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NEPAL

SECOND EDUCATION PROJECT
(TECHNICAL AND VOCATIONAL TRAINING)

STAFF APPRAISAL REPORT

Education and Agricultural Institutions Division
South Asia Projects Department

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SCHOOL YEAR

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GLOSSARY

DEO	-	District Education Officer
IOE	-	Institute of Engineering, Tribhuvan University
IECS	-	Institute of Engineering Consultancy Services
LSC	-	Labor Supply Center
NESP	-	New Education System Plan - Introduced in 1971
NEC	-	National Education Committee - the highest policy making body in the Ministry of Education - advisory to the Minister
PIU	-	Project Implementation Unit
PSC	-	Public Service Commission
SLC	-	School Leaving Certificate
UNDP	-	United Nations Development Programme

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Basic Data 1/

Population

Estimated total (1980)	14.3 million
Annual growth rate (1970-79)	over 2%
Average density 2/	94 per sq km
Literacy rate (1977)	19%

Enrollments (1979/80)

	<u>Total</u> ('000s)	<u>Male</u> ('000s)	<u>Female</u> ('000s)	<u>% Female</u>
Primary (grades 1-3)	1,013	742	271	27
Lower secondary (grades 4-7)	343	275	68	20
Secondary (grades 8-10)	106	88	18	17
Higher:				
Certificate (grades 11-12)	22	n.a.	n.a.)
Diploma (grades 13-14)	10	n.a.	n.a.) 22
Degree (grades 15-16)	4	n.a.	n.a.)

Education Expenditure Recurrent and Development (1979-80)

As a percentage of GDP	1.4
As a percentage of total Government expenditure	9.9
Technical/Vocational Education Expenditure as a Percentage of total education expenditure	5-6

	<u>Percentage</u> <u>of Education</u> <u>Budget</u>	<u>Approximate</u> <u>cost per student</u>	
		<u>Rupees</u>	<u>US\$</u>
Primary subsector	26.7	98	8
Secondary subsector	18.2	173	15
Tertiary subsector	37.8	3,117	262
Other budgeted expenditures	<u>17.3</u>		
	100.0		

1/ See Annex 1 for comparative educational indicators.

2/ Average population densities vary from 24 per sq km to 103 per sq km from the mountains to the hills respectively and 208 per sq km in the Terai.



I. THE EDUCATION SECTOR

A. Socio-Economic Background

1.01 The Fifth Development Plan (1975-80) made less than its anticipated progress towards ameliorating the severe and widespread poverty in Nepal, which is due to lack of exploitable mineral resources, low productivity of the workforce, high population growth and severe physical and topographical disadvantages which severely limit development. The expected real annual rate of growth of GDP of 4-5% during the plan period was held below 2.5% per annum. This resulted from stagnant agricultural production caused by poor monsoons, failure to fully exploit the irrigation infrastructure or to diffuse appropriate agricultural technology and improve support services. Industrial performance also fell behind expectations due to lack of viable investment opportunities, scarcity of skilled manpower, particularly technical and supervisory manpower, and shortages in electric power supply. Consequently, the development program is still heavily dependent upon foreign aid.

1.02 The development of social services during the plan period has experienced mixed success. Education enrollments have exceeded targets, but qualitative deficiencies remain; the vocational and technical training system also did not supply adequate numbers of skilled workers or technicians for economic growth, particularly in civil engineering skills; the human resource constraint to development remains acute. In family planning and health, there was a failure to contain population growth largely due to declining death rates. There was a major shortfall in the planned provision of new rural health posts and hospitals.

1.03 Nepal faces one of the worst demographic situations among less developed countries. The present population of about 14.0 million is estimated to be increasing at over 2% per annum and there is no evidence that the fertility rate is declining. Population pressure on cultivable land is increasing, particularly in the hills where over 60% of the population live. Resulting food shortages in the hills are leading to increased migration to the Terai and elsewhere. High fertility rates and population growth mean an increasingly younger population, resulting in greater pressure to provide schooling. Based on current trends, the population under 15 years (which comprised nearly 40% of the total population in 1971) will reach 45% by 1990. The concentration of the population in the less accessible hill and mountain regions also makes the provision of education and other social services more difficult and expensive.

1.04 Some consequences of high population growth and low rates of economic growth are clearly present in Nepal. The creation of employment opportunities has lagged behind growth in the labor force, resulting in unemployment and underemployment. Although reliable data are scarce, initial reviews indicate that employment creation performance during the Fifth Plan fell below expectations. Frequent disruptions in the supply of raw materials and power directly retarded employment growth in manufacturing, construction and related industries and a stagnant agricultural sector (para 1.01) failed to absorb rural surplus labor.

1.05 During the Sixth Plan (1981-86), it is estimated that 176,000 persons will enter the labor force annually. In the industrial sectors, there will be a priority for better education and training to raise the productivity and employability of manpower. In agriculture, where 90% of the workforce seek their livelihood, there are similar priorities for raising the productivity of farmers through better education and through the provision of more and better trained extension agents. According to the basic principles enunciated for the Sixth Plan, the Government intends to pursue these aims as a matter of priority (para 1.20).

B. Education Sector Development and Issues

1.06 The last decade was characterized by a rapid quantitative expansion in terms of enrollments and schools, at all levels of the education system. This expansion was stimulated by the introduction of a basic reform of the education system in 1971, known as the New Education System Plan (NESP), which was designed to modernize the structure of education and ensure its growth in relation to national needs. In the Fifth Plan (1975-80), primary enrollments (including overage students) increased from 43% to over 80% of the age cohort, representing an absolute enrollment increase of 120%. In the same period, lower and upper secondary enrollments increased by 97% and 58% respectively. Nearly 2000 primary schools (16% increase), over 1,000 lower secondary schools (62% increase) and over 150 upper secondary schools (34% increase) were established, mainly with local financing. The number of primary teachers (including untrained school leavers, who were also hired as teachers) increased by 40% while the lower and upper secondary teachers increased by 62% and 24% respectively. The Government introduced free textbook distribution to all primary children and undertook to pay all primary teachers' salaries, 75% of lower secondary and 50% of upper secondary teachers' salaries. At tertiary level, Tribhuvan University, which has been responsible for all post-secondary education, increased its enrollment from 22,000 in 1974/75 to 37,000 in 1979/80. But these achievements were not matched by comparable qualitative progress in the education system as a result of lack of trained manpower and budget resources. Training capacity was inadequate to provide the required number of trained teachers (which has been the sole responsibility of the Institute of Education of Tribhuvan University), trained school supervisors or competent managers for the enlarged education sector, particularly at the primary level. These issues, elaborated below, will become a focal point for improvements during the Sixth Plan (para 1.20).

Efficiency

1.07 Primary education suffers from excessive dropout and repeater rates (30% and 40% respectively in grade 1) with the result that only about 30% of entrants complete the three year cycle and completion takes an average of about 6.5 student years. Low attendance is also widespread at all levels, especially primary where studies have shown discrepancies between enrollment and attendance in a number of districts. Contributing causes are the lack of properly trained and motivated teachers, poor physical facilities, perceived irrelevance of

curricula, the high opportunity cost of child labor and the debilitating effect of poor health among children. Furthermore, the three year primary cycle is inadequate to achieve permanent literacy and numeracy and serves merely to produce semi-literate school leavers and entrants to lower secondary education, who are poorly prepared for further schooling (para 1.09). In recognition of this problem, the Government has recently decided to extend the primary cycle to five years, but its success may depend upon the Government's ability to obtain financing to meet capital and recurrent costs, especially teachers' salaries. About 60% of entrants complete the secondary cycle, but their level of education is generally deficient in mathematics, science and English. In recent years the average success rate in the School Leaving Certificate (SLC) has been around 30% and fell as low as 22% in 1976. Even successful candidates are poorly prepared for further education and often require remedial teaching in the above subjects on entering post-secondary institutions.

Equity

1.08 Significant disparities exist in access to educational opportunities based on sex and region. In 1979/80, females accounted for only 26.7% of total primary enrollments and although this figure is low it nevertheless represents progress over the last five years (in 1974/75 female enrollment was only 17.3%). At the secondary level the situation is even less satisfactory with females comprising only 19.2% of total enrollment compared with 16.6% five years earlier. In post-secondary education, enrollment was 22.4% female in 1978/79. Regionally, the female primary enrollment is only 17% in the Far Western Region compared with 30%, 26% and 29%, respectively, in the Western, Central and Eastern Regions. Similar regional disparities are found in the proportion of primary school age (including overage) children enrolled, which was only 60% in the Far Western Region compared with 98% in the Western Region. Some of these inequities are due to: (i) the traditional prejudice against education for girls, whose place is in the home until early marriage; (ii) the opportunity cost of children of both sexes particularly among poor rural families; and (iii) caste differences, which tend to inhibit schooling among lower caste groups, particularly in rural areas.

Quality

1.09 With the growth in enrollments at primary and secondary levels, quality has decreased. At the primary level it is estimated that, of the students graduating from grade 3, 28%, 70% and 92% had acquired 60% of the objectives in arithmetic, writing and reading respectively. Notwithstanding this relatively high reading attainment upon graduation, the majority of grade 3 graduates, without further education, become semi-literate after six months, especially in remote areas where there are few suitable reading materials readily available to sustain literacy skills.

