team, will perform inspection and supervision during the program, paying special attention to compliance with the conditions precedent to the first disbursement, the start-up period, selection of the members of the PCU, and follow-up on reform measures and progress reports.

L. Status of program preparation

3.30 Program preparation has depended on progress in defining policies for vocational education, curricular guidelines, and instruments for publicizing the financing conditions. The components included in subprogram A have been defined and scaled, but detailed execution plans of each component are still required. They must be drawn up for each component prior to any disbursements for that component.

3.31 As for subprogram B, the preliminary versions of manuals for preparing state vocational education and secondary education plans, and the manual for preparing school projects are ready. For both subprograms, agreement has been reached on the content of the Operating Regulations and the Annexes thereto and on the organizational and procurement manuals. Taken together, these tools will allow for rapid progress to be made in preparing investments in the states and in the schools.

3.32 The PCU has been established and assigned permanent staff who have been preparing the program.

M. Ex post evaluation

3.33 The borrower has agreed to present the methodology to be used for the ex post evaluation to the Bank for consideration three years after the contract becomes effective. It will present the ex post evaluation report one year after the final disbursement of the loan, using that methodology as the basis.

3.34 The logical framework for the program and the data compiled for the annual evaluations will be useful for the ex post evaluation.

IV. PROGRAM FEASIBILITY

1. Political feasibility

4.1 The program addresses a latent demand by various segments of Brazilian society. General support from labor unions and companies was assured with approval of the program by the executive council of the Worker Assistance Fund, which considers it a key component of job creation in Brazil and will provide US$125 million in cofinancing (see chapter II).

4.2 The program was also supported by the Federations of Industry and Agriculture and by the semi-public system. The project team met in Brasilia with representatives of the semi-public system, who confirmed their willingness to participate.

4.3 The main resistance to reform comes from federal technical schools, particularly from teachers and students who do not want to see the separation of technical and academic courses or elimination of the latter in future. The teachers oppose the reform because they may be relocated to other educational institutions or lose their jobs. The students and their families do not want to lose the prospect of free, good-quality public secondary education which prepares them for university. Since they generally come from middle class families, they are more able to make their interests heard than lower income groups, who would be the main clients of the schools, since they are public.

4.4 The government adopted two measures to forestall political resistance to the reform: (i) a communications plan that clarifies the government's intentions and stresses Brazil's needs in a global context; and (ii) as for the federal schools, teachers in academic courses will have the option of joining the university-oriented system of secondary schools, thereby keeping their jobs in the federal public sector.

4.5 Strategic and participative planning will be used to identify the different players and scenarios in the reform process on the federal and state levels and in the schools themselves. They will also allow the reform to take place through continued consensus with the main stakeholders involved. The reform has been developed under a political and institutional marketing system that publicizes its principles, objectives, and positive results, with a view to building a social support base for its initiatives.

2. Legal feasibility

4.6 As mentioned in chapter I, the reform is supported under the National Education Guidelines Act, Presidential Decree 2208, and

Ministerial Decree 646, which guarantee its viability from the legal standpoint.

3. Incentives and institutional feasibility of the vocational education system

4.7 The vocational education system has been designed to link companies and schools as closely as possible. The technical schools have a clear mission to train young people and adults for entry into the labor market. An information system accessible to the public will be established to provide data on the following: (i) regional labor market demands, which will provide schools and students with a planning tool; (ii) the success of the different schools in job placement for their graduates; and (iii) the estimated cost per student and per graduate. These last two will permit the government and the public to evaluate the schools and the system. Also, the public funds earmarked for the technical schools will be gradually allocated under a per capita system (except for the teachers hired under the uniform civil service employment system). This will assure competition for funding and transparency in the results.

