

INTERACTIVE DISTANCE-LEARNING SYSTEM FOR TECHNOLOGY EDUCATION

(TC-00-05-05-6-PE)

EXECUTIVE SUMMARY

Executing agency:	Instituto Tecnológico Superior (TECSUP)
Beneficiaries:	<p>The direct beneficiaries will be the 840 students enrolled in regular courses on the virtual campus and the 7,900 enrolled in continuing training courses; TECSUP; educational institutions that take part in implementing virtual professional technical training courses; and companies with which TECSUP signs staff training agreements. Benefiting indirectly will be students at post-secondary institutions, technical personnel and workers of companies that have agreements with TECSUP, and companies that have graduates of TECSUP's continuing training programs on staff.</p>
Objectives:	<p>The project's general objective is to help improve the quality of human resources in Peru, particularly in technical areas, in order to boost productivity and instill new practices and technologies. To that end, it will help set up a virtual campus for distance technology education using modern communications systems, to make available more training and continuing education services that are geared to the needs of the business sector.</p> <p>Specific objectives are to: (i) train new technology workers in mid-sized urban centers and remote areas; (ii) supply the need for professional development and continuing training for human resources in the mining, oil, energy, and communications sectors, among others, to promote the implementation of new techniques; and (iii) strengthen TECSUP's institutional capacity to develop and refine alternative distance-education models that will work in Peru.</p>
Description:	<p>The project will be comprised of three components: (i) development of new professional training programs: the development of courses to be offered via a virtual campus will be financed; instructors will be trained in virtual campus methodology; educational materials will be developed; and seminars and symposia will be organized with post-secondary schools to promote the use of this system; (ii) development of a continuing training system for professionals and technicians: funding will be provided for a market survey to flesh out the data</p>

TECSUP has at present, to ascertain the demand for continuing training using a distance learning approach; a training plan that can be updated will be designed; and continuing training modules will be developed; and (iii) institution-strengthening: TECSUP professionals will be trained to manage and run the virtual campus and equipment will be provided for technological support thereof; a quality evaluation system will be devised; and promotional activities will be developed related to the virtual campus courses.

Financing:

Modality:	Grant
TECSUP	US\$ 700,000
MIF (Window II):	US\$1,000,000
Total:	<u>US\$1,700,000</u>

Terms:

Execution period:	36 months
Disbursement period:	42 months

Special contractual conditions:

Conditions precedent to the first disbursement: (i) appoint the coordinator of the project's executing unit (paragraph 4.2); and (ii) submit the work plan for the first six months of execution to the Bank (paragraph 4.3).

Exceptions to Bank policy:

There will be no exceptions to Bank policies or procedures.

Environmental and social impact:

The Committee on Environment and Social Impact reviewed and approved the project at its 30 June 2000 meeting.

I. COUNTRY AND PROJECT ELIGIBILITY

- 1.1 On 14 December 1993 the Multilateral Investment Fund declared the Republic of Peru to be eligible for MIF financing. The project proposed here is concordant with the MIF's objectives and meets the criteria for grant funding under the Human Resources Facility. The proposed project meets the eligibility criteria for a grant through the Human Resources Facility. This Facility supports national private-sector initiatives that pay particular attention to the increase of financial resources, the expansion of existing training programs, and support for strategic economic sectors, and promote a partnership between the public and private sectors in the development and delivery of training programs.

II. BACKGROUND

A. Training and professional development programs for technical cadres

- 2.1 Because of the strong growth of private enterprise in Peru and heightened competition as the country moves into the global marketplace, companies are demanding more highly skilled technical cadres who are up to date in their fields. New techniques need to be developed to improve the caliber of technical training and create a stock of providers of continuing training.
- 2.2 In the past 10 years, private investment in Peru (from both local and foreign sources) and moves to modernize the economy have been technology-intensive. Because of local shortages of technical workers with the requisite skills, many companies have hired foreign technicians to set up and run their facilities in Peru. The same holds true for technology training services because there are few, if any, local providers, particularly to deliver training and development courses for technical personnel in core production industries (energy, mining, oil, communications).
- 2.3 Though the number of professional technical training providers in Peru has been growing, their facilities are ill-equipped and their teaching techniques outmoded; they have not tailored their programs to companies' needs, and do not offer courses at convenient times or locations for technical workers. Most providers are clustered in Lima and a handful of other major urban centers.

