

PÚBLICO

DOCUMENTO DEL BANCO INTERAMERICANO DE DESARROLLO

Perú

Peruvian University Development Plan

TC7012123

Operations Plan

December 1970

PLAN OF OPERATIONS
CONTINGENT RECOVERY TECHNICAL ASSISTANCE LOAN
CONSEJO NACIONAL DE LA UNIVERSIDAD PERUANA
(CONUP)

REPUBLIC OF PERU

I. Application 1/

- i. Applicant: Consejo Nacional de la Universidad Peruana (CONUP).
- ii. Date received by IDB: March 10, 1970. Revised version submitted on July 10, 1970. On May 4, 1970, the Minister of Economy and Finance of Peru informed the IDB as to the priority status of this application.
- iii. Recipient: Consejo Nacional de la Universidad Peruana (CONUP).
- iv. Amount of application and type of financing: An amount equivalent to US\$100,000, on a contingent recovery basis.

II. Background Information

- 2.01 On February 27, 1970, the Consejo Nacional de la Universidad Peruana, with headquarters in Lima, addressed a request to IDB for a technical assistance loan to help prepare a plan to develop the Peruvian university system.
- 2.02 On May 4, 1970, the Peruvian Minister of Economy and Finance informed the Bank of the high order of priority which his government accorded this application.
- 2.03 On June 22, 1970, there was a meeting of the working group appointed to study this application. The meeting was attended by the IDB project specialist in education affairs, who is based in Chile but has authority to supervise projects under way in Peru. Those present found that the application as submitted had several major shortcomings precluding a proper examination, principally with respect to definition of the objectives sought as well as a time table for execution of the operation projected. In order to overcome these deficiencies a detailed examination was made of the data furnished, as well as a determination of the additional data needed to process the application.

1/ The rate of exchange used in examining this application is S/38.70 = US\$1.

- 2.04 After preliminary study by the working group a request was submitted to CONUP, through the IDB office in Lima, for certain additional information and for a reappraisal of certain aspects of project content and implementation.
- 2.05 CONUP sent a memorandum dated July 10, 1970, explaining the use of the requested technical assistance resources, which included an increase in project cost as well as an increase in the IDB share as shown in this plan of operations.

III. Project Purposes

- 3.01 The main purpose of this technical assistance project is to draw up a development plan for the Peruvian university system that will permit:
 - a. Performance of a complete statistical survey of academic departments and physical plant, including equipment, laboratories and other facilities installed in all universities in Peru, and a diagnostic examination of the status of the country's system of higher education.
 - b. The programming of university reform in keeping with the National Economic and Social Development Plan placing particular emphasis on the structure of personnel demand.
 - c. Establishment of proper technical criteria providing for a more efficient allocation of resources among Peruvian universities.
 - d. An examination of possibilities for developing supplementary sources of financing on the basis of specific projects planned in accordance with the university development program.

IV. Project Description

- 4.01 An office reporting directly to the Office of the Director General of CONUP will be responsible for implementing the plan mentioned in section 3.01. This office would be designated as the "Office of the Development and Investment Program" and would consist of: a) executive staff; b) national advisors; c) international advisors, and d) auxiliary personnel.
- 4.02 The executive staff will consist of two full-time executives, with the positions of Program Director and Executive Secretary. The Program Director will be responsible for executing the project; coordinating relations between the IDB and the CONUP as well as the work of the teams of national and foreign advisors, promoting working arrangements between the different universities of the system, and furnishing regular reports, in addition to a final report, summarizing program development and the results obtained. Payment of compensation as well as travel expenses for the executive staff shall be made with the allotment from CONUP.