4.8 To ensure that the technical schools have the capacity to respond to the incentives, they must be allowed managerial autonomy, particularly with regard to budgets and human resources. Failing that, they should be allowed management flexibility through private support foundations or other mechanisms. In the case of the federal schools, the Ministry of Education will seek a more permanent solution in the form of a law that will grant them similar autonomy to that proposed for universities, which is currently being debated by Congress. Similar solutions will be sought for the state and municipal schools included in the program. Community schools will operate under private law.

4.9 Another structural aspect involves participation by companies and community representatives on school councils and advisory boards, which should make for close ties to the labor market and require more of the technical schools. State vocational education councils and a network of sector chambers which will be established to act as policy-setting bodies.

4.10 Last, the limited public funding available to cover the recurrent costs of the technical schools, combined with the schools' legal right to sell courses and other services such as the products or processes they develop, means that the schools will have incentives to be efficient and to establish even closer links with markets, which can only be beneficial for the schools and for society.

4. Economic feasibility

a. Technical schools as catalysts for development

4.11 The vocational education system proposed in the program will encourage the schools to become one of the main means of focusing, managing, and transferring technical and technological know-how. This will not take place through their training courses alone, but also through other activities they perform including services for companies (product development, processes, equipment maintenance, employee training, etc.), training for teachers in companies, cooperation with local governments to attract companies by offering training tailored to their needs, and others.

b. Education and productivity in a globalized economy

4.12 As mentioned in chapter I, the Brazilian government is aware of the need for deep-seated change in the country's education system, and has taken a series of steps to upgrade the supply and quality of primary and secondary education. The program will support the creation of instruments to develop the curricula of secondary education and intends to reform and expand secondary education in the states.

4.13 To ensure the feasibility of the changes in vocational education, it is necessary to understand the nature of labor markets, their demands, needs, and future trends. The program will finance studies and mechanisms that orient school projects to current and future labor markets. The information system will allow for follow-up on graduates and market demand. Entrepreneurs will also be included on technical school advisory boards.

4.14 Integration of schools, companies, and communities is one of the key elements for the economic viability of the schools and will also lead to a better understanding of the vocational education market by establishing joint commitments with lower cost solutions and greater effectiveness for organization of the system. Once all the stakeholders take responsibility for the financing and viability of the system, inconsistencies, risks, and conflicts of interest will become explicit, which will facilitate the search for solutions that are agreed upon by all the stakeholders involved.

c. Rates of return on vocational education

4.15 For further details on the economic advisability of the program, an indicative analysis was conducted of rates of return with respect to secondary education and technical, existing, and proposed training in state and federal schools.

4.16 The results show that: (i) owing to the high cost of courses in federal schools, the rate of return on academic and technical training is low at present and does not justify the present level

of public spending; (ii) the present return on academic and technical courses on the state level is acceptable; and (iii) in the new proposed model of technical education, the increase in efficiency (reduction in the dropout rate and the number of graduates of post-secondary courses in the job market and reduction in per student costs) results in relatively high rates of return on vocational education in federal and state schools, an indication that the reform is headed in the right direction.

5. Pedagogical feasibility

4.17 The pedagogical feasibility of the program is established by examining: (i) the curricular proposal; (ii) the methodology and implementation of school and state projects; (iii) the modular nature of the courses; (iv) integration between the schools and the labor market; (v) the new skills certification processes; and (vi) the innovative nature of the teacher training process.

4.18 The curricular proposal is based on the definition of minimum guidelines that allow the schools 25% flexibility in introducing items that respond to the needs of the local producing sector and a modular design that can serve students with different needs and different levels of training in the same school. The core of the proposal is identification of the skills profiles required by each branch of economic activity which, apart from establishing the basic curriculum, will make it possible to: objectively measure the quality of the training courses and the skills of graduates seeking work; support the process of selecting employees; guide human resource training; and define vocational training policies.

4.19 Apart from post-secondary courses, the technical schools can offer basic courses for students and workers to learn skills or complete their vocational training at any age, regardless of their educational background. However full-time students enrolled in post-secondary courses that grant diplomas must have completed general secondary school.