1.10 The largest single cause of the poor quality of primary education is the lack of adequately trained teachers. Only 37% of primary teachers throughout Nepal have the prescribed training of SLC followed by 10 months teacher training. Some primary teachers have only completed grade 8. At lower secondary level, 39% of the teachers are trained. At secondary level, 63% are

trained, but there is a lack of trained science and mathematics teachers at secondary and tertiary level.

1.11 The lack of educational materials and satisfactory school buildings are also major causes of poor educational quality. Although most primary schools have textbooks, there are few teacher's guides, charts, maps or other educational equipment. Blackboards and writing materials are also lacking as a result of inadequate operational budgets, which must be provided locally. Buildings, also provided by local school committees under the local Panchayat, tend to be of low quality and design, consistent with the poverty of the area. Many school buildings are too small, unheated, dark, have mud floors, leaky roofs and have no sanitation or water supply.

Management

1.12 The supervision system is considerably understaffed, especially in subject specialists and among primary supervisors, particularly in the Central and Far Western Regions. The establishment of regional directorates, as illustrated in Annex 1, Chart 1, for each of the four regions of Nepal, and the delegation of a supervisory role to these directorates, though correct in concept, has failed in practice. National shortfalls in staffing are 25% for primary supervisors, 16% for secondary supervisors and 50% for subject specialists. A primary supervisor is expected to visit each school twice a year (210 school days); he has about 100 teachers and 30-40 schools under his supervision. This would be an excessive workload for a well qualified supervisor, since many of the schools may be several days walking distance. But most primary supervisors lack training in supervision and few have had experience of primary teaching, although a small proportion have had some inservice training. Secondary supervisors, who have to cover 15-20 schools, often lack the range of speciality to be able to help subject teachers and are mostly younger, with less teaching experience, than the teacher they are supposed to supervise. In consequence, supervisors generally do not help with the improvement of teaching methods in schools but confine themselves to fulfilling more administrative functions. Equally, many District Education Officers (DEOs), without adequate knowledge of what is expected of a supervisor, are unable to provide direction and guidance to their staff. The supervisor's morale and reputation suffer as a result. The supervisor is neglected at school and district levels and at regional level, where he is supposed to receive training in new ideas and methods in administration and pedagogy.

1.13 Most DEOs, whose prime responsibility should be concerned with the schools in his district, have had no training in education or educational administration and usually lack previous experience in the education system. Many were posted from other positions in the Public Service quite unrelated to education. Regional directorates do not provide enough inservice training to solve this problem.

C. Technical Education and Vocational Training

1.14 Before 1971, little emphasis was placed on the importance of vocational training or technical education at either secondary or post-secondary

level. After 1971, under the New Education System Plan (NESP), institutes within Tribhuvan University (the only university in Nepal) were made responsible for post-secondary technical education; the Institute of Engineering being the institute responsible for electrical, construction and mechanical trades and technician training. Vocational subjects were also introduced into all secondary schools; the amount of time devoted to vocational subjects was as follows: 10% at lower secondary level, 20% at upper secondary level and at least 40% in 115 vocational secondary schools. This emphasis was intended to meet the need for employable skills in: (a) agriculture; (b) commerce; (c) industrial arts; (d) the construction industry; and (e) cottage industries. However the vocational secondary schools never achieved their objectives and were recently declared a failure by the National Education Committee mainly due to lack of adequately trained vocational teachers and inadequate equipment (para 1.17). As a result, these schools are now reverting to general secondary schools. In their place, at least five new secondary technical schools (para 1.20) are planned. These are being established with donor support, in an attempt to avoid the problems experienced in staff training and in the equipping of 115 vocational schools. Two of the schools, at Jiri and Doti, are being supported by SATA 1/ and Unesco respectively. These together with four existing secondary technical schools at Jumla, 2/ Dhankuta, Lahan and Kathmandu, 3/ will become the direct concern of a newly established Directorate of Technical Education in the Ministry of Education. This new directorate will be responsible for at least nine secondary technical schools, six of which are expected to train construction workers.

1.15 Under the Department of Cottage Industries semi-skilled training is provided at four regional centers; the Department trains workers in mechanics and carpentry, in addition to other semi-skilled workers needed for cottage industries. The Department of Labor provides semi-skilled craft training and technician training at three Labor Supply Centers (LSCs) located in Hetauda, Butwal 3/ and Nepalgunj. These centers produce 20 workers in mechanics, and about 600 semi-skilled construction workers per year from two six-month courses. A center at Butwal under the Department of Labor, supported by SATA, produces 20 mechanical certificate graduates per annum at junior technician level, but this qualification is not recognized by the Ministry of Education nor the Public Service Commission (PSC) for employment purposes in the public service (para 1.18). The Institute of Engineering (IOE) is the only institution providing recognized technical training at a higher level to supply the need for middle level technicians (certificate level) and senior technicians (diploma level). These programs are being provided or planned at the Dharan campus (electrical, civil and mechanical certificate programs), Pulchowk campus (electrical and civil certificate and civil engineering diploma programs), 4/ Thapathali campus (mechanical and auto mechanical certificate programs), and at the proposed Pokhara campus (electrical, civil and mechanical certificate programs).

1/ SATA - Swiss Association for Technical Assistance.

2/ Supported by DANIDA - Danish International Development Agency

3/ Supported by the United Missions, Nepal.

4/ The Pulchowk campus is being financed under Credit 772-NEP.

Manpower Supply

1.16 Many of the above programs of training have been introduced recently in an attempt to meet the shortages of trained technicians and craftsmen, which are becoming increasingly apparent especially in civil engineering and construction (para 1.28). Supply and demand estimates are shown in Table 1.1. Although the shortage of technical manpower is the major issue facing the subsector, industrial demand for technical skills in Nepal is a relatively recent phenomenon. As a result, the development of technical education and vocational training is still at an early stage and other issues also have to be addressed. These have been clearly recognized by the Government and are discussed below.

Quality

1.17 Nepalese culture, due perhaps to the caste system, tends to discourage acquisition of manual skills for a career. For this reason, and the still small industrial base, there are few competent teachers of manual skills to be found in either teaching or industry. The situation is aggravated by the absence of national trade tests, as a standard measure of skill attainment; thus permitting a wide variation of quality intrade skill training programs, some of which have inflated academic content and excessive duration because of the established system of recognition for civil service employment (para 1.18). Also, equipping of schools and training centers is generally inadequate due to budget constraints. For the new secondary technical schools (para 1.14) this problem is being addressed by seeking donor support for every school. But, the level of equipment in training centers of the Department of Labor, Department of Cottage Industries and on some campuses of IOE is still inadequate.

Recognition

1.18 Recognition of trade skill training programs by the Public Service Commission for employment purposes is based upon the ability of an Equivalence Committee of the Ministry of Education to certify that the training program is equivalent to one of the recognized academic programs, which lead to academic qualifications (viz. SLC or Intermediate Certificate). This equivalence to academic qualifications has permitted students to pursue more academic studies after their trade training is completed, or seek an office job in the Public Service, so that their skills have been lost to the work force.

Career Development

1.19 For technical certificate graduates, career development in the civil service is limited. These middle level technician can enter the civil service only at the top (class 1) of the non-gazetted technical ranks (salary scale in November 1980 was Rupees 550-15-700, EB 15-820 for class 1). Promotion to the gazetted (technical) ranks at class III level (salary scale in November 1980 was Rupees 700-15-850, EB 15-1,000 for class III) is possible, but further promotion prospects up to class 1 (salary scale in November 1980 was Rupees 1,275-40-1835) is impossible without a degree. For this reason, many certificate and diploma graduates seek enrollment in degree programs and are therefore diverted from the work force where their skills are vitally needed.

D. Education Policies

1.20 The Government's Sixth Plan (1981-86) attaches considerable importance to the development of the education sector as part of its strategy to meet the minimum basic needs of the population, and to support developments in other sectors. Greatest priority is attached to primary education, work oriented adult education, and vocational and skills training. More specifically, the Government will concentrate on:

- (a) improving educational quality and reducing wastage;
- (b) imparting relevant skills and scientific knowledge;
- (c) curricula and textbook revision to make them more relevant to existing conditions of life, as well as national and social values; and
- (d) increasing education opportunities in backward areas and to groups, such as females.

The Government's strategy to achieve these objectives will be to:

- (a) contain within reasonable expansion targets enrollments at primary, secondary and particularly tertiary levels (except in technical skills where manpower demand necessitates enrollment increases), so as to permit greater emphasis on quality;
- (b) give priority to new physical facilities for primary education, non-formal work oriented education, and vocational and technical education; and
- (c) encourage community involvement for the expansion of general education, and continue the policy that all physical facilities (building and furniture), excluding technical schools, shall be provided by the local community with technical advice from the Ministry of Education Engineering Unit.

Specific plans involve: (a) the opening of 620 reading centers with a view to maintaining literacy; (b) the establishment of at least five new special technical schools (para 1.14); (c) free distribution of scientific materials and equipment to all secondary schools; (d) the introduction of special teacher training programs in science and mathematics; (e) the revision of curricula for primary and secondary schools in mathematics and industrial education; (f) the introduction of reforms in the administration and supervision of adult and primary education; and (g) the provision of free education for girls up to secondary level in remote districts and the provision of special hostels at model schools.