- 4.03 The group of national advisors will comprise qualified personnel subject to the directives and regulations of CONUP. Compensation as well as travel expenses for such individuals shall be paid from the CONUP allotment.
- 4.04 The group of international advisors will comprise two specialists, engaged for one year each, in the fields of university administration and facilities planning; one specialist in organization of academic studies, engaged for six months; and one specialist in library science and communication engaged for six months. Expenses allocated to this group would be financed through the allotment from the IDB.
- 4.05 The auxiliary personnel complement will consist of office manager, an assistant to the senior executive staff and secretarial and clerical personnel, with all compensations payable from CONUP funds.
- 4.06 The universities in the system ^{1/} will furnish four faculty members each to assist in drafting the plan; and will prepare pre-construction projects subject to review and approval by program executives and experts (see paragraph 8.03).
- 4.07 The project will also call for the acquisition of such equipment as typewriters, calculating and copying machines, rental of data processing services and travel to the different universities constituting the Peruvian university system (see paragraph 6.02 and Appendix 1). Such investments and expenses are estimated at the equivalent of US\$23,000, chargeable to the IDB, of which US\$15,000 would be used to finance equipment and materials imports, while the US\$8,000 balance is chargeable to CONUP and would be used to pay for services and domestic travel expenses. It should be noted that no vehicles or transportation equipment may be acquired with IDB funds; therefore, any necessary vehicle purchases will be financed with the CONUP allotment.
- 4.08 The project would be completed in 12 months from the date on which the international consultants begun work.

V. Executing Agency

- 5.01 The executing agency will be the Consejo Nacional de la Universidad Peruana (CONUP), based in Lima, Peru, and created by Decree Law 17,437 of February 18, 1969, which provides that this council is: "the chief body governing and representing the system and is a sovereign legal entity in the national and international domain subject to the system of laws in effect. It moreover enjoys the rights which, pursuant to laws not in violation of Law 17,437, were granted to the superseded Inter-University Council." The principal powers vested in the council are as follows:

^{1/} The 34 Peruvian universities constitute what is called the "university system" (see paragraph 7.01 et seq.). authorization is incumbent

- a. To plan coordinated development of the Peruvian university system in keeping with national education policy and the national economic development plan. Pursuant to this authorization it is incumbent on the council to decide upon the establishment or elimination of academic programs in the universities, as well as to plan projects for consolidation of universities, for purposes of regional integration.
 - b. To coordinate such decisions as may affect the Peruvian university system with the National Research Council and to assign responsibilities in research undertakings.
 - c. To formulate the budget plan for the Peruvian university system on the basis of organized procedures and in keeping with the system plan and the programs to be instituted in each university and to submit the budget plan to the Ministry of Education, in its capacity as central executive organ of the education sector.
 - d. To rule on the establishment as well as the elimination of universities, according to the findings of studies, taking into account reports submitted by the Regional University Councils.
- 5.02 The council is now composed of the rectors of the following universities, whose term of office expires December 31, 1971:
- 1. Universidad Nacional Mayor de San Marcos
 - 2. Universidad Nacional de San Antonio Abad
 - 3. Universidad Nacional de Trujillo
 - 4. Universidad Nacional de Ingeniería
 - 5. Universidad Nacional de San Agustín
 - 6. Universidad Nacional Agraria
 - 7. Universidad Nacional de la Amazonía Peruana
 - 8. Pontificia Universidad Católica del Perú
 - 9. Universidad Peruana Cayetano Heredia
- 5.03 After December 31, 1971, CONUP will be composed of:
- a. The directors of the seven (7) oldest universities in the country: Universidad Nacional Mayor de San Marcos (Lima); Universidad Nacional de San Antonio Abad (Cuzco); Universidad Nacional de Trujillo (La Libertad); Universidad Nacional de Ingeniería (Lima); Universidad Nacional San Agustín (Arequipa); Universidad Nacional Agraria (Lima), and Pontificia Universidad Católica del Perú (Lima).
 - b. The chairman of the regional councils, except when a chairman is also a regular member of the national council, in which case the vice chairman of the corresponding regional council shall represent the region on CONUP.