4.20 The new courses offered by the schools may be approved and accredited by the producing sector, which will lead to immediate recognition of graduates by the labor market. The proposed studies on demand will ensure that skills profiles are identified and updated to tailor curricula to market realities and to plan actions that identify and promote the new course contents, through flexible partnerships.

4.21 Integration with the market will also ensure that all the courses are practical, since they will include in-service training in companies in the region, which will permit effective on-hands training and better job prospects for graduates in the short term.

6. Financial feasibility

4.22 The program's financial feasibility is ensured by federal government counterpart funds (US$125 million) and the Worker Assistance Fund (US$125 million). Budgetary allocations have already been made for 1997 and 1998.

4.23 The program's financial sustainability is ensured as follows: (i) in the federal system, the government is currently spending US$750 million a year and, although the goal is to reduce the financial dependency of the schools when they begin to sell services and other products, federal subsidies may be continued, at their present levels if necessary; (ii) the situation of some of the state systems (São Paulo for example) is similar to that of the federal system; in other cases the states are taking steps such as concluding agreements with the private sector to operate the schools or with the National Industrial Apprenticeship Service (SENAI) to take charge of them (which would convert them into community schools); as part of its vocational education plan, each state must demonstrate how it intends to maintain existing and new schools; and (iii) the mechanism for the community schools is suitable for combining the particular interests of the partners, which may include business associations, labor unions, and others, to support the recurrent costs of each proposed school.

4.24 In compliance with the Operating Regulations, each school project applying for program funds will have to demonstrate its financial feasibility. Apart from any public subsidies received, possible sources of financing include the sale of courses to the Worker Assistance Fund, the sale of consulting services, the development of products and processes, employee training, and other company services. The experience of certain technical schools that have attained significant levels of self-sustainability indicates that it is realistic to require schools to generate reasonable levels of funding of their own.

7. Project feasibility

4.25 Since demand exists to bring existing technical schools into line with the recent legislation, as we saw in chapter II, and since the eligibility requirements are reasonable, it is feasible that the projects presented will be eligible for financing under the program's Operating Regulations. Strategically-planned school projects that involve major reforms are understandably slow to mature. This explains why there was no group of school or state projects prepared and ready for execution at the time of the analysis mission. However the Regulations require that each project to be financed obtain Bank approval, which will verify compliance with the eligibility criteria.

8. Gender considerations

4.26 Brazilian data indicate that the percentage of girls attending secondary school grew more rapidly than the percentage of boys over the last decade. These also suggest that the female workforce attained a higher average level of education than the male workforce over the same period. Women account for 55% of all students of higher education. As for vocational training, women tend to focus on secretarial studies, nursing, and teaching, with very few turning to industrial or agricultural courses.

4.27 The program includes measures and mechanisms to increase participation by women and to facilitate their access to courses in nontraditional areas, and vice versa (access by men to nursing for example), such as: (i) the labor market studies will have gender content and provide estimates and projections on participation by gender in the workforce; (ii) follow-up on graduates will have gender content; (iii) the communications plan will include actions to promote participation by men and women in nontraditional careers; (iv) the curricula will include gender aspects to eliminate stereotyping and encourage participation by women in nontraditional areas; (v) the information and certification systems and the monitoring mechanisms will compile data broken down by sex, which will facilitate evaluation; and (vi) the school projects will contain proposals to encourage participation by women in nontraditional careers.

9. Other program impacts

4.28 The program could also have very broad fiscal and social impacts. From an economic standpoint, it will help to increase self-financing of vocational education programs by companies and communities, reducing dependency on the public purse, particularly on the federal level, where US$750 million is spent on technical schools each year. The reduction will permit the Ministry of Education to rechannel funding to other educational priorities.

4.29 The social impact of the program will be seen in: (i) a future improvement in the attitude that society currently takes toward vocational education financed with federal funds; (ii) the creation of employment alternatives and higher future incomes for young people and adults, by providing them with better vocational skills; (iii) funding for new curricular models for academic secondary education courses geared to the basic knowledge and skills required by the workplace; (iv) more participation by women in vocational areas; and (v) a long-term contribution to better income distribution in Brazil.