B. Investment in the productive sectors

- 2.4 As measured by domestic and foreign investment, the mining, communications, and energy industries are among the most buoyant in Peru's economy. According to the National Statistics Bureau, between 1989 and 1999 the mining industry grew by 30%, accounting in 1998 for 51,000 direct jobs and 204,000 indirect ones. These figures are expected to double by 2005.

- 2.5 Between 1989 and 1998 the energy and communications sectors posted 27% growth. Over that interval, 240,000 new jobs were created in those industries; the forecast is for about 135,000 additional jobs between 2000 and 2005. This growth pattern is expected to hold in the coming years, as a fruit of investments made thus far and those still to come. According to figures in the Ministry of Energy and Mining's master plan, a total of US\$9 billion will be invested in the mining industry between 1999 and 2007, with a possibility of a further US\$1.824 billion in associated construction outlays. In the oil industry, the contract awarded for development of the Camisea natural gas field will mean over US\$1 billion in investments in the next five years. The fastest-growing sector of the economy is communications, which in 1999 alone recorded 21.6% growth. Investments in 1999 and 2000 will reach US\$1.433 billion, climbing to around US\$2.5 billion by 2003.

C. Instituto Tecnológico Superior (TECSUP)

- 2.6 TECSUP is one of the most solidly placed institutions in Peru to deliver the kind of technical training the country needs at this juncture. It was the first educational establishment to set up a "virtual campus" to teach technology subjects. TECSUP was the brainchild of a group of private business owners who needed professionals with the knowledge and skills required in today's high-tech economy, to help industrial enterprises grow and spur the use of advanced technologies in fields that the country's other post-secondary institutions were not addressing.
- 2.7 The chief executive officers of Peru's leading industrial groups sit on TECSUP's board of directors.¹ Because the industrial sector is represented on the TECSUP board, supply and demand are truly matched. Members of its Technical Advisory Committee are experts in each of the specialized subject areas the institution offers² and represent their respective industries. The board and advisory committee develop and approve TECSUP's technical education programs, making sure that learning contents are relevant to today's labor market.
- 2.8 In developing its programs TECSUP works with corporate human resources officers to design courses tailored to companies' needs for highly skilled professional cadres. It also draws on this experience to create or update its course offerings to the general public. TECSUP has arrangements with private companies for student tours, internships, and practicums.
- 2.9 Thanks to TECSUP's partnerships with businesses and its instruction methods, it is able to keep pace with companies' evolving technology needs, continually updating its curricula and occupational profiles. As a result, 93% of its graduates find jobs.

¹ See the file document describing TECSUP's partnerships with the private sector.

² Heavy equipment maintenance, plant maintenance, industrial electronic engineering, electronics and industrial automation, chemical and metallurgical processes, data networks and communications.

TECSUP graduates are much in demand: 645 requests have been received this year from businesses interested in hiring.

D. Internet services

- 2.10 Distance education systems are possible because of modern communications systems and their accessibility to more and more of the population. Peru has witnessed explosive growth in communications networks generally, and in electronic data exchange networks in particular. This is in part because companies have built such systems into the different stages of their production processes, and in part because these new technologies are making it possible for people to access the Internet from their workplace, public terminals, educational institutions, and homes. There are an estimated 1.4 million computers in use in Peruvian companies today and, according to the Peruvian Science Network (RCP), approximately 800,000 Internet users in the country.
- 2.11 Internet kiosks or booths are privately run services in which the general public can pay to use the Internet. Dating back to 1995, these services have mushroomed to about 560 public-access terminals nationwide. TECSUP reports that 40% of its distance continuing-education students tap into its virtual campus from their workplace, 30% from public booths, and 20% from home.
- 2.12 Communications industry analysts³ see these public terminals as a way of making multiple Web-based information services available to the broader public. The current cost of one hour of Internet use in these booths ranges from US\$0.70 to US\$1.00; this will come down as telecommunications investment commitments are carried through. The growth of public-access terminals is being spurred by various institutions that work with information technology, among them the RCP and banks. The Telecommunications Investment and Development Oversight Agency and the Telecommunications Investment Fund are proposing to make the Internet more universally accessible by having booths set up in 1,142 rural district capitals.⁴ They are expected to directly benefit more than 1.8 million Peruvians.