- c. Two private university rectors, elected by the rectors of such private universities.
- 5.04 The Chairman of CONUP is elected by the council members for a term of one year by unanimous vote cast through secret ballot, among candidates who are directors of government universities. The principal powers vested in the chairman are as follows:
- a. He is the official and legal representative of the Consejo Nacional de la Universidad Peruana.
 - b. He supervises the administrative functions and the financial operations of the national council.
 - c. He is responsible for enforcement of the agreements and decisions of the national council.
- 5.05 The organization enabling CONUP to carry out its functions consists of an Office of the Director General which is in turn composed of a General Secretariat and three divisions as follows: University Planning Division; Division of Evaluation of University Establishment, and National Peruvian University Fund.
- 5.06 The financial resources of CONUP are derived from the following sources:
- a. Funds from the public treasury including subsidies to private universities.
 - b. CONUP income, such as voluntary contributions from graduates, endowments or donations; revenues from proprietary assets, and income from services rendered or proceeds from sale of goods produced in consequence of its own activities.
 - c. Surpluses carried over from the budget request.
- 5.07 CONUP consolidates fund allocations for all government universities and adds them to its own budget as financial resources for the system as a whole. Similarly, CONUP apportions an adequate volume of funds to each government university in keeping with the programs approved for each, taking into consideration the plan for the system as a whole. In order to grant subsidies as required by law CONUP must give due consideration to natural growth and to greater outlays for operation of new programs and must study the investment made in each university by individual program, according to the region served by a given university, for the purpose of evaluating the cost of operating each establishment.
- 5.08 Government subsidies for private universities are conveyed directly to the recipient. CONUP manages only appropriations of funds allocated to government universities.

- 5.09 At present CONUP has a staff of 83 persons, consisting of nine officials, 62 employees, and 12 laborers. The CONUP operating budget for 1970 amounts to S/19.6 million (US\$506,500).

VI. Justification

- 6.01 The University Act (Decree Law 17,437 of February 18, 1969, amended by Resolutions 17,706, 17,757 and 17,833) combines all Peruvian universities into a central establishment designated the "university system".
- 6.02 Education at the university level is at present offered throughout the national territory (see Appendix 1) in 34 universities of which 22 are classified as national or government universities, while the remaining 12 are classified as private universities.
- 6.03 In 1960, a very unusual development began to take place in the higher education sector of Peru. Until that year only 15 universities were operating in the country. In the decade that followed, this number increased to 34, of which 12 are private and 22 are government establishments.
- 6.04 The principal factors in this process are as follows:
- a. Lack of planning or effective policies for operating education establishments at the university level.
 - b. Rate of urban population growth exceeding that of the country as a whole. Between 1940 and 1961, the increase for Lima, Trujillo and Arequipa in effect reached 172%, 182% and 100%, respectively, while population growth was only 74%.
 - c. A 192% increase in secondary education enrollment during the 1950's. In 1960, there were 200,000 students enrolled in secondary education establishments.
 - d. The design of secondary education to serve exclusively as a preliminary step to university entrance.
 - e. Lack of communication and coordination of activities, which led to a disorganized outlay of individual efforts and the consequent diffusion and overlapping of all such endeavors.
- 6.05 Preliminary projections by the National Planning Institute show that from 1967 to 1980 a very substantial imbalance will emerge between the supply of graduates and the effective demand for graduates qualified to meet the requirements of economic development.

University Graduates, 1967-80

Supply and Demand

(thousands of persons)

	<u>Supply</u> 1/	<u>Demand</u> 2/	<u>Surplus or deficit (-)</u>
<u>Total</u>	<u>180.9</u>	<u>140.8</u>	<u>40.1</u>
Education	87.1	25.5	61.6
Humanities	54.2	50.5	3.7
Medicine	5.8	10.7	- 4.9
Sciences	9.6	23.4	- 13.8
Engineering	24.2	30.7	- 6.5

- 6.06 Obviously, if the trend of the past decade remains constant, there would be a total surplus of 40,100 professionals solely as the result of the excess number of graduates in the fields of education and humanities, while in the fields of health sciences, general sciences and engineering there would be very considerable shortages.
- 6.07 Growth of the university student population has been disproportionate, with enormous concentrations in Lima and Callao (58.4%) and marked differences in the structure of entrance requirements at the different universities.
- 6.08 Elsewhere, the number of full-time tenured faculty personnel is insufficient even though the ratio of students to teachers has continued to decline, from 100 in 1961 to 50 in 1965. It should be noted moreover that most instructional personnel have not undertaken graduate courses.
- 6.09 As to material resources and physical plant, only a few universities have buildings and campuses of their own equipped with adequate facilities in good state of repair, or that have their installations so arranged as to allow functional development.