4.30 This program will chiefly benefit high-school graduates, which are a relatively favored group in Brazil, and therefore it cannot strictly be classified as targeted to the poor as specified in paragraph 2.15 of document AB-1704 (Report on the Eighth General

Increase in the Resources of the Inter-American Development Bank). However under paragraph 2.13, the program can be classified in the category of "social equity and poverty reduction" since it involves actions and reforms in the education sector.

10. Program risks

4.31 **Market linkage**. There is a risk that the technical schools may fail to establish good market linkage, which would lead them to offer courses that do not respond to market demands. This risk will be mitigated by promoting the autonomy of the schools, making the system transparent through public access to information, and requiring the use of tools such as demand studies, follow-up on graduates, advisory boards with representatives from the private sector and labor unions, and for new schools by promoting the foundation of associations with the private sector.

4.32 **Scaling**. There is a risk that the demand for funds will be below the forecast level. Some 30% of the funding is expected to go to establishing new technical schools. The program will require states and municipalities to demonstrate their financial and institutional capacity to keep new technical schools operating. It is possible that on account of this condition, a significant number of states will not apply for project funding, except for studies. Further, the demand for community schools is not yet known because this is a new type of venture in which recurrent costs are guaranteed by the partners in an association. As a precaution, estimates that 50 state technical schools and community schools will be established in the 27 states are based on conservative figures.

4.33 **Reversibility**. Since (i) the legal instruments of reform are limited to a presidential decree and a ministerial decree and (ii) federal and state technical schools may not necessarily have completed their conversion to exclusively vocational schools by the end of program execution (since they may continue to offer regular secondary instruction), there is a risk that a new administration might reintegrate secondary and vocational education without much difficulty. To minimize this risk, the Operating Regulations include a system for prioritizing proposals which, *inter alia*, gives preference to projects involving (i) plans to convert schools to exclusively technical centers during the program execution period; and (ii) technical/instructional proposals with a higher proportion of courses and vacancies that require high school diplomas for admission to vocational education programs. Agreement may also be concluded for additional financing with schools wishing to place such conditions in effect in advance.

11. Statement of environmental and social impact

4.34 The program will have mainly positive environmental and social impacts. The curricular development component includes environmental education and worker safety, and the new system will train technicians in environmental protection and effluent analysis and control. Adverse environmental effect could occur during the construction stage and in the operation of schools that intend to upgrade their infrastructure. However the eligibility requirements contained in the Operating Regulations and current school construction standards call for environmental protection measures, which comply with Bank requirements, to be taken with respect to the location, construction, and operation of schools. As part of the vocational education plans, state departments of education will ask state environment departments to update their building standards. Calls for bids on works will include these environmental protection measures.

EDUCATIONAL POLICY LETTER

Mr. Enrique Iglesias, President
Inter-American Development Bank
1300 New York Avenue, N.W.
Washington, D.C.

Dear Mr. Iglesias:

The Government of the Federative Republic of Brazil is requesting a loan from the Inter-American Development Bank to support reform of the country's vocational education sector. The reform seeks to rechannel federal and state public funds and make more effective use of them in human capital training linked to the country's current economic development efforts. Under the changes, central government spending on federal and state vocational education will be targeted more closely to the working class. Growth in this system, through state and community initiatives, will benefit young people and adults from less favored classes, giving them new skills which will improve the quality of the country's human capital.

It should be noted that an indispensable part of this initiative is to foster mutual support, joint efforts, and participation by all public and private vocational training institutions, companies, and labor unions, in order to share successful experiences and implement integrated policies, and support the management and financing of technical schools.

1. National education policy

Brazil has a low level of schooling compared to other middle-income countries. This has been pointed to as one of the factors responsible for excessive inequality in income distribution. Low levels of education impose a significant constraint on the country's economic growth, particularly in light of economic liberalization and the consequent need to create competitive advantages.