1.21 With known manpower and budget constraints, the Government's Sixth Plan may not be fully realized without considerable foreign support in the form of expert assistance and financing. For this reason, early in the Sixth Plan period, the Government (a) is seeking donor support for the establishment of all new technical schools as well as for the improvement of existing technical schools; (b) intends to prepare a primary education project for external financing, which will begin to address issues already clearly defined (paras 1.07-1.13); and (c) intends to conduct feasibility studies on secondary education and non-formal education to identify issues more clearly and lead to the preparation of a project or projects for external financing.

E. Education Finance

1.22 The rapid growth in enrollments for all levels of education during the Fifth Plan (1975-80) (around 17.5% per annum) has not been matched by a corresponding annual increase in education expenditure, which averaged about 11% per annum, in real terms, during this period. The greatest contribution to this increase was in 1975/76 (48.8%), when a higher proportion of teachers' salaries were first paid by the central Government (para 1.06). Since then the annual increase, in real terms, has fluctuated down to 6%. The proportion of the national budget allocated to education decreased from a peak of 12.1% in 1975/76 to 9.9% in 1979/80. Within the education budget for 1980/81 the allocation of resources has favored higher education (35.6%) at the expense of primary education (27.1%), which has been consistently underfunded.

1.23 Although present education expenditure of 9.9% of the national budget or about 1.4% of GDP is not as high as in other Asian countries (Annex 1, Table 1); this expenditure is supplemented by contributions, both capital and recurrent, from local private sources. While no figures are available, these contributions must be significant since they cover the cost of construction and maintenance of primary and secondary school buildings as well as a significant proportion of teachers' salaries at lower and upper secondary levels (para 1.06). Thus, the aggregate figures given above understate the total flow of resources to education and consequently, the burden of education on the community, which will be greatest at primary and secondary levels. Although complete data are difficult to compile regarding expenditures on vocational and technical training, it is estimated that they account for only 5-6% of total expenditure on education/training. This is a very modest amount which is reflected in the small number of institutions serving vocational and technical training in Nepal (paras 1.14-1.16).

F. Manpower Requirements for Skilled Workers

1.24 The human resource base of Nepal is one of the least developed in the world. Although the education system has grown rapidly in recent years, it is only in the last decade that attempts have been made to develop a modern education system (para 1.06). The consequence of this is a literacy rate of only 19%, a poorly educated, low-productivity workforce and the lack

of an adequate training infrastructure to produce the skilled workers which are vital to development. Although quantifying manpower needs is difficult in Nepal due to a deficient data base, it is nevertheless clear that the lack of skilled manpower is one of the main factors which has retarded economic progress. The expansion of the present inadequate capacity for skills training is therefore a high priority in Nepal's development strategy.

1.25 This expansion must support the major directions of economic growth in industry and agriculture as set out in the Government's development plans. Industrial development priorities call for the expansion of the relatively small manufacturing sector, the transport and communications infrastructure and electricity generation and supply. Expansion in all these areas implies a concomitant growth of the construction sector. The skills needed for rural development are not restricted to the agricultural skills of the farmer but must serve the broader needs of the rural community for the construction and maintenance of rural roads, service and repair of vehicles and farm machinery, development of small-scale irrigation schemes, expansion of rural electrification, etc. All these activities require a range of modern skills in the construction trades, mechanics and electricity. Workers with these skills are required not only to practice as individual craftsmen, but also at a higher level as technicians and supervisors to provide key middle level management in the workforce. The craftsmen and technicians form the skilled base of the manpower pyramid supporting the engineers and managers who control the productive process.

Table 1.1: MANPOWER REQUIREMENTS, 1979-86

Category	Average Annual Output Requirements 1979-86	Estimated Annual Output from System, 1986	Additional Annual Output from Project Institution 1986	Deficit 1986
<u>Technician Certificate Courses</u>				
Civil	490	200 /a	64	226
Electrical	70	35 /a	16	19
Mechanical	85	65 /a	16	4
<u>Skill Trade Courses</u>				
Construction	505	74	64	367
Electrical	135	54	32	49
Mechanical	295	106	64	125

/a Actual output reduced by one-third to account for direct entry to diploma and degree courses.

1.26 The estimated requirements for technicians and craftsmen in Table 1.1 above give only general orders of magnitude, due to the unsatisfactory data base. Nevertheless, the data show that requirements at the technician level are concentrated on the outputs from the civil certificate course to fill mainly the positions of works supervisors in the government authorities

dealing with roads, housing, water supply, irrigation and local development. The main requirements for electrical and mechanical technicians come from construction related authorities and from electricity generation and supply authorities.

1.27 At present the great majority of technicians entering the workforce are attracted to the public sector because of the greater prestige and security of public service employment. The private sector, which is made up largely of small and medium size firms, has shown much less interest in the past in recruiting technicians, although this is changing as management becomes more sophisticated, production processes more complex and the role of the technician better understood. Conversely, demand for craftsmen has been dominated by the private sector with the chief source of public employment being the regional development agencies. Contractors in the construction industry account for most of the requirements for craftsmen (mainly carpenters, masons and plumbers), while manufacturing, transportation and local electricity authorities share with the construction industry the major demand for mechanical and electrical craftsmen.

1.28 Table 1.1 shows that by 1986 there are likely to be deficits between demand and supply in all manpower categories covered by the project, although in the case of electrical and mechanical technicians, the gaps seem practically negligible. At the craft level, some of the gaps could be closed through the upgrading of semi-skilled workers; facilities for this purpose will be available at the Pokhara and Dharan campuses. However, on current indications it seems likely that the supply of skilled manpower from the civil certificate and construction craft courses will be significantly less than requirements by 1986. Construction supervisors are in great shortage, particularly in rural development schemes, minor irrigation schemes and track and trail improvement projects. Such shortages are also seriously delaying major irrigation projects. This points to the need for increased training capacity in these fields during the Sixth Plan. The proposed project will make a significant contribution to the supply of skilled manpower by 1986 through increasing planned outputs by one-third at the certificate level and by two-thirds at the craft level.

G. Bank Strategy and Lending for Education

1.29 IDA has identified four major areas of priority where assistance should be introduced--technical skill training, forestry skills training, basic education and agricultural training. Technical training for manpower development has been assisted in the First Education Project financed by IDA. It became effective on July 13, 1978. The project focuses on quality and quantity improvements of technical manpower at certificate and diploma levels in an attempt to meet the demand for trained middle and senior level technicians mainly for the construction industry. Implementation of this ongoing project is satisfactory. Project management is good and no major problems have been encountered, except that a cost overrun has now been identified of about 15%, above the total project cost of \$7.8 million, due to an unprecedented rise in construction costs in Nepal. The first education

project is financing new laboratories and workshops, equipment, teaching materials, boarding facilities and staff housing at Pulchowk campus of the Institute of Engineering (IOE) of Tribhuvan University, with the British Government providing the technical assistance services (about \$1.1 million). The teaching facilities will provide for about 400 diploma students in civil engineering subjects (representing an annual output of 120 diploma graduates) and 1,000 certificate students (representing an annual output of 480 certificate graduates) for mainly electrical and civil engineering subjects. The proposed second education project would continue the emphasis on increasing the supply and improving the quality of skilled technical manpower relevant to the needs of national development. Forestry skills training will be provided under an IDA Credit for the development of community forestry. This ongoing project will finance a new training center in Pokhara to train about 40 foresters (diploma) and soil and water conservation officers per annum as well as 100 technicians; a further 100 technicians will be trained through upgrading a similar training center at Hetaura.

1.30 Some future development priorities in the education sector would aim to: (a) improve basic education leading to ultimate improvements in literacy (currently 19%), numeracy and adult education; and (b) improve the quality and supply of agricultural manpower. The first of these priorities would be addressed by building on the already extensive formal primary education system which has been studied and its issues identified (paras 1.07-1.13) under the First Education Project. In support of the Government's intentions (paras 1.20 and 1.21), a primary education project would be prepared; studies would be undertaken on (a) secondary education and (b) the expansion of adult non-formal education, which would aim to have a more relevant impact on rural development. The second lending priority, relating to agricultural training, has been studied in a subsector review and issues identified. This would serve as the basis for the preparation of a future project. It is expected that the project would assist the management of the agricultural training system in Nepal, the employment of trained agricultural manpower, qualitative improvements in training and the expansion of training capacity.

II. THE PROJECT

2.01 The project was initially identified under a study included in the First Education Project (Credit 772-NEP), and further defined in a Project Brief following an IDA mission in November 1979. The project request was prepared by the Government in March 1980, and appraised by an IDA mission in November 1980.

A. Project Objectives

2.02 The Second Education Project is designed to:

- (a) increase the supply of (i) skilled craftsmen with basic engineering skills and (ii) technicians for engineering and construction industries by expanding training capacity;

- (b) improve relevance and quality in trade skill training programs throughout the nation by establishing trade standards, introducing national trade testing, and provide better trained instructors and properly equipped facilities; provide recognition of, as well as better career development prospects for, skilled craftsmen and technicians within the Public Service; and
- (c) support the Ministry of Education's role in general planning, future project preparation and evaluation by inclusion of project studies relating to existing and future sector developments.