E. TECSUP and distance education

- 2.13 The distance learning program launched by TECSUP in 1997 – the only one of its kind in the country for technical training – seeks to expand and decentralize its course offerings are helping to modernize productive activities in areas with

³ "The Internet is good business: Public-access Internet terminals" (see file document on Internet accessibility).

⁴ This project, similar to the RCP proposal, includes training, libraries, software, a management module and, generally, the resources these booths need in order to serve as information-system promotion hubs. It is targeted to telecommunications network operators, Internet content providers and portals.

economic development potential, where there are few providers of quality education services.

- 2.14 To design its virtual courses, TECSUP hired advisors from the Monterrey Institute of Technology and the Open University of Cataluña. With their assistance, it has developed its virtual campus, in which 1,900 students have enrolled thus far. It has spent US\$118,000 on hardware, software development, and staff training. TECSUP also signed a cooperation agreement with the Madrid Polytechnic University to accredit its distance-education courses. Other institutions like the Consortium of Private Universities are interested in TECSUP because of the expertise and experience it has built up and its innovative approaches.
- 2.15 TECSUP also has received grants from the European Economic Community,⁵ their general objective being to train young people who have the vocation and ability but not the money for technical training. Further grant support has come from the Swiss Education Foundation,⁶ to set up a fund to provide loans to young people of modest means who have superior academic records.

F. Rationale for the project

- 2.16 The establishment of a virtual campus for technology education is an important step towards consolidation of a learning system which, by taking advantage of communications systems development and increased access by the population to these services, can be strengthened, improved, and spread throughout the country. This project allows TECSUP, the only institution with a virtual campus for technical training in the country, to expand its services to reach remote areas and sectors of the economy where there is a proven demand for continuing training courses on new technological advances. It will also serve as a model for other educational institutions in the country that may be interested in developing this type of program. This initiative could not get under way without MIF support, which will make it possible to expand supply by developing new courses in priority areas, prepare instructors in the use of this methodology, and improve quality with the implementation of a system to evaluate the quality of learning.

III. PROJECT OBJECTIVES AND COMPONENTS

A. Objectives

- 3.1 The project's general objective is to help improve the quality of human resources in Peru, particularly in technical areas, in order to boost productivity and instill new practices and technologies. To that end, it will help set up a virtual campus for

⁵ Eighty training grants, 36 study grants, and 132 merit scholarships, for a total of 390,000 euros.

⁶ This foundation's total contribution in 1998-2005 will come to about US\$115,000.

distance technology education using modern communications systems, to add to the supply of training and continuing education services geared to the needs of the business sector.

- 3.2 Specific objectives are to: (i) train new technical cadres in mid-sized urban centers and remote areas; (ii) supply the need for professional development and continuing training for human resources in such sectors as mining, oil, energy, and communications; and (iii) strengthen TECSUP's institutional capacity to develop and refine alternative distance-education models that will work in Peru.

B. Components

- 3.3 The project, which will run for three years, will have three components: (i) professional training of new technicians; (ii) continuing training for professionals and technicians, and (iii) institution-strengthening. The expected outcomes, indicators, and means of verification are shown in the logical framework (Annex III-1).
- 3.4 Development of new professional training programs (MIF – US\$108,585; local – US\$64,381). As part of its professional technical training program, TECSUP plans to organize virtual courses in each of the six major fields of study it offers at its regular campus. Students can take the virtual courses from remote locations or at TECSUP, in classrooms outfitted for the purpose. This is a way to expand supply and at the same time enable students who opt for this methodology to acquire new knowledge and skills relating to the use of information technology, its applications in the respective discipline, and appropriate distance learning techniques. Some 840 technicians will be trained. Virtual training courses will be made available to other universities and post-secondary institutions through agreements, benefitting students of other establishments and *departamentos* in the country.
- 3.5 The proposed project will fund the preparation of 10 new professional technical training courses to be offered via the virtual campus, and the development of associated print materials and software, with assistance from short-term consultants. Course instructors and the virtual campus team will decide on the instructional sequence, how to adapt teaching practices, simulation programs, and teamwork requirements, among other things, to ensure the quality and functionality of learning outcomes.
- 3.6 Funding also will be provided to train 70 instructors in virtual-campus methodologies and the development of new educational materials, with assistance from consultants. The courses include contents and methodologies for assisting students and tracking their progress.
- 3.7 Project funds will help defray the cost of symposia and workshops to be organized with approximately 50 post-secondary institutions to promote the use of this system