Based on this analysis, the government's educational policy gives priority to the development and expansion of basic education (grades 1 to 8), improvement and expansion of secondary education (grades 9 to 11), and the reform of vocational education (job training). It also seeks to gear higher education to labor market requirements.

The changes in Brazil's national education policy have taken the form of legislation (passed or under debate) by congress and presidential and ministerial decrees.

The most important include: (i) the Fund for Maintenance and Development of Basic Education and Teaching Staff Enhancement, whose purpose is to provide more financing for education and salaries, ensure greater equity in the distribution of funding, encourage municipalities to take charge of primary schools, and assure minimum spending in each municipality per primary school student; and (ii) the National Education Guidelines and Standards Act, which clarifies the basic guidelines for education and its decentralized organization, specifying the powers and responsibilities of the different levels of government.

The bill on university autonomy currently before Congress will grant universities autonomy in their curricula (study plans and programs), and in administrative matters as well, since they will be free to manage their staff and administer their government funding and the income they obtain from the sale of services, subsidies, donations, financial cooperation, and agreements with public and private entities.

The National Education Guidelines and Standards Act, Presidential Decree 2208 and Ministerial Decree 646, promulgated in 1997, have established the government's vocational education reform policy. Among other aspects, the reform policy introduces administrative and curricular separation between vocational training and regular secondary education, with the latter focusing on cognitive and basic academic skills. The reform policy permits the institutionalization of modern vocational education, linked to the job market, and encourages the development of post-secondary technical education.

2. Technology, labor market and vocational education

Recent studies show that many companies in the formal sector are investing in capital goods with a higher technological content, and therefore demand more highly skilled workers. 1/ From 1989 to 1996, when the absolute number of jobs in the formal sector dropped, there was a marked rise in the percentage of workers who had completed high school, which points to the replacement of less-skilled labor with higher-skilled labor.

The new technologies clearly require major changes in training for technicians and workers, since the new processes require more technological content, more inter-disciplinary knowledge, and more capacity to adapt and learn new skills.

Brazil has state-of-the-art technical schools which have been modernizing for some time through linkages with local companies for the purpose of: (i) programming supervised in-service training for students; (ii) permitting reciprocal training, use of equipment, and infrastructure; and (iii) selling services such as the of product or process development and

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1/ "Referenciais do Mercado de Trabalho, FIESP, CIESP, SESI, SENAI, IRS". June 1997.

the provision of training for employees. Apart from training high-quality technicians, these schools have become true agencies for technology transfer and business development and have been able to generate significant funds of their own, sometimes accounting for as much as 50% of their budgets.

3. Reform of vocational education

Based on these new needs and on the successful experiences mentioned above, and with the objective of modernizing and rationalizing vocational education, the government embarked on a reform of the sector under a presidential decree followed by a ministerial decree on the federal system of technical schools.

Presidential Decree 2208/97 in support of educational reform clarifies the powers and responsibilities of the federal and state governments and schools with respect to vocational education. It establishes that vocational education:

(i) Has the objectives of: (a) promoting the transition between school and the working world; (b) providing training on the intermediate, senior, and post-graduate levels; (c) providing technological specialization and upgrading for workers; and (d) qualifying, retraining, and upgrading young people and adults for better jobs and performance.

(ii) Will provide training on three levels: basic (regardless of previous schooling), technical (for students enrolled in secondary school and graduates), and technological (higher).

(iii) Will separately organize regular secondary education, but with linkage to this system.

(iv) Will offer a curriculum organized by discipline with a content for each vocation depending on the job skills required, which will be modular in nature and will provide certification of skills (to facilitate entry and exit from the system, providing workers with flexibility in their educational strategies).