1/ Estimated according to the 1960-65 index.

2/ Need for graduates adjusted to requirements of the economy.

Source: Instituto Nacional de Planificación, Plan de Desarrollo Económico y Social, 1967-70.

- 6.10 There is a deficit in laboratories and workshops as well as in equipment, especially laboratory facilities for the study of biology, chemistry, physics, physical chemistry, electricity, mechanics, electronics and engineering.
- 6.11 There is also a visible shortage in libraries and reading rooms and in recent library accessions and the number of subscriptions to special publications and reviews.
- 6.12 It should also be pointed out that, owing to a lack of organization and planning, most Peruvian university students do not enjoy services of such importance to contemporary university life as transportation, eating facilities, student housing, health and social services, scholarships and cultural extension programs.
- 6.13 Also, reported costs per student per university and per field of specialization are so unequal as to suggest shortcomings in the acquisition or use of funds on the part of some universities or branches of education.
- 6.14 One example in support of such statements can be found in the technology degree program, the cost of which varies from S/95,000 to S/9,000 (US\$2,455 to US\$232) yearly per student, and the fact that between 90% and 99% of yearly allotments of university funds are used for faculty salaries and operating expenses meaning that investment in real terms is virtually nil.
- 6.15 It should be noted that development of university education in the instructional, research and planning aspects has been characterized by a lack of coordination with developments in the economic and social domain as well as by an imbalance of offerings in the branches of science and technology, although these must be encouraged if the country is to achieve real progress.
- 6.16 The proposal to finance the technical assistance operation described herein would provide a plan enabling the country to: a) coordinate growth of the university system in terms of the country's national and regional socioeconomic requirements, and avoid an increase in the overall surplus of graduates and a shortage of graduates in certain professions directly related to national progress; b) provide a comprehensive and detailed picture of the education sector and therefore of its present status and prospect for the future, and c) plan a development strategy suited to the stated goals. Also, the IDB itself will have at its disposal a basis on which to develop a strategy, or its own program consistent with findings from investigations in university education that have already been submitted ^{1/} or may be submitted in the future.

^{1/} Pontificia Universidad Católica del Perú and Universidad Peruana Cayetano Heredia.

VII. Project Cost and Financing

- 7.01 The total cost of the technical assistance plan would be equivalent to US\$196,000, of which not more than the equivalent of US\$100,000 would be provided by the IDB, while payment of the remaining amount, equivalent to US\$96,000 would be made by CONUP. Consequently the IDB allotment would finance 51% of the total project cost.
- 7.02 The following table lists the project components as well as the potential sources of financing:

(In US\$ or the equivalent) 1/

<u>Summary</u>	<u>IDB</u>	<u>CONUP</u>	<u>TOTAL</u>	<u>%</u>
A. <u>Executive staff</u>	-	<u>31,500</u>	<u>31,500</u>	<u>16.1</u>
1. <u>Compensation</u>				
1 director at US\$1,200 monthly for 12 months = US\$14,400				
1 secretary at US\$1,000 monthly for 12 months = US\$12,000	-	26,400	26,400	13.5
2. <u>Travel and per diem expenses</u>	-	5,100	5,100	2.6
B. <u>National advisors</u>	-	<u>21,000</u>	<u>21,000</u>	<u>10.7</u>
1. <u>Compensation</u>				
24 man/months at US\$700 each	-	16,800	16,800	8.6
2. <u>Per diem expenses</u>	-	4,200	4,200	2.1
C. <u>Foreign advisors</u>	82,000	-	82,000	41.9
1. <u>Compensation</u>				
36 man/months at US\$2,000 each	72,000 2/	-	72,000	36.8
2. <u>Travel expenses</u>	6,000	-	6,000	3.1
3. <u>Per diem expenses</u>	4,000	-	4,000 2/	2.0
D. <u>Auxiliary personnel</u>	-	<u>19,000</u>	<u>19,000</u>	<u>9.6</u>
1. <u>Compensation</u>	-	<u>19,000</u>	<u>19,000</u>	<u>9.6</u>
Subtotal	<u>82,000</u>	<u>71,500</u>	<u>153,500</u>	<u>78.3</u>
E. <u>Material resources</u> 3/	15,000	8,000	23,000	11.7
F. <u>Services</u>	-	10,000	10,000	5.1
G. <u>Contingencies</u>	<u>3,000</u>	<u>6,500</u>	<u>9,500</u>	<u>4.9</u>
TOTAL	<u>100,000</u>	<u>96,000</u>	<u>196,000</u>	<u>100.0</u>
Percentage	51.0	49.0	(100.0)	