and execute agreements to replicate the professional training courses, particularly the virtual teaching method, and start putting together a network of educational institutions that are prepared to build distance education into their offerings. Pilot courses will be run under agreements with selected institutions.

- 3.8 Development of a continuing training system for professionals and technicians (MIF – US\$444,531; local US\$295,422). In order to meet the production sector's training and professional development needs, TECSUP will offer, on its virtual campus, a set of distance continuing training modular courses that will run an average of two months, focusing on very specific technical fields. The courses will be open to individuals and companies. In designing the program, the following types of courses were identified, among others: maintenance management, foundations of electronics, industrial centrifugal pumps, and computer networks. Some 7,900 in-service technicians are expected to be trained.
- 3.9 Funding will be provided for a market survey, to be performed by consultants, to flesh out the data TECSUP has at present, to ascertain the nationwide demand for continuing training for individuals and businesses using a distance learning approach. Based on the findings, the best strategies will be implemented in light of the technical specialties for which there is demand and the institution's own capacity.
- 3.10 Also to be funded is the design by consultants of a continuing training plan that can be updated through input from the network of TECSUP graduates and corporate partners. TECSUP will promote this plan in personal visits to institutions and in information workshops, to bring new companies into the continuing training program it offers on its virtual campus.
- 3.11 Local and international consultants will be hired with project funds to develop approximately 150 continuing training modules. That will require decisions as to specific contents, skills to be developed, and expected outcomes. The independent learning activities designed will be adapted to interactive electronic communications media, the outcomes sequence, materials (texts, guides, CD-ROMs, offprints, etc.) and the evaluation system. Software will be designed according to international protocols and standards, with the aim of setting up a digital database by specialty. Using these materials and electronic media, and with their self-appraisals to guide them, students enrolled in the courses will be able to chart their own work strategy depending on the time they can devote to their studies.
- 3.12 A system of face-to-face testing for course certification will be implemented. For this purpose, associate institutions (schools, companies, etc.) will be identified for use as exam sites.

- 3.13 Institution-strengthening (MIF – US\$234,640; local – US\$159,960). Twenty-five professionals will be trained by means of consulting services and the requisite hardware provided to underpin the virtual campus and to bolster information technology and communications capabilities. Software will be purchased to improve current materials and develop new ones.
- 3.14 Project funds will be used to implement a monitoring and evaluation system that will provide feedback for the project's execution, using TECSUP's present Graduate Development Service as a point of reference. Also slated for funding are consulting services to implement a system to evaluate the quality of learning. Funding will be provided for visits to share experiences with institutions in the region with a long virtual-campus history and extensive supply of courses.
- 3.15 Funds are budgeted under this component for promotional campaigns to solidly position TECSUP as a distance-education provider of technical training and continuing training in Peru.

IV. EXECUTING AGENCY AND BENEFICIARIES

A. Project implementation

- 4.1 The project will run for 36 months. Its beneficiary is the not-for-profit institution TECSUP, which also will supply the local counterpart resources. TECSUP's board members come from industry and the professional and academic community.
- 4.2 The project will be carried through by an independent executing unit (EU) set up within TECSUP, staffed by a coordinator, whose appointment will be a condition precedent to the first disbursement, an education specialist, and an administrator. (Their terms of reference are in the technical files.) The EU will provide technical and logistical support for all training, consulting, and institution-strengthening activities for the project. Activities under each component will be carried out by staff from the Teaching, Administration, and Promotion and Development Divisions.
- 4.3 TECSUP, through the EU, will be responsible for monitoring the project and producing the associated reports. Prior to the first disbursement, it must submit a work plan for the first six months of execution. A progress report is to be prepared every six months to document activities during the preceding period, along with a work plan and disbursement timetable for the following period. The report will be delivered to the Bank's Country Office for approval within 60 days after the end of the six-month period. Within three months after the project ends, the Country Office will send a project completion report to the MIF.
- 4.4 TECSUP will keep internal books of account and financial controls over the project funds. Information on project expenditures must distinguish MIF-funded items