Ministerial Decree 646 regulates implementation of Presidential Decree 2208/97 for the federal vocational education system. It sets the following requirements over a four-year period: (i) to raise enrollment in post-secondary technical courses in the system to at least 120,000 students; (ii) to reduce enrolment in regular secondary education in each school to a maximum equivalent to 50% of 1997 enrolment; (iii) to offer technical courses for secondary school students and graduates, post-technical specialization courses, job-training courses in the diversified section of secondary education, and qualification, requalification, and

retraining courses; (iv) to establish permanent mechanisms for consultation with sectors interested in vocational education and follow up on graduates and studies on demand to identify vocational profiles and to gear courses to demand; and (v) to comply with all of the stipulations of the Basic Education Guidelines and Standards Act and the presidential decree.

The purpose of educational reform is to promote the development of post-secondary vocational education. It removes vocational education from the general education system and establishes a separate system for it. The new system would supplement general academic secondary education but not replace it. In other words, studying technical and technological courses in the vocational education system and obtaining diplomas would also require that academic prerequisites be fulfilled by the student previously or concomitantly in the general secondary school system. Vocational diplomas and certificates would enable students to enter the labor market or continue with vocational courses on the next level.

To improve "employability", basic courses for the training and retraining of workers are given highest priority, as is apparent from the agreements between the Ministry of Labor and the Ministry of Education. The Ministry of Labor launched a national vocational training plan (PLANFOR) in 1996, whose goal is to train 40 million workers by 1999 with financing from the Workers' Assistance Fund. In 1996, US$330 million was disbursed under the program on courses for 1.3 million workers. The funds were used exclusively for the purchase of services and not for direct investments, and therefore involved the use of vocational education systems, including the private sector, universities, and federal, state, and municipal schools.

The government's strategy with respect to federal schools is to take steps to: (i) enable these schools to form the base of the post-secondary, nonuniversity vocational system; and (ii) decentralize them and make them legally independent. The measures include:

(i) To ensure that the number of technical and vocational educational establishments is increased only through the states, federal district, or municipalities, independent of (except in the case of municipalities) or preferably in association with the private sector or through private nonprofit institutions independent of or in association with the public sector.

(ii) To encourage the adoption of flexible forms of hiring based on current legislation.

(iii) Promoting contractual ties between the schools, state institutions, the local private sector, and others, to reduce financial dependency on the federal government and encourage school independence (one of the mechanisms already being used by federal schools is

selling services to the Ministry of Labor with financing from the Worker Assistance Fund and to companies).

(iv) Conferring greater autonomy on schools, within the current legal limits, through foundations and other mechanisms that allow for more flexible contracting of teachers and other staff.

(v) Gradually introducing systems for financing training in the case of public funds;

(vi) Submitting a bill to congress to make schools effectively and fully autonomous.

(vii) To encourage the conversion of federal schools financed with the proceeds of the program to schools that attend to the objectives of technical and vocational education, and gradually reduce enrollment in regular secondary education.

(viii) Admitting to technical courses only high school graduates or students in the last year of secondary education.

4. Secondary education reform

The separation of vocational education from regular secondary school is the first step in the secondary education reform. Various states have adopted the vocational education reform as their own, and in advance of the new national guidelines, some are already proceeding to separate the contents of regular secondary education and vocational education. There is agreement that the current secondary school curriculum is fragmented and out of date.

The Ministry of Education recently presented a policy to reform regular secondary education to the National Education Council, which focuses on establishing curricular guidelines, marked by: (i) definition of skills in three basic categories – codes and languages, science and technology, and society and culture; and (ii) applied and interdisciplinary education, i.e. the learning of theoretical principles through practical studies in interdisciplinary projects. Based on these concepts, the Ministry of Education and the States will be responsible for defining 75% of the curriculum offered by states and schools, with schools being responsible for the other 25%.

As a consequence of the increase in coverage and upgrading of primary education, and in response to demands by employers, an increase is expected in the number of secondary school students, and that level is expected to expand. The program will not only support vocational education, but will also promote the reform and expansion of secondary

education by financing initial studies and actions by the Ministry of Education and preinvestment studies in secondary education for the states, which are mainly responsible for this level of learning.