1/ Rate of exchange S/38.70 = US\$1.

2/ Not less than 30% of the amount of fees and per diem expenses of all foreign experts not domiciled in Peru will be paid in local currency, the remainder will be paid in United States dollars (see paragraph 5.01 (b) (ii)).

3/ See paragraph 4.07.

- 7.03 A statement in quantitative terms of the personnel allotment from the system universities, as mentioned in section 4.06, is precluded because it consists principally of personal services on a part-time basis to report statistical data and other information.

VIII. Financing Fund and Budget

- 8.01 According to this plan of operations, the amount of the IDB allotment is equivalent to US\$100,000, to be disbursed on a contingent recovery basis. This means that, in the event of a loan from IDB to the Peruvian Government or to CONUP for partial financing of the formulation, through this technical assistance loan, of a national plan for development of the Peruvian university system, the amount stated above would be made an integral part of such loan, and would be subject to the provisions set forth in the appropriate loan contract. Such IDB allotment as stated in this plan of operations would in the meantime be allocated from the technical assistance budget of the Social Progress Trust Fund for fiscal 1970 (Category I-1).

IX. Procedure for Contracting International Consultants

- 9.01 Selection, appraisal and contracting of international consultants whose services are payable from technical assistance resources, together with their terms of reference and service contract drafts, will be subject to prior approval by IDB and governed by the following procedures:
- a. CONUP will submit to the Bank for approval: i) the procedure to be used for selection; ii) the list of advisors from which selections will be made, including detailed reports on the professional experience and personal history of individual candidates, and iii) the appropriate terms of reference and work schedules.

CONUP will proceed to select the advisors as soon as the Bank shall have approved the requirements stated above. The text of the draft contracts to be entered into with each advisor must be submitted to the Bank for approval.
 - b. Contracts between CONUP and the international advisors will contain provisions to the effect that:
 - i. Compensation of advisors domiciled in Peru shall be payable in sols;
 - ii. Advisors domiciled in countries other than Peru shall receive not less than 30% of their compensation in sols, and the remainder will be payable in dollars or the equivalent in other currencies comprised by the loan.
 - iii. All per diem expenses will be paid in sols and, as required in the currency of the countries where advisors may be rendering these services.

- iv. CONUP shall withhold not less than 10% of the total amount of compensation payable to advisors until such time as the final report to which reference is made in paragraph 11.03 is delivered.
- 9.02 Selection and hiring of international advisors will be governed by such procedures as may be established in conformance with paragraph 5.01 to this document. It is agreed that the recipient may not establish any provisions, to become effective before or after the services are rendered, such as: i) regulations or other conditions that may hinder or restrict selection and hiring of advisors from member countries of the Bank, or ii) requisites or other conditions based on the nationality of such advisors.
- 9.03 The agreement to be entered into with CONUP will contain a suitable provision to the effect that cooperation furnished by the Bank shall not be construed as a commitment by the IDB to participate in the financing of any program, project or study that may derive from tasks performed by the group of advisors contracted.

X. Disbursements

- 10.01 A revolving fund not exceeding the equivalent of US\$15,000 will be established to effect disbursements. This Fund will be established as soon as the advisors mentioned in Section 4.04 above have been hired and the report mentioned in Section 11.03 (a) submitted to the IDB.
- 10.02 The IDB allotment may be used only in payment of the expenses shown in the table in Chapter VIII of this plan of operations. Disbursements may be made up to December 31, 1972.
- 10.03 Disbursements in local currency will be calculated in the equivalent of United States dollars at a rate of exchange computed according to the procedures agreed upon between the IDB and the Peruvian Government for purposes of maintaining currency value.