from those paid for from other sources, and the goods acquired and services commissioned must be identifiable. TECSUP will open two separate bank accounts exclusively for the project's administration: one for the counterpart funds, the other for MIF funds. TECSUP must follow Bank procedures in disbursing MIF funds and purchasing goods and services. It will prepare financial statements on the project annually and at the end of the project, have them audited and forward them to the Bank. At the request of the executing agency, up to 10% of the MIF funds may be advanced.

B. Project preparation

- 4.5 The project's design, budget, and planned activities were worked out jointly by TECSUP and the Bank's team. The local counterpart has been confirmed, including expenditure allocation in cash and in kind, as set out in the itemized project budget (see technical files). As part of the design of the project a consultant was hired to assess TECSUP's institutional capacity, the availability of distance continuing training in Peru, and the general demand on industry's part for this kind of training. From that information, the project team has ascertained that there is a demand for training and consulting services.

C. Beneficiaries

- 4.6 The direct beneficiaries will be the 840 students enrolled in regular courses on the virtual campus and the 7,900 enrolled in continuing training courses; TECSUP; educational institutions that take part in implementing virtual professional technical training courses; and companies with which TECSUP signs staff training agreements. Benefiting indirectly will be students at post-secondary institutions, technical personnel and workers of companies that have agreements with TECSUP, and companies that have graduates of TECSUP's continuing training programs on staff.

V. SUSTAINABILITY

- 5.1 According to the planned outlays, the project's operating costs will be covered by tuition fees paid for the virtual training courses. Increases in scale as TECSUP's coverage expands will assure that hardware and software can be continually updated. The cost of virtual courses that are part of professional training programs will be covered by TECSUP students' tuition fees and contributions resulting from the participation of associated educational institutions.
- 5.2 As a result of the investments planned for its virtual continuing-training programs, TECSUP will be able to increase its offerings from 70 modules in year 1 to about 150 additional modules in year 3. Tuition fees will rise from US\$68 per course to US\$75. Thus, sustainability was considered on the basis of an increase in the

number of courses offered annually from 70 in year 1 to 252 in year 3 and in enrolment in year 1 of 980 to 4,030 in year 3, while the costs double in the three years. The virtual technical-training courses will last six months; continuing training courses will run for two months (five terms a year).

VI. COST AND FINANCING

- 6.1 The total project cost is US\$1.7 million. The MIF will provide US\$1 million (59% of the total) and TECSUP US\$700,000 (41%). TECSUP will cofinance all the components – professional training, continuing training, institution-strengthening, and administration. The counterpart in-cash contribution will be US\$400,000 (57%).

Cost table (U.S. dollars)

	TOTAL	MIF	TECSUP
1. Professional training of new technicians	172,966	108,585	64,381
1.1 Preparation and development of software and communications	92,399	46,200	46,200
* Consulting services	12,600	8,400	4,200
* Materials	23,966	16,986	6,981
1.2 Selection of post-secondary institutions to establish agreements:	44,000	37,000	7,000
* Symposia and workshops	14,000	7,000	7,000
* Instructor training	15,000	15,000	0
* Pilot course	15,000	15,000	0
2. Continuing training for professionals and technicians	736,953	441,531	295,422
2.1 Market survey	30,000	15,000	15,000
2.2 Development of software and communications	212,200	106,100	106,100
2.3 Promotion and sale of training courses	158,480	79,240	79,240
2.4 Preparation and development of virtual continuing training courses	313,773	218,691	95,082
* Consulting services and monitoring	117,768	78,512	39,256
* Materials (reproduction, sending)	196,005	140,179	55,826
2.5 Testing and course certification	22,500	22,500	
3. Institution-strengthening	394,600	234,640	159,960
3.1 Software development			
3.2 Hardware for development and support of the virtual-campus approach	90,000	0	90,000
3.3 Methodology support (training, consulting services)	40,000	10,000	30,000
3.4 Communications services (computer/electronic data network)	64,800	64,800	0
3.5 Promotion	199,800	159,840	39,960
TOTAL - COMPONENTS	1,304,519	784,756	519,763
Project coordination and administration	395,481	215,244	180,237
Executing unit	197,400	131,600	65,800
Services and evaluation	167,000	70,000	97,000
Contingencies	31,081	13,644	17,437
GRAND TOTAL	1,700,000	1,000,000	700,000
Percentage	100%	59%	41.2%