Yours sincerely,

Dr. Paulo Renato de Souza
Minister of Education and Sports

PROCUREMENT PLAN

Main program procurements	Financing		Method of bidding	Period
	IDB (%)	Local (%)		
1. Physical infrastructure. Contracts for remodelling, expansion, and construction of 200 schools. Cost US$120 million	58	42	LCB/ICB	1998-2002
2. Equipment and furniture for 200 schools. Cost US$200 million	58	42	LCB/ICB	1998-2003
3. National and international consulting services. Cost US$42 million	50	50	LCB/ICB	1998-2003
4. Training courses. Cost US$45 million	34	66	LCB/ICB	1998-2003

LOGICAL FRAMEWORK
VOCATIONAL EDUCATION REFORM PROGRAM
BR-0247

Narrative summary of objectives	Objectively verifiable indicators	Means of verification	Assumptions
OBJECTIVE			
Efficient and modern system of vocational education established	By the end of the program: 1.1 Some 200 technical schools* with 240,000 places in technical courses operating under program guidelines. 1.2 Annual graduates of technical courses: 120,000 with at least 70% 1/ finding jobs in the first year after gradation. 1.3 Annual graduates of basic and extension courses: 600,000 with at least 70% finding jobs. 1.4 Functions of regulating, supporting, coordinating, monitoring, evaluating, and informing the public about the **federal and state** vocational education systems institutionalized.	1. Information system 2. Follow-up studies 3. Supervisory reports prepared by the PCU	Reform policy for vocational education is maintained. Political and public support for the reform is maintained. Business associations and labor unions do not oppose the reform. Economic growth is maintained

1/ Proposed on the basis of currently available statistics for federal schools and SENAI/São Paulo technical education centers.

Narrative summary of objectives	Objectively verifiable indicators							Means of verification	Assumptions
SUBPROGRAM A		**1998**	**1999**	**2000**	**2001**	**2002**	**2003**		
1. Implementation of a general policy on vocational education	1.1 Ministry of Education organized to regulate, coordinate, guide, monitor, and evaluate vocational education on the national level	-						1. Supervisory reports prepared by the PCU	The states observe the new legislation (Presidential Decree 2208/97)
	1.2 National information system in operation				-			2. Follow-up studies by the PCU	
	1.3 Initial national curricular guidelines disseminated and continuous curricular updating system implemented	-							
	1.4 Study of national demand based on secondary data completed and disseminated	-							
	1.5 Methodologies (market study, curricular development, graduate follow-up, etc.) and management models for states and schools completed and disseminated	-							
	1.6 Certification system pilot project evaluated				-				Congress approves changes to the law
	1.7 Legal framework for the federal technical schools reformed to allow autonomy with respect to budget and human resources management (except existing staff)				-				

Narrative summary of objectives	Objectively verifiable indicators							Means of verification	Assumptions
SUBPROGRAM A (continued)		**1998**	**1999**	**2000**	**2001**	**2002**	**2003**		
1. Implementation of a general policy on vocational education	1.8 Financing system for the federal technical schools includes funding for training			-				1. Supervisory reports prepared by the PCU	The states observe the legislation
	1.9 Principals and teachers have attended short courses (30 to 60 hours) on technical-pedagogical upgrading (figures in thousands)	2	4	5	4			2. Follow-up studies by the PCU	The states continue to improve their fiscal situation
	1.10 Teachers updated in technical and pedagogical aspects through 80-hour courses (figures in thousands)	1	2	1					
	1.11 Principals and technical experts trained in institutional management (figures in thousands)	1	1						
	1.12 International seminars on vocational education	1	2	1					
	Secondary education								
	1.13 Places offered in federal high schools (figures in thousands) 2/	20	-	-	-	-	-		
	1.14 States with secondary education plans *** completed	13	14						
	1.15 Ministry of Education studies completed			-					

2/ The targets for 1.13 will be set each year as part of the annual operating plans.