B. Project Components

2.03 The project objectives would be achieved through the implementation of the project components listed below:

(a) The Western Region Center

Construction, furnishing and equipping of a skill training center at Pokhara in the Western Region to provide 160 trained craftsmen and 96 technicians in civil, mechanical and electrical technology per annum. In addition to academic and communal facilities the Center would include staff housing (100%) and student boarding (90%). Operating costs for incremental staff salaries, consumable training materials and maintenance would also be provided.

(b) The National Skill Testing Authority and the Public Service Promotional Structure

A National Skill Testing Authority of the Government having a permanent technical skill testing Secretariat would be established. The National Skill Testing Authority would be authorized, if necessary under laws promulgated for the purpose, to set standards for engineering trades and to design and administer nationally recognized trade skill tests. The promotional structure of the Public Service would be revised by the Public Service Commission, if necessary under a new legal mandate, to provide skilled tradesmen and technicians with adequate promotion prospects to suitably senior levels.

(c) Education Project Studies

The Ministry of Education would undertake the following preparatory work for future education projects: (i) the full preparation of a primary education project; (ii) a study on the need for improvements in secondary education;

(iii) a needs assessment study to expand non-formal education. All these preparatory studies would examine the potential of new management approaches to education under environmental conditions, peculiar to Nepal. Additional evaluation of the First Education Project would also be made possible, after its completion, through a monitoring system to be established by the Institute of Engineering (IOE) of Tribhuvan University; the monitoring system would provide a data base for the preparation of completion reports for both the First and Second Education Projects.

(d) Project Implementation Services and Technical Assistance

Project implementation services would be provided in support of the above three components and would include: (i) technical assistance consisting of about 62 man-years of overseas fellowships and about 9 man-years of specialist services, partly financed by UNDP, and additional consultancy and specialist services, mainly for the project studies, financed under the Credit; (ii) establishment of an office for the project implementation unit which would include office furniture and equipment, incremental operating costs, including salaries and travel.

C. The Western Region Center

2.04 The new training center, to be established under the Project, would be located at Pokhara, which is the principal city in the Western Region of Nepal. The Center would be administered by the Institute of Engineering (IOE) of Tribhuvan University and would help to provide access for craft and technician training for suitable candidates mainly from the Western and Far Western Regions. The site would be developed to have an academic complex of fully equipped and furnished laboratories, workshops, library and classrooms which would accommodate a maximum enrollment of about 450 students when full capacity is reached in 1987. In view of scarcity of accommodation in Pokhara and in order to permit enrollment of students beyond the Pokhara district, boarding for 400 students would be provided. The Center would have 45 teaching staff, all of whom would be provided housing on campus. Similar centers of the IOE exist in the Central Region; a center at Dharan in the Eastern Region is being developed with assistance from the Asian Development Bank.

2.05 The Center at Pokhara would provide craft level skill training programs in basic electrical, construction and mechanical technology, (output 160 craftsmen per annum) as well as certificate level technician training in electrical, civil and mechanical technology (output 96 technicians per annum). The distribution of the graduates per annum by skills is shown in Table 1.1. Under the Project, formal trade training programs of one year duration will be introduced in Nepal for the first time. It is expected that the experience gained from these programs would lead to the shortening and intensifying of existing trade training programs elsewhere in Nepal. Certificate programs

would be of 2-1/2 years duration. Both programs would include some remedial teaching in science, mathematics and languages; in the case of the certificate program, remedial teaching of a half year would be included. It is anticipated that, when the quality of secondary level teaching improves, the certificate program would be reduced to two years by dropping all remedial teaching for new entrants.

The Center Advisory Committee

2.06 To ensure adequate emphasis on practical training, the skill training programs would be made up of 80% practical work (workshop and laboratory) and the technician programs would consist of 60% practical work. Curricula have been reviewed by the Association and found to be satisfactory. To ensure close links with industrial concerns and government departments which would employ the graduating students of the Center, a Center Advisory Committee, representing these bodies and teaching staff, would be established within six months of the opening date of the Center and would advise on future curriculum development as well as help with the placement of graduates. The Committee would also review annually the demand for skill upgrading programs in the Region and the Center would introduce in-service skill upgrading programs, when the demand is considered to be great enough.

Entry Requirements

2.07 In selecting trainees for entry to both the craft and certificate level programs, the Center would employ a simple system of skill aptitude tests which would be developed by its staff in consultation with the Association. For craft programs, the minimum entry requirement would be age 15 years and completion of grade 7 education, while for certificate programs, a minimum entry requirement of SLC would be required. The Center would adopt the Government's quota system for applicants from the educationally less developed districts, insofar as practicable, without lowering the minimum entry requirements described above.

Staff Recruitment and Training

2.08 The five most senior administrators would be recruited and sent for overseas training (para 2.14) according to a training plan (Annex 3). In addition to a degree qualification, these administrators should have some experience of college administration and have been employed in a similar institution. No difficulties are anticipated in the recruitment of administrators, some of whom could be spared from other IOE campuses. When fully operational, the Center would require 45 teaching staff and 22 technicians for workshop, laboratory and general maintenance, who would be recruited over a four year period (Annex 3, Chart 1). All teaching staff would be trained overseas (para 2.14). Serious difficulties are not anticipated in recruitment due to relatively attractive salary scales and conditions. The Government has agreed that all staff of the Center, including the instructors, lecturers and administrative staff would be paid according to the scales laid down by the University Service Commission for their levels of appointment. These levels of appointment have been agreed with the Association as shown in Annex 1, Chart 2. In addition to this regular pay, the appointees at the Center and

staff of the Project Implementation Unit (PIU) would receive the supplementary benefits which are normally paid in recognition of their status as employees at a new training center at Pokhara.

D. The National Skill Testing Authority and
the Public Service Promotion Structure

The National Skill Testing Authority

2.09 To help establish national skill standards applicable to all training institutions in Nepal and thereby improve the quality of skill training programs throughout the nation to minimum acceptable levels, the successful completion of all craft programs would be determined according to the standard of skill attainment of the trainee. For this purpose skill standards and skill tests for skilled craftsmen in the principal electrical, construction and mechanical crafts would be developed, in consultation with the Association by January 1, 1984. These tests would be administered under the supervision of a National Skill Testing Authority to be established for this purpose by January 1, 1985. To ensure nationwide acceptance of such tests: (a) by January 1, 1985, the Authority would be vested with such responsibilities; if necessary by legal statutes; and (b) craft training programs for all sectors at every level would receive recognition only if the trainee had passed the appropriate tests. For this purpose the Authority would have adequate representation from departments and ministries employing trainees or conducting training programs, the Public Service Commission (PSC) and from industry. Its membership would need to be reviewed at least every two years to ensure that it retains adequate balance of representation. For the design and supervision of testing, the Authority would need a permanent secretariat, which would employ sufficient technical staff on an occasional or full-time basis. During negotiations, the Government provided assurances that: (a) a staffing and staff training plan for a Secretariat would be prepared by August 1, 1982 and submitted for review by the Association; and (b) such a Secretariat would be established by January 1, 1983. Until such time as the Authority is established, the Secretariat would work within the Ministry of Education or another appropriate agency of Government. Project assistance would consist of technical assistance support (paras 2.13 and 2.14), funds for office furniture, equipment and incremental operating costs, including salaries for the Secretariat.

The Public Service Promotion Structure

2.10 Legislation may be necessary to ensure that: (a) recognition would be given to skill tests (paras 1.18 and 2.09) for appointment and promotion purposes within the public service; and (b) technicians would be provided with adequate career development prospects (para 1.19). During negotiations, the Government provided assurances that: (a) by January 1, 1985, skill attainment, as determined by skill tests, would be recognized for the purposes of appointment and career development in the public service; (b) by January 1, 1984, a plan would be developed and furnished to the Association and implemented, beginning January 1, 1985, to improve career opportunities for

skilled craftsmen and technicians in the public service. The project would provide technical assistance support (paras 2.13 and 2.14) and funds for office furniture and equipment for the Public Service Commission.

E. Education Project Studies

Future Project Preparation

2.11 The planning and development arm of the Ministry of Education would continue its preparation of a primary education project employing the results of an earlier feasibility study conducted as part of the First Education Project (Credit 772-NEP). The preparation document would be prepared according to terms of reference agreed with the Association. The same agency would also undertake two needs assessment studies which would give background information and constitute full feasibility studies prior to possible project preparation for project financing: (i) on secondary education; and (ii) on non-formal and adult education. Both these studies would examine the potential of new management and supervision approaches to education in Nepal under the environmental conditions prevailing (para 2.03) and would be conducted under terms of reference agreed with the Association. Further evaluation studies (para 2.12) would be conducted by the Government to determine the effectiveness of the First Education Project (Credit 772-NEP).

Evaluation

2.12 In order to assess the socio-economic background and quality of entering students and the internal efficiency of the Center, a monitoring and evaluation system would be established for this project, with technical assistance support, and operated jointly with the system already being established for the First Education Project (Credit 772-NEP). To ensure that the outputs of the Center at Pokhara and the Pulchowk Campus would be adequately trained in relation to industry's needs and would secure employment in jobs for which they had been trained, a tracer study would be included in the evaluation system. During negotiations, the Government provided an assurance that details of the evaluation system to be employed would be made available to the Association by January 1, 1984, to permit review and comment before the opening of the new Center. The results of the evaluation exercise would be forwarded to the Association for five years following the first outputs from the Center and from the Pulchowk Campus (Credit 772-NEP). Funds would be provided for this evaluation study and to undertake further evaluation studies at the end of the existing First Education Project (Credit 772-NEP). By January 1, 1984, the Government would indicate which agency of Government would have the prime responsibility for conducting the evaluation studies for both the First and the Second Education Projects.