VII. BENEFITS AND RISKS

- 7.1 The project's principal benefits will be to: (i) help supply the demand for continuing training for businesses and professionals throughout Peru, thereby narrowing the gap between supply of and demand for professional training; (ii) support the

creation of a network of educational institutions that offer their students virtual technical-training courses; (iii) offer students flexibility for gaining access to new technologies at their own rate of learning; and (iv) develop capacity and expertise locally, to expedite future distance-learning projects at other levels of the education system.

- 7.2 The greatest risk would be that prospective students might not have Internet access. The likelihood of problems in this respect will be minimized by: (i) the strategy of partnering with companies to help get their technical staff onto the Internet; (ii) the growing number of public-access Internet terminals, and (iii) the development of virtual-course delivery capacity in other educational institutions that have Internet access. The planned market survey will provide specifics on potential demand as well as Internet service availability.
- 7.3 The new knowledge and know-how to be gained by the virtual campus team along with the active participation of TECSUP's board, administrators and faculty will ensure that the project objectives will continue to be pursued after the MIF support ends.

VIII. PROGRESS AND EVALUATION INDICATORS

- 8.1 The Bank will hire individual consultants to perform two evaluations of the project: a mid-term review 18 months after the technical cooperation agreement is signed or when 50% of the resources have been disbursed, whichever occurs first, and a final evaluation within three months after the project is completed. The Bank, in consultation with the executing agency, will draw up the terms of reference for the evaluations.
- 8.2 The Bank's Country Office, with support from the project team and the executing agency, will conduct annual reviews to ascertain whether progress on the project is satisfactory, whether any corrective action is needed, and whether the project should be reformulated or cancelled.
- 8.3 The executing unit will compile qualitative and quantitative indicators to monitor the program and for the mid-term and final evaluations. These indicators, listed in the Logical Framework in Annex III-1, will be used by the Country Office, in concert with TECSUP, to gauge the project's progress, impact, and overall outcomes. The first evaluation will focus on organizational aspects of the project and its general impact on the administrative operation launched. The final evaluation will look at the program's impact on individual participants and industry sectors, and the institutional linkages that the project is to foster. To this end, TECSUP undertakes to gather and store data on the Graduate Development Service, enrollment of students in the courses finances for this project, and participating

instructors. TECSUP will provide access to any other information and documentation necessary for this evaluation.

IX. EXCEPTIONS TO POLICIES AND PROCEDURES

- 9.1 The project will be implemented in accordance with Bank policies and procedures.

X. SPECIAL CONTRACTUAL CONDITIONS

- 10.1 Conditions precedent to the first disbursement: (i) appoint the coordinator of the project's executing unit (paragraph 4.2); and (ii) submit the work plan for the first six months to the Bank (paragraph 4.3).
- 10.2 The contract will stipulate that the educational material developed and all related aspects will be considered public property.