XI. Reports

- 11.01 Contracts to be entered into with advisors will include a provision requiring the advisors to submit quarterly reports to CONUP, with copy to the IDB, on the status of work in progress, as well as a final report to be submitted within the term set forth in the contract to be signed, as provided in Chapter IV. This final report will be delivered together with a copy of the studies made, and will include all appropriate conclusions and recommendations.
- 11.02 Such contracts will also contain provisions setting forth the obligation of the advisors to: i) furnish any additional information which

the IDB may reasonably request in connection with accomplishment of the program, and ii) report regularly all information on work in progress to the IDB representative in Peru.

11.03 CONUP agrees to submit the following reports to the IDB, to its entire satisfaction and within the terms to be established for each:

- a. Within 90 days following the date of this agreement, a report including: i) a detailed description of the office, organized, according to paragraph 4.01, that will be responsible for implementation of the program; ii) the names and duties of the Director and the executive secretary; iii) the names, personal history and record of experience of the national advisors who will participate in the program, as provided in paragraph 4.03, and iv) a detailed description of the program, including a work schedule and a complete statement of the work and duties to be carried out by each of the national and international advisors. The report will also describe positions within the management structure, and the chain of command between the national and international advisors themselves and with respect to CONUP.
- b. Within 30 days after the end of each quarter of activities under the program, beginning on the date on which the report indicated in the preceding paragraph is submitted, a report of activities performed during the quarter immediately preceding.
- c. Within 60 days after the date on which the program is concluded, a final report to include all recommendations formulated as to: i) measures necessary for proper execution of the plan, specifically stating such legal measures as may be considered necessary; ii) the funds to be allotted by the universities or by their respective regions in order to achieve the stated objectives of the plan, and iii) the methods to be used to evaluate the direct and indirect benefits of the plan, in respect of economic and social effects as well as essentially technical, scientific and cultural effects.

XII. Supervision

The agreement and the contracts referred to in Chapter V will contain provisions to the effect that supervision of the work performed by consultants, aside from any work incumbent upon the recipient, may be exercised by the IDB through its representative in Peru. To this end, the consultants will regularly report their activities to the IDB representative in Peru.

XIII. Evaluation Criteria

13.01 The results of this technical assistance may be evaluated on the basis of aspects identifiable upon its conclusion as follows:

- i. Findings and final recommendations of CONUP and the national and international advisors on the success of the study to secure the basic objectives stated in paragraph 3.01.
- ii. The opinion of CONUP as to the value of services rendered by the national and international advisors.
- iii. The opinion of the national and international advisors as to the extent to which local facilities and logistical support contributed to efficient performance of their tasks.
- iv. Conclusions and observations contained in the final report that will permit identification of potential projects eligible for international financing.

XIV. Agreement

The technical assistance agreement must be signed by the Bank and by CONUP not later than 90 days after the date of approval by the Bank of this plan of operations.

XV. Responsibility in the Bank

The Office of the Deputy Manager for Loans, through Loan Division Zone II, will assume primary responsibility for this operation until the agreement with the recipient has been approved and signed. Once the agreement is signed, primary responsibility will be transferred to the Office of the Deputy Manager for Loan Administration, Zone II Division. Technical responsibility will at all times be assigned to the Office of the Deputy Manager for Project Analysis, Division of Analysis of Social Projects.

XVI. Recommendations

The Operations Manager recommends this plan of operations to the President of the Bank through the Technical Assistance Committee for approval and subsequent presentation of the corresponding resolution to the Board of Executive Directors for consideration.