F. Technical Assistance

2.13 The project would include about 9 man-years of specialist services aimed at improving the quality of instruction, advising on implementation

issues and on developing institutional structures for testing and recognition of skill attainment. Also, as an integral part of the staff training program, about 62 man-years of overseas staff training would be included. Before negotiations, the Government obtained a commitment in principle from UNDP, for financing most of the specialist services and all the fellowships which are needed. Because of its immediate importance to the success of the project, an agreement would be signed with UNDP as a condition of Credit effectiveness.

2.14 Since there is inadequate institutional capacity for technical teacher training in Nepal, about 62 man-years of fellowships would be used mainly for teaching staff to receive overseas training in pedagogy and additional trade skills as indicated in Annex 1, Table 2. About 26 man-months would be used for the two senior management staff (the Chief of the Center and the Division Chief for Property Management and Procurement) to go overseas, primarily for study visits to institutions similar to the Center. The two heads of department and the librarian would need a longer period overseas, perhaps leading to a higher degree amounting to 22 man-months each. Approximately 32 man-months would be reserved for a trade test study team and a PSC study team to travel overseas and observe how other countries provide career development prospects in the civil service for skilled craftsmen and technicians. The 9 man-years of specialist services, to be provided in the project, would be utilized mainly for short-term consultants each year to assist the Center with curriculum development, equipment procurement, workshop planning and supervision. About one man-year would be devoted to advise HMG on the establishment of trade standards and trade tests for skilled craftsmen and about six man-months would be used for project studies.

2.15 An outline staff recruitment and training plan for teaching and support staff has been agreed with the Association. During negotiations, the Government provided assurances that: (a) a detailed staffing and staff training plan for the Center would be prepared by March 1, 1982, indicating qualifications and experience required, timing of appointment, training requirements and a schedule for training; and (b) a similar plan for the Secretariat would be provided by August 1, 1982.

III. PROJECT COST, FINANCING, IMPLEMENTATION AND DISBURSEMENTS

A. Project Costs

Total Project Costs

3.01 The total cost of the project is estimated at NR 231.06 million or US\$17.50 million equivalent including an estimated US\$2.50 million for Technical Assistance to be financed by UNDP and US\$0.25 million for land acquisition financed by HMG. Detailed costs and foreign exchange components are given in Annex 2, Table 1. Costs by project component are summarized in Table 3.1 below:

Table 3.1: SUMMARY OF COSTS BY PROJECT COMPONENT

	Million N Rupees			Million US\$			% of Total
	Local	Foreign	Total	Local	Foreign	Total	
1. Western Region Center (Pokhara)	60.26	57.37	117.64	4.57	4.34	8.91	85.7
2. National Skill Testing (incl. PSC)	2.07	1.12	3.19	0.16	0.08	0.24	2.3
3. Education Project Studies	5.94	1.98	7.92	0.45	0.15	0.60	5.8
4. Project Implementation Services	2.42	0.82	3.24	0.18	0.06	0.25	2.4
5. Technical Assistance	0.80	4.54	5.35	0.06	0.34	0.40	3.9
<u>Total Baseline Costs</u>	<u>71.50</u>	<u>65.84</u>	<u>137.34</u>	<u>5.42</u>	<u>4.98</u>	<u>10.40</u>	<u>100.0</u>
Contingencies							
- Unforeseen	7.14	7.21	14.35	0.54	0.55	1.09	10.4
- Price Escalation	26.52	16.55	43.07	2.01	1.25	3.26	31.4
<u>Sub-total Contingencies</u>	<u>33.66</u>	<u>23.76</u>	<u>57.42</u>	<u>2.55</u>	<u>1.80</u>	<u>4.35</u>	<u>41.8</u>
<u>Total Project Costs (excluding UNDP technical assistance and land costs)</u>	<u>105.16</u>	<u>89.60</u>	<u>194.76</u>	<u>7.97</u>	<u>6.78</u>	<u>14.75</u>	<u>141.8</u>
UNDP technical assistance	4.95	28.05	33.00	0.37	2.13	2.50	
Land costs financed by HMG	3.30	-	3.30	0.25	-	0.25	
<u>Total Project Costs</u>	<u>113.41</u>	<u>117.65</u>	<u>231.06</u>	<u>8.59</u>	<u>8.91</u>	<u>17.50</u>	

Figures may not add due to rounding.

3.02 The cost breakdown by categories into local and foreign cost elements of expenditure is summarized in Table 3.2 below:

Table 3.2: PROJECT COSTS BY CATEGORY OF EXPENDITURE

	Million N Rupees			Million US\$			% of Total
	Local	Foreign	Total	Local	Foreign	Total	
1. Site development	11.99	5.14	17.13	0.91	0.39	1.30	12.5
2. Buildings	25.70	17.13	42.83	1.95	1.30	3.25	31.2
3. Professional services /a	4.86	0.54	5.40	0.37	0.04	0.41	3.9
4. Furniture	2.72	2.72	5.44	0.21	0.21	0.41	4.0
5. Equipment /b	5.65	32.01	37.66	0.43	2.42	2.85	27.4
6. Staff salaries /c	13.08	0.00	13.08	0.99	0.00	0.99	9.5
7. Consumable training materials /d	0.76	1.77	2.53	0.06	0.13	0.19	1.8
8. Experts/consultants	0.80	4.54	5.35	0.06	0.34	0.40	3.9
9. Project studies /e	5.94	1.98	7.92	0.45	0.15	0.60	5.8
<u>Total Baseline Costs</u>	<u>71.50</u>	<u>65.84</u>	<u>137.34</u>	<u>5.42</u>	<u>4.98</u>	<u>10.40</u>	<u>100.0</u>
Contingencies							
- Unforeseen	7.14	7.21	14.35	0.54	0.55	1.09	10.4
- Price Escalation	26.52	16.55	43.07	2.01	1.25	3.26	31.4
<u>Sub-total Contingencies</u>	<u>33.66</u>	<u>23.76</u>	<u>57.42</u>	<u>2.55</u>	<u>1.80</u>	<u>4.35</u>	<u>41.8</u>
<u>Total Project Costs</u> (excluding UNDP technical assistance and land costs)	<u>105.16</u>	<u>89.60</u>	<u>194.76</u>	<u>7.97</u>	<u>6.78</u>	<u>14.75</u>	<u>141.8</u>
UNDP technical assistance	4.95	28.05	33.00	0.37	2.13	2.50	
Land costs financed by HMG	3.30	-	3.30	0.25	-	0.25	
<u>Total Project Costs</u>	<u>113.41</u>	<u>117.65</u>	<u>231.06</u>	<u>8.59</u>	<u>8.91</u>	<u>17.50</u>	

Figures may not add due to rounding.

/a Architectural design and supervision.

/b Including books and instructional materials.

/c To cover teaching and support staff (including PIU) salaries during CY1982 through 1987.

/d To cover operating costs during school years (CY) 1986 and 1987.

/e For preparation of future education projects and the evaluation of the First and Second Education Projects.

Base Costs

3.03 Cost estimates excluding contingencies refer to October 1981 prices, and were calculated on the following basis.

- (a) Construction Costs - on facilities of a similar nature recently completed in Nepal. The average unit cost was estimated at about US\$150 per sq meter (excluding site development and contingencies), compared with US\$170 per sq. meter in Pakistan, US\$150 in Bangladesh and US\$125 in India for similar facilities.

- (b) Equipment and Furniture - on detailed lists prepared with assistance from Paisley College (UK), which supplied technical assistance for the First Education Project (Credit 772-NEP).
- (c) Consumable Materials - on appropriate cost/trainee place (by skill) in comparable centers in Nepal.
- (d) Architectural Design and Supervision Services - the estimated base cost of about US\$400,000 for architectural services is based on the national fee scale of 9% of estimated construction cost (6% for design and 3% for construction supervision).
- (e) Specialist Services - Technical advisory services, which will be provided by individual specialists, are estimated to require about 54 man-months at a total cost of about US\$400,000, in addition to those provided by UNDP. The average man-month cost (based on the individuals' fees, international travel and local allowances) is expected to be about US\$7,500. The total estimated cost also includes provision for the cost of vehicles, local travel and some other minor items.
- (f) Operating Costs - on detailed breakdown of maintenance and other relevant operating costs in similar institutions in Nepal.
- (g) Salaries - on agreed scales plus allowances laid down by the University Service Commission (range NR 500 to NR 2,200 per month).

Area Allocations and Cost Per Student

3.04 Unit areas and costs of new facilities (net of contingencies, operating costs and costs for professional services) are shown in Annex 2, Table 2. Gross area per student place for academic and communal facilities averages about 12.5 sq meters 1/ and total capital cost (civil works, furniture and equipment) per student place for academic and communal facilities averages about US\$7,000. 2/ Unit costs for civil works were derived from recent building contracts for similar facilities in Nepal. Local materials and building techniques would be used to the maximum extent possible. Gross area allocations for student boarding facilities and staff housing are in conformity with national standards. In aggregate, academic and communal facilities account for about 48% of total baseline costs, and boarding and staff housing for about 26%.