Narrative summary of objectives	Objectively verifiable indicators							Means of verification	Assumptions
SUBPROGRAM B		**1998**	**1999**	**2000**	**2001**	**2002**	**2003**		
	2.1 States with vocational education regulatory and management bodies operating under their vocational education plans**	5	10	7	5				
2. Network of technical schools established	2.2 Technical schools established under the projects financed		30	40	70	40	20	1. Supervisory reports prepared by the PCU	
	2.3 Students in new vocational courses each year (figures in thousands)	10	50	100	150	200	240	2. Information system	The states continue to improve public finances
	2.4 Annual graduates of new vocational courses (figures in thousands)		20	50	75	100	120	3. Information system 2	
	2.5 Annual number of graduates of basic and extension courses		100	150	300	500	600	4. Follow-up studies	Municipalities and states are able to interest partners in covering a significant share of the operating costs of technical schools

Activities			
1. **Policy implementation** Contact with users or beneficiaries of products, preparation of terms of reference, consulting contracts, supervision of works, approval of products (studies, methodologies, guidelines, training, etc.), evaluation of results. Pilot studies. Communications plan 2. **State plans and school projects** Promotion and preparation of vocational education and secondary education plans and projects, applications for financing, verification of eligibility, approval of preinvestment and investment projects, supervision of implementation, receipt of products, and evaluation of results	**Funds** US$500 million Cooperation by partners	1. Supervisory reports prepared by the project coordination unit	Sector education policies are maintained

* Technical school: federal, state or municipal/community, with the following characteristics:

i. Determination of courses offered based on demand studies
ii. Continuous updating of curricula based on the occupational skills required
iii. System of supervised internships for students in the workplace
iv. Training for teachers through internships in companies
v. Job placement system for graduates
vi. System for follow-up on graduates
vii. Inclusion of the private sector in decision making
viii. Integration with markets through partnership agreements with companies and other employers for internships, use of equipment, teacher training, sale or purchase of services, etc.
ix. Coordination with other vocational education institutions to coordinate supply, teacher training, provision or receipt of technical assistance, etc
x. Cost accounting per product
xi. Generation of significant own income
xii. Autonomy in budget and human resource management

** **State vocational education plans** to strengthen or establish supervisory and management bodies to regulate, support, coordinate, monitor, evaluate, and inform the public regarding the vocational education system in cooperation with SEMTEC. Identification of possible technical schools to be set up in existing or new schools.

*** **Secondary education plans** carried out in a context of strategic planning for the expansion and reform of secondary education. They include: (i) current and projected enrolment based on the numbers of primary school graduates; (ii) inventory and profile of principals and teachers (current); (iii) profile of current and future students; (iv) description of buildings, equipment, and materials; (v) study of alternative sources and mechanisms for financing the initial and recurrent costs of expansion, and (vi) preliminary proposal to improve and extend education, including a new model for school organization with autonomous management, and components directed to teacher training, curricular development, provision of teaching materials and equipment, infrastructure and furniture, adjustment of the regulatory and institutional framework, planning and budgeting, human resource management (contracting, salaries, training, renewal), financial administration, asset administration, organization of teaching, and monitoring and evaluation.

LEG/OPR1/BR-1901

PROPOSED RESOLUTION

BRAZIL. LOAN /OC-BR. TO THE FEDERAL REPUBLIC OF BRAZIL
(Technical and Vocational Education Reform 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 the Federative Republic of Brazil, as Borrower, for the purpose of granting a financing to cooperate in the execution of a Technical and Vocational Education Reform Program. Such financing will be for the amount of up to two hundred and fifty million dollars of the United States (US$250,000,000), or its equivalent in other currencies, except that of the Federative Republic of Brazil, which are part of the Ordinary Capital resources of the Bank, and will be subject to the "Special Contractual Conditions" and the "Terms and Financial Conditions" of the Executive Summary of the Loan Proposal.