**ANNEX III-1
LOGICAL FRAMEWORK**

NARRATIVE SUMMARY OF OBJECTIVES	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
GOAL			
More highly trained human resources to boost productivity and instill new technology practices	<p>1.1 Number of students in professional training programs increases</p> <p>1.2 Quality of instruction improves</p>	<p>1.1 Student enrollment records</p> <p>1.2 Evaluation system findings</p>	<ul style="list-style-type: none"> • Technical-training providers offer training geared to the job market • Companies offer technical staff and employees incentives to get training and develop new technologies
PURPOSE			
Implement a program to deliver professional training courses and develop a distance skills upgrading and professional development system based on modern communication systems, to improve the quality and increase the supply of technical training geared to production-sector needs	<p>1.1 New courses developed</p> <p>1.2 Specific agreements executed with companies to develop virtual training programs</p> <p>1.3 Agreements worked out with other educational establishments to start virtual-campus programs</p> <p>1.4 Computer-based technical support in operation to enable development of innovative teaching methods to enhance the quality of distance-learning outcomes</p>	<p>1.1 Curricula approved</p> <p>1.2 Records of courses organized for specific companies</p> <p>1.3 Agreements signed, student enrollments</p> <p>1.4 Certification for payments for hardware installed and software developed</p>	<ul style="list-style-type: none"> • Companies, educational institutions, technicians and students recognize the quality of, and are satisfied with, the virtual courses.

NARRATIVE SUMMARY OF OBJECTIVES	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
OUTCOMES BY COMPONENT			
<p>1. Development of new professional training programs. Implement virtual courses for technical professional training.</p>	<p>1.1 10 new virtual courses in place</p> <p>1.2 840 students enrolled in regular virtual courses</p> <p>1.3 70 TECSUP instructors trained in virtual-campus subjects</p> <p>1.4 X events (symposia and workshops) held with 50 post-secondary institutions to promote the use of the virtual system</p>	<p>1.1 Student and teacher guides distributed</p> <p>1.2 Enrollment records</p> <p>1.3 Records of instructors participating in the courses</p> <p>1.4 Participating institution and staff records</p>	<ul style="list-style-type: none"> • There are enough consultants available and interested in participating • The contractors meet their deadlines • The survey findings are used • The counterpart resources are available according to execution timetable
<p>2. Development of a continuing training system for professionals and technicians. Distance modular courses lasting an average of two months will be offered in order to meet skills upgrading, professional development, and continuing training needs.</p>	<p>2.1 Market survey completed</p> <p>2.2 Continuing training plan implemented</p> <p>2.3 X promotional activities held to bring in new companies</p> <p>2.4 150 continuing training modules developed</p> <p>2.5 7,900 students enrolled (60% obtain certification)</p>	<p>2.1 Final report</p> <p>2.2 Approval decision</p> <p>2.3 List of visits to institutions and information workshops organized</p> <p>2.4 Software and print materials used in the courses</p> <p>2.5 Student records</p>	

NARRATIVE SUMMARY OF OBJECTIVES	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
3. Institution-strengthening. Actions will be carried out to strengthen TECSUP's capacity to offer training through a virtual campus.	3.1 25 professionals and technicians trained in virtual-campus techniques	3.1 Records of participants	
	3.2 Software acquired	3.2 Delivery receipts and verification of software use	
	3.3 Project monitoring and evaluation system	3.3 Reports prepared	
	3.4 Quality evaluation systems	3.4 Reports detailing outcomes disseminated	
	3.5 Activities to promote the project and share experiences	3.5 Sample of materials produced and payment voucher	

PROPOSED RESOLUTION

**PERU. NONREIMBURSABLE TECHNICAL COOPERATION FOR THE
PROGRAM "INTERACTIVE SYSTEM FOR TECHNOLOGY
TRAINING THROUGH DISTANCE EDUCATION"**

The Donors Committee of the Multilateral Investment Fund

RESOLVES:

1. That the President of the Inter-American Development Bank or such representative as he shall designate is authorized, in the name and on behalf of the Multilateral Investment Fund, to enter into such agreements as may be necessary with the Instituto Tecnológico Superior (TECSUP), of the Republic of Perú, and to take such additional measures as may be pertinent for the execution of the project proposal contained in the Donors Memorandum MIF/AT-_____ with respect to a nonreimbursable technical cooperation for the program "Interactive System for Technology Training Through Distance Education."
2. That up to the sum of US\$1,000,000, or its equivalent in other convertible currencies, is authorized for the purpose of this resolution, chargeable to resources of the Human Resources Facility of the Multilateral Investment Fund.
3. That the above-mentioned sum is to be provided on a nonreimbursable basis.