1/ Gross area range of similar Bank-financed projects during 1978-80 was about 11.6 to 18.2 sq meters.

2/ Cost range of similar Bank-financed projects during 1978-80, adjusted to October 1981 prices was about US\$3,199 to US\$13,425.

Customs Duties and Taxes

3.05 Goods not specifically imported for the project would be subject to customs duties and taxes. Therefore, civil works costs include a tax component estimated at about US\$0.66 million. Instructional equipment, consummable training materials, and building materials imported specifically under the project would be subject to 1% tax. The Government provided assurances during negotiations that it would take the necessary steps to ensure efficient customs clearance, including payment of such taxes.

Contingency Allowances

3.06 Estimated project costs include physical contingencies (US\$1.09 million), estimated at 10% of base cost for unforeseen factors, and price contingencies (US\$3.26 million), estimated at 31% to cover expected price escalation as shown in Table 3.3 below.

Table 3.3: PRICE ESCALATION ESTIMATES

<u>Category</u>	<u>Annual Percentages of Price Increases</u>		
	<u>Year</u>	<u>Local</u>	<u>Foreign</u>
Civil works, furniture, equipment,) consumable training materials,) and maintenance costs)	1982	14	8.5
	1983-84	12	7.5
	1985	10	7.5
	1986-87	10	6
Professional services, salaries,) and experts/consultants)	1982-87	9	8

Detailed contingency allowances are shown in Annex 2, Table 3.

Foreign Exchange Component

3.07 Based on detailed analysis of expenditures in similar projects in Nepal, the foreign exchange component has been estimated as follows: (a) site development 30%; (b) buildings 40%; (c) furniture 50%; (d) equipment 85%; (e) professional services 10%; (f) consumable training materials 70%; (g) salaries 0%; (h) project studies 25%; and (i) specialists services 85%. The foreign exchange component, including contingencies and the UNDP technical assistance, is estimated at US\$9.28 million, or about 63% of the total project cost of US\$17.50 million.

Financing Plan

3.08 The total project cost of US\$17.50 million equivalent would be financed as follows:

- (a) the proposed IDA credit of US\$14.30 million equivalent would cover 85% of the total project cost net of taxes and duties (100% of the foreign exchange costs and 90% of local costs);

(b) the UNDP would finance most of the technical assistance program (fellowships and specialists' services) (paras 2.13 and 2.14) estimated at US\$2.50 million including contingencies);

(c) the Government would finance the remaining net costs of US\$0.04 million, and an estimated US\$0.66 million in taxes and duties.

3.09 The financing plan and IDA credit allocations by category of expenditure is presented in Table 3.4 below:

Table 3.4: PROJECT FINANCING PLAN

	<u>Government of Nepal</u>	<u>IDA</u>	<u>UNDP</u>	<u>Total</u>
	------(in US\$ million)-----			
1. Civil works and furniture	0.05	6.90	-	6.95 <u>/a</u>
2. Land acquisition	0.25	-	-	0.25
3. Equipment, books, journals and instructional materials	0.01	3.75	-	3.76 <u>/a</u>
4. Professional services (engrg./architectural fees)	-	0.48	-	0.48 <u>/a</u>
5. Technical assistance				
(a) consultant services and project studies	-	1.17	-	1.17 <u>/a</u>
(b) consultant services, fel- lowships and misc. costs	-	-	2.50	2.50 <u>/b</u>
6. Staff salaries, allowances and operating costs	0.26	1.04	-	1.30 <u>/a</u>
7. Consumable training materials	0.03	0.28	-	0.31 <u>/a</u>
8. Unallocated	0.10	0.68	-	0.78 <u>/c</u>
<u>Total Project Cost</u>	<u>0.70</u>	<u>14.30</u>	<u>2.50</u>	<u>17.50</u>
Less Taxes & Duties	-0.66	-	-	-0.66
<u>Total Net Project Cost</u>	<u>0.04</u>	<u>14.30</u> <u>/d</u>	<u>2.50</u>	<u>16.84</u>

/a Totals represent 95% of total estimated costs per category, including contingencies.

/b UNDP estimate including contingencies.

/c About 5% of total cost, including contingencies.

/d The Credit of US\$14.30 million represents 85% of net costs, including technical assistance.

Recurrent Expenditures

3.10 To assist the Government in initially setting up the Center, IDA would finance recurrent incremental expenditures to cover: (a) 80% of the salaries of (i) teaching and administrative staff for the Center, (ii) staff and administrative costs of the Project Implementation Unit, (iii) staff for the Skill Testing Secretariat; and (b) 100% of foreign or local ex-factory expenditures and 80% of other local expenditures for consumable training materials and maintenance costs for a two-year period at the Pokhara Training Center.

Recurrent Cost Implications

3.11 The recurrent costs (mainly salaries and consumable training materials) generated by this project when fully operational would amount to about NR 4 million per annum for the Tribhuvan University in 1980 prices, which is equivalent to about 3% of its budgeted total recurrent expenditures in 1980. The additional expenditures could be accommodated within the feasible growth of education expenditures, without undue financial difficulty to the Government.

Local Budget Requirements

3.12 Budget allocations would be made available to the project on an annual basis in accordance with annual estimates. Forecast of Expenditures and Disbursements is shown in Annex 4. In addition funds required for expenditures not eligible for IDA financing, such as taxes, land acquisition and cost of utilities, would also be provided. The project schedule would be revised annually and the financial requirements for the project would be reviewed regularly by the PIU to ensure that the project implementation is not delayed and operation of the Western Region Center at Pokhara does not suffer, because of lack of funds. During negotiations, the Government provided assurances that it would:

- (a) furnish to the Association, by March 1 of each year of implementation commencing in 1982, a revised project schedule, an estimate of project funds required for the following fiscal year; and
- (b) make the necessary funds available to ensure prompt project implementation during the life of the project, and proper operation and maintenance of the physical facilities.

B. Project Implementation

Implementation Period

3.13 The project would be implemented over a period of about six and a half years, including a two-year operation period after completion of the physical facilities, for evaluation and monitoring purposes during the early stages of operation. To assist in effective and timely project execution, a detailed implementation schedule acceptable to the Government has been prepared (Annex 3, Chart 1). This schedule would also serve as a monitoring device during implementation and would be updated regularly by the project staff.

Administration

3.14 The project would be implemented, throughout its life, by a new Project Implementation Unit (PIU) similar to that created under the First Education Project (Credit 772-NEP) in the IOE, Pulchowk Campus. The first PIU, presently under the directorship of the Dean of IOE, retains a full complement of professional staff as agreed under Credit 772-NEP and has demonstrated satisfactory performance. The assistance of its staff would be provided for the implementation of the Second Project. The Government has agreed to a staffing pattern, levels of appointment and duties and responsibilities of the PIU as illustrated in Annex 3, Chart 2. The Unit would also be assisted by specialists, provided under the technical assistance program (para 2.13 and Annex 1, Table 2). Funds have been included in the proposed credit for administrative costs, the procurement of equipment for the Unit and coverage of additional staff salaries. During negotiations, the Government provided assurances that certain full-time key staff appointed under the First Education Project such as the project architect and the procurement officer would continue to be retained during the project implementation period of this project, and a project coordinator, an education officer and other support staff, solely responsible for the new Center, would be appointed.

3.15 Current policies of the Tribhuvan University call for all skill training at craft and certificate levels to be handed over eventually to appropriate ministries. Such handover will not take place until the management capability of the ministries is sufficiently developed. Although it is expected that responsibility for the Center may be transferred to the Ministry of Education at some future date, the IOE will manage the implementation of the Project until it is completed.

Professional Services

3.16 The Government has chosen, as its architectural consultants, the Institute of Engineering Consulting Services (IECS) group which has performed satisfactorily in design work for the First Education Project (Credit 772-NEP) and has thus gained considerable experience on a similar project. The IOE has entered into a new agreement with this group under terms and conditions already established for the First Education Project. This has enabled IOE to expedite the commencement of design work.

IDA Review and Approval of Project Components

3.17 Master equipment and furniture lists, building materials schedules, equipment specifications, fellowship programs and terms of reference of experts would be reviewed upon their completion. The Association has reviewed and commented on: (a) an architect's brief, including an accommodation schedule and a description of basic construction methods and materials to be used, with cost estimates; (b) schematic designs for major buildings to be constructed under the Project; and (c) a site layout plan. The Association's comments would be incorporated in the detailed designs and final bidding documents which will be reviewed and approved, as a condition of Board presentation.

Site Selection

3.18 A suitable site has been selected (but not yet acquired) for the proposed Center which is located about a kilometer from the bazaar end of Pokhara and is accessible by a motorable dirt road. The main industrial district of Pokhara is about ten kilometers away. A suitable water supply is already available. Although an adequate electrical supply does not presently exist in Pokhara there will be a 132 KV grid line system financed by the Asian Development Bank, which is expected to be completed and be able to supply adequate electric power to the Center by June 1985 at the latest. At negotiations, the Government confirmed that an adequate electrical power supply would be made available before the opening of the Center. A topographical survey of the site has been prepared. The Government provided assurances that, by March 1, 1982, all necessary action required for the acquisition of title to the site would have been taken and evidence of ownership would be furnished to the Association promptly after acquisition. Availability of the land and access to it for all project purposes, including construction, would be a condition of credit effectiveness.