SOCIOECONOMIC EVALUATION OF THE PLAN OF OPERATIONS FOR
TECHNICAL ASSISTANCE TO THE NATIONAL COUNCIL
OF PERUVIAN UNIVERSITIES

1. Conclusions and recommendations

- a. The plan under consideration will help to improve the planning of higher education in Peru, an objective which has high priority in view of the unplanned way in which the sector has developed and of the outlook for a very substantial increase in the total surplus of graduates and in the shortage of personnel in certain professions closely involved in the economic and social development of the country.
- b. It is important that the problem of the supply of and demand for higher-level human resources be examined very carefully and on a realistic basis in the plan on development for the Peruvian university system, so as to ensure an effective contribution to meeting the requirements of the productive sectors of the Peruvian economy.
- c. The plan should lay the groundwork for establishing a system of current statistics that will provide information on the efficiency of the Peruvian university system.

2. Amount and nature of the operation

The cost of this operation amounts to US\$202,000, of which US\$106,000 would be provided by the Bank and the rest by the National Council of Peruvian Universities (CONUP).

The project would be aimed primarily at formulating a plan for the development of the Peruvian university system as a means of gaining a better understanding of the present problems and future possibilities of the university situation; obtaining a more efficient distribution of the resources allocated to Peru's system of higher education; coordinating economic and social development more effectively, and planning the sources of financing in line with the sector's requirements.

3. The Peruvian higher education sector

University education in Peru has developed at a disproportionate rate. According to information from the National Planning Institute, between 1960 and 1965 higher education grew at an annual rate (18%) exceeding the rate of development of intermediate education (13%).

Moreover, university teaching personnel experienced a striking growth although not sufficiently fast to prevent a widening of the gap in the

teaching staff, particularly in science and technology. The older universities made an effort to increase the number of full-time, faculty, but the older ones increased the number of part-time, and poorly paid, instructors.

There are indications that the quality of the teaching personnel was affected by the rapid and disorderly growth of enrollment in higher education.

According to preliminary projections made by the National Planning Institute, the period that began in 1967 and will end in 1980 will be characterized by a very substantial imbalance between the supply of graduates, as indicated by a projection of the historic trend, and the actual demand adjusted to the requirements of economic development.

Thus, for example, it is estimated that the total output of graduates of the Peruvian university system for 1967-80 will, if the trend in the past decade is maintained, amount to 181,000 professionals, whereas the economy will be able to absorb only some 141,000. Within this general picture, there would be a very substantial oversupply of graduates in education and the humanities while medicine, science and engineering would show very considerable deficits.

University Graduates, 1967-1980

Supply and Demand

(thousands of persons)

	<u>Supply 1/</u>	<u>Demand 2/</u>	<u>Surplus or deficit (-)</u>
<u>Total</u>	<u>180.9</u>	<u>140.8</u>	<u>40.1</u>
Education	87.1	25.5	61.6
Humanities	54.2	50.5	3.7
Medicine	5.8	10.7	- 4.9
Science	9.6	23.4	-13.8
Engineering	24.2	30.7	- 6.5

1/ Estimated on the basis of the 1960-65 trend.

2/ Need for graduates, adjusted to requirements of the economy.

Source: Instituto Nacional de Planificación, Plan de Desarrollo Económico y Social, 1967-70.

The university sector is characterized by a large deficit in buildings, equipment and laboratory facilities, with very limited benefits available to the students.

Generally speaking, the higher education sector in Peru is not structured and has not been developed in such way as to aid economic and social growth. This shortcoming applies equally to the volume and kind of professionals it turns out as to the internal efficiency of the sector, which is very low.

Another field in which the Peruvian universities could make a very important contribution is research, especially through programs designed to help solve specific problems of such productive sectors as fisheries, mining, farming, animal husbandry and industry. There is a real need here for coordination and strengthening of the varied program carried out by the different agencies.

Another characteristic of the development of the Peruvian higher education system has been the proliferation of universities, of which there are currently 34, including 22 national or state universities and 12 private ones. In spite of this, there is still a heavy concentration of the university population of the Lima-Callao area (which has 58%), and many of the existing universities have less than 10,000 students, considered the minimum enrollment for efficient operation from the academic standpoint.

While there are no consistent and regular statistics on the efficiency of the university education system of Peru, available indicators point to a high student-professor ratio and a high dropout rate.