Maintenance and Spare Parts

3.19 To ensure proper use of the facilities and equipment, funds have been included in the project for:

- (a) construction of, and equipment for, one maintenance and repair workshop; and
- (b) spare parts for instructional equipment.

During negotiations, the Government provided assurances that the maintenance and repair workshop would be staffed with properly trained personnel, and that sufficient funds would be provided annually for maintenance and necessary repairs to the physical facilities to ensure their proper operation (para 3.12).

C. Procurement

Local Competitive Bidding (LCB) (US\$3.75 million) 1/

3.20 Civil Works (US\$2.75 million) and Furniture (US\$0.30 million). Past experience in Nepal has shown that contracts for civil works (below US\$800,000) and furniture (below US\$250,000) do not attract foreign bidders. Therefore, contracts for civil works and furniture below these values would be awarded on the basis of local competitive bidding following procedures which are satisfactory to the Association and do not exclude foreign bidders. Construction of the civil works component would be undertaken by private contractors. Only prequalified contractors would be allowed to bid for civil works contracts under this project.

1/ This and subsequent statements are estimates, including contingencies.

3.21 Equipment (US\$0.40 million). Contracts that cannot be grouped into packages for bulk procurement of at least US\$50,000, not exceeding in the aggregate US\$400,000 (equivalent to about 10% of the estimated total cost of equipment) would be procured in accordance with local competitive bidding procedures satisfactory to the Association.

3.22 Consumable Training Materials (US\$0.30 million). Since timely delivery of consumable materials, including spare parts, for the workshops, laboratories and offices, is critical, such materials would be procured locally on a regular basis following local competitive bidding procedures or by prudent shopping (para 3.25); thereby avoiding storage problems associated with bulk procurement.

International Competitive Bidding (ICB) (US\$7.03 million)

3.23 Equipment (US\$2.81 million), and Civil Works (US\$3.97 million) and Furniture (US\$0.25 million). Contracts exceeding US\$50,000 equivalent for equipment, US\$800,000 equivalent for civil works and US\$250,000 for furniture would be awarded on the basis of international competitive bidding in accordance with Bank Group guidelines. Local equipment and furniture manufacturers would receive a margin of preference in bid evaluation of 15% of the c.i.f. price of competing imports or the actual customs duty, whichever is lower. Local civil works contractors would receive a margin of preference in bid evaluation of 7-1/2% against competing foreign contractors.

Prudent Shopping (Local and International) (US\$0.60 million)

3.24 Off-the-shelf items of, equipment, furniture, and consumable training materials (special items, including spares, etc.) not exceeding US\$20,000, equivalent for each contract and aggregating a maximum of US\$600,000 (equivalent to about 12% of the estimated total cost of equipment furniture and consumable training materials), could be purchased on the basis of a minimum of three competitive price quotations.

Direct Purchase (Local and International) (US\$0.25 million)

3.25 Books and instructional printed matter would be purchased directly from publishers or authorized distributors at the lowest possible prices on the basis of at least three competitive price quotations, if applicable.

IDA Review and Approval of Procurement Decisions

3.26 Prior approval of the Association would be required for the award of any civil works contracts exceeding US\$200,000 equivalent and for any contracts for equipment, books, furniture, building materials, and consumable training materials, exceeding US\$50,000. The PIU has been advised to forward bid evaluations and recommendations for contract awards, allowing sufficient time (at least one month) for the Association's review and approval. In this respect, bid validity dates should be established to allow the PIU sufficient time to process bids received, prepare evaluation reports and reach agreement on award recommendations.

D. Disbursements and Auditing

Disbursements

3.27 The proposed credit of US\$14.30 million would finance 85% of total project costs, including technical assistance, net of customs duties and taxes. The proceeds of the proposed IDA credit would finance the following categories of expenditure:

- (a) Civil works and furniture, including building materials
100% of foreign expenditures,
90% of local expenditures.
- (b) Equipment, books, journals and instructional materials
100% of foreign expenditures,
100% of local expenditures ex-factory,
90% of other local expenditures.
- (c) Professional services for architectural design and supervision
100% of total expenditures.
- (d) Consultants services for technical assistance and project studies
100% of total expenditures.
- (e) Staff salaries, allowances, and other operating costs
80% of total expenditures.
- (f) Consumable training materials and maintenance
100% of foreign expenditures,
100% of local expenditures ex-factory, and
80% of other local expenditures.

3.28 To ensure an early start to the project, retroactive financing not exceeding US\$300,000 would be provided from January 1, 1981 to the date of Credit signing for expenditures incurred in the provision of professional architectural services and for the preparation of a topographical survey of the site.

Documentation of Expenditures

3.29 Withdrawal applications would be supported by full documentation, except for expenditures on salaries and small items of locally procured consumable training materials which may be reimbursed against statements of expenditures certified by the Project Director. Documentation for these statements would be retained by the project unit and be available for review

by the Association during project supervision missions. To the extent practicable, withdrawal applications would be aggregated in amounts of US\$50,000, or more, prior to submission to the Association for reimbursement out of the proceeds of the proposed credit. A forecast of expenditures and disbursements is shown in Annex 4.

Project Accounts and Audits

3.30 Project expenditures would be recorded in accordance with appropriate accounting practices. During negotiations, the Government provided assurances that: (a) accounts and financial statements for each fiscal year would be prepared and audited by independent auditors acceptable to the Association; (b) certified copies of the accounts and financial statements, for each fiscal year, together with the audit would be furnished to the Association as soon as available, but not later than nine months after the end of each fiscal year.

IV. BENEFITS AND RISKS

A. Benefits

4.01 The main benefits expected to accrue from implementation of the proposed project are as follows:

- (a) an increase in the supply of scarce skilled manpower of 160 craftsmen and 96 middle level (certificate level) technicians per annum;
- (b) a reduction in costs, through the reduction of the duration of skill training from 3 years duration to one year. Other centers (para 2.05) may follow this pattern;
- (c) a qualitative improvement in trade and technician training programs, for electrical, civil and mechanical engineering fields, through the provision of better trained instructors, improved administration, and the establishment of properly designed and equipped workshops and teaching laboratories;
- (d) improvement in the regional distribution of craft and technician training opportunities for adults and secondary school leavers;
- (e) reinforcing improvements in the quality of skill training at all training institutions through the establishment of a nationwide skill testing system in electrical, construction and mechanical crafts; and
- (f) improvement in the career development prospects in the public service for skilled craftsmen and technicians.

B. Risks

4.02 An essential part of the project is: to establish trade standards; to develop skill tests; to obtain PSC recognition for these tests; and to establish satisfactory public service career development prospects for skilled craftsmen and technicians. To achieve these objectives legislation may be necessary. The Association has obtained assurances that: (i) skill testing would be established and recognized by the PSC within a specific time limit (paras 2.09 and 2.10); and (ii) the PSC would establish adequate promotion prospects for skilled craftsmen and technicians (para 2.10) before the Center produces its first graduates, but in the event that these time limits are exceeded, the project may be less than effective in meeting the national demand for manual and technical skills (paras 1.18 and 1.19).

V. AGREEMENTS REACHED

5.01 During negotiations, the Government provided special assurances that:

- (a) a Center Advisory Committee would be established with industrial representation within six months of the opening date of the Center at Pokhara (para 2.06);
- (b) skill aptitude tests would be used to assist in the selection of applicants to the Center (para 2.07);
- (c) certain full-time key staff of the PIU, for the First Education Project, would be retained for this Second Education Project (para 3.14); appointments of PIU staff and the staff of the Center would be at agreed levels (paras 2.08 and 3.14); IOE would be responsible for project management throughout its implementation period until completion (para 3.15);
- (d) by March 1, 1982, all necessary action required for the acquisition of the site would have been taken, and evidence of ownership would be furnished to the Association promptly after acquisition (para 3.18).
- (e) by March 1, 1982 a detailed staff recruitment and training plan for the Pokhara Center would be prepared for review by the Association (paras 2.08, 2.14 and 2.15); by August 1, 1982 a staffing and staff training plan for the Secretariat of the National Skill Testing Authority would be prepared for review by the Association (para 2.15);
- (f) (i) by January 1, 1984, furnish to the Association for review and comment a plan designed to monitor and evaluate academic progress of the Pokhara Center and the Pulchowk Campus including the employment situation for their graduates and specify the agency of Government to be responsible for such evaluation; and (ii) evaluation data would be submitted to the Association for five years following the first outputs from the Pokhara Center and Pulchowk Campus (para 2.12);

- (g) by January 1, 1983, a permanent Secretariat would be established to provide technical support to an Authority on skill standards and skill tests (para 2.09); by January 1, 1984, the Secretariat would establish skill standards and skill tests in the principal electrical, construction and mechanical drafts (para 2.09); by January 1, 1985: (i) the Authority would be established, with nation-wide responsibilities, for setting skill standards and conducting skill tests (para 2.09); (ii) these tests would be recognized for promotion purposes within the public service (para 2.10); (iii) improved career opportunities leading to suitably senior levels would be introduced within the public service for skilled craftsmen, as well as middle and senior level technicians (para 2.10);

5.02 As a condition of Board Presentation detailed designs and final bidding documents for civil works would have been reviewed and approved by the Association (para 3.17).

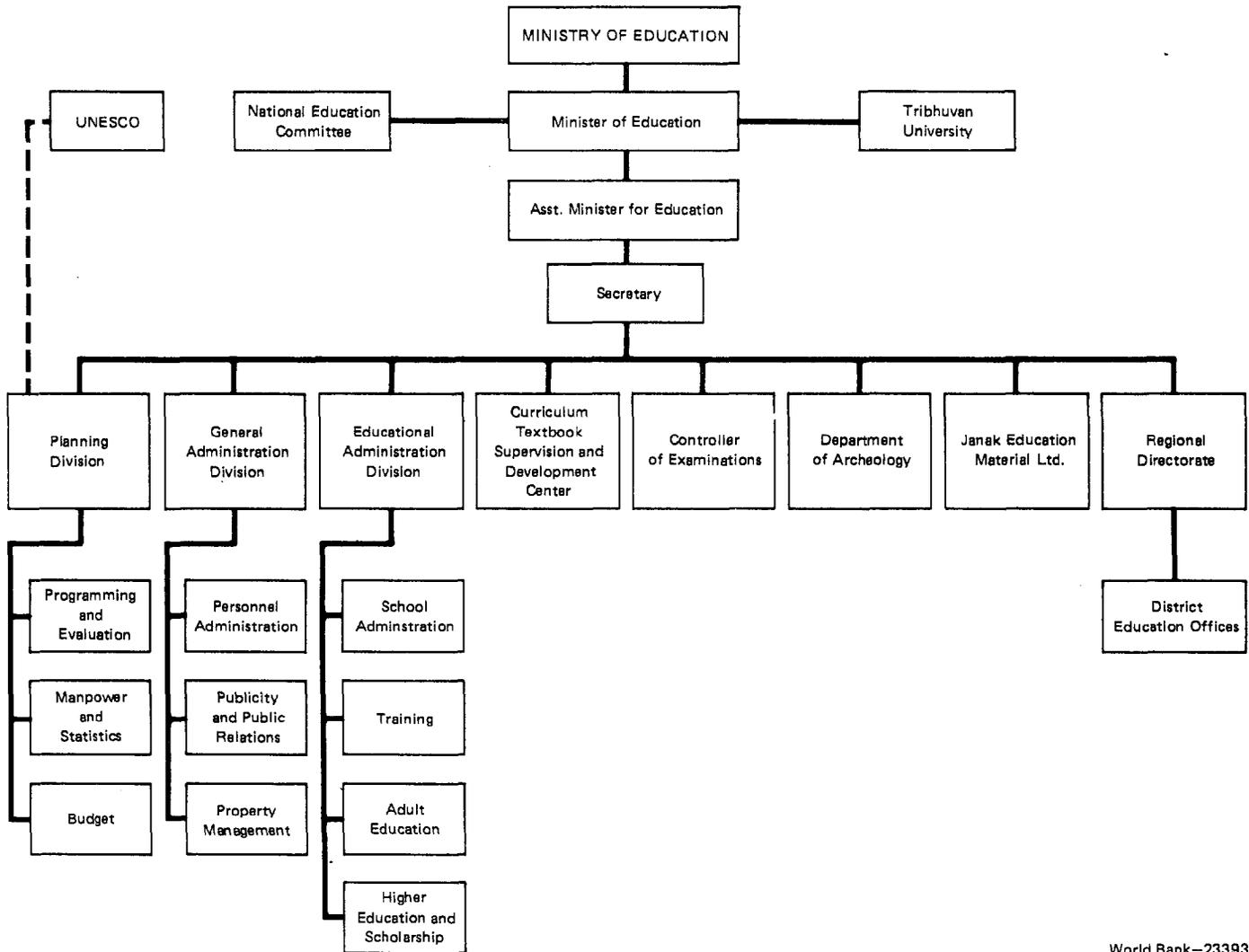
5.03 Conditions of Credit effectiveness would be that:

- (a) the land required for the construction and operation of the Pokhara Center is available and fully accessible for all project purposes including construction; and
- (b) a UNDP Project Agreement has been signed, providing financing of about US\$2.5 million for most of the specialist services and the fellowships program (paras 2.13 and 2.14).

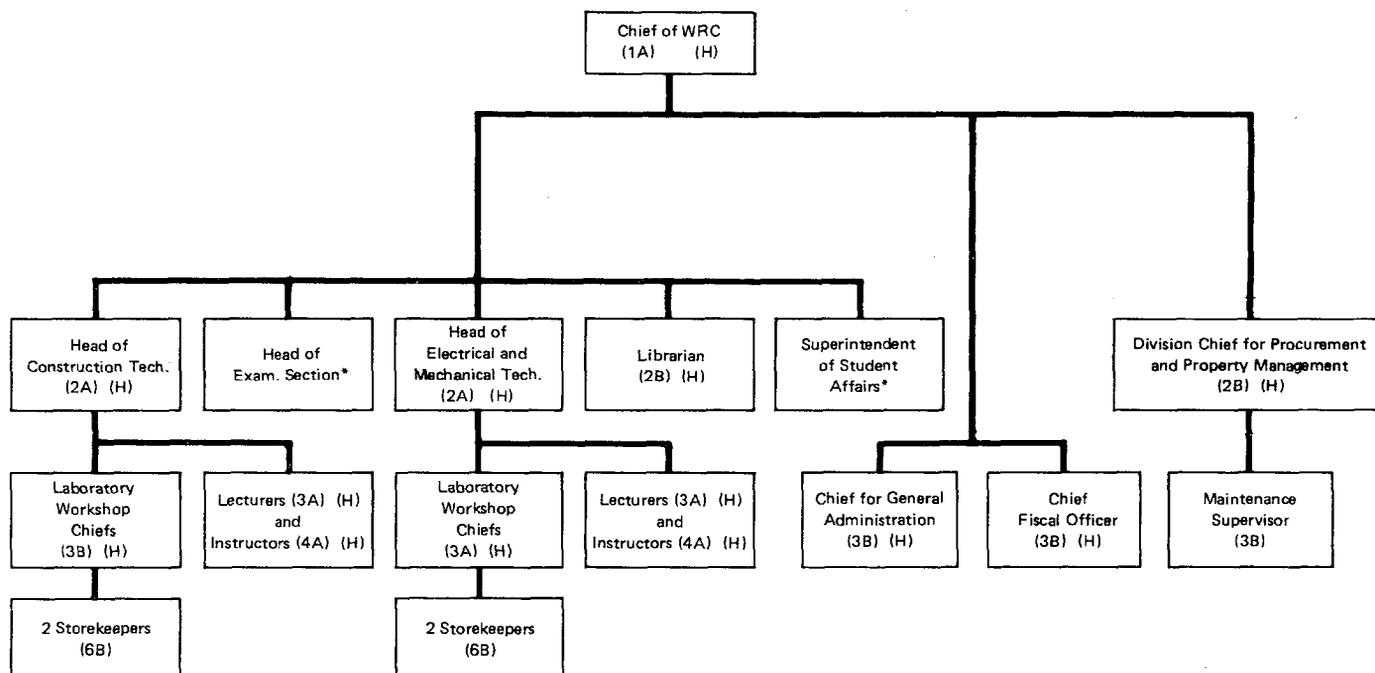
NEPALSECOND EDUCATION PROJECT(TECHNICAL AND VOCATIONAL TRAINING)Table 2: Technical Assistance Requirements

<u>Project Personnel</u>	<u>Total</u> m/m	<u>FY83</u> m/m	<u>FY84</u> m/m	<u>FY85</u> m/m	<u>FY86</u> m/m	<u>FY87</u> m/m
Project Coordinator	48	12	12	12	12	
Trades Test Specialist	12		6	6		
<u>Consultants</u>						
Subject Specialist A	10	2	2	2	2	2
Subject Specialist B	10	2	2	2	2	2
Subject Specialist C	10	2	2	2	2	2
Non-formal Education	2		2			
<u>Secondary Education</u>						
Specialist D	2	2				
Specialist E	2	2				
Other Specialists	<u>12</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>2</u>	<u>2</u>
Sub-Total	108	24	29	27	20	8
<u>Training</u>						
<u>Study Tour</u>						
PSC Study Team	16	8	8			
Trades Test Study Team	16	8	8			
<u>Property Management</u>						
Chief	4		4			
Other Staff	6		6			
<u>Fellowships</u>						
Campus Chief	22	10	12			
Librarian	22		10	12		
Head of Dept. A	22	10	12			
Head of Dept. B	22	10	12			
Technicians (22)	132			66	66	
Lecturers (22)	176		48	64	64	
Senior Instructors (9)	135		60	75		
Instructors (14)	<u>168</u>		<u>60</u>	<u>84</u>	<u>24</u>	
Sub-Total	741	46	240	301	154	

NEPAL
SECOND EDUCATION PROJECT
(TECHNICAL AND VOCATIONAL TRAINING)
Structure of the Ministry of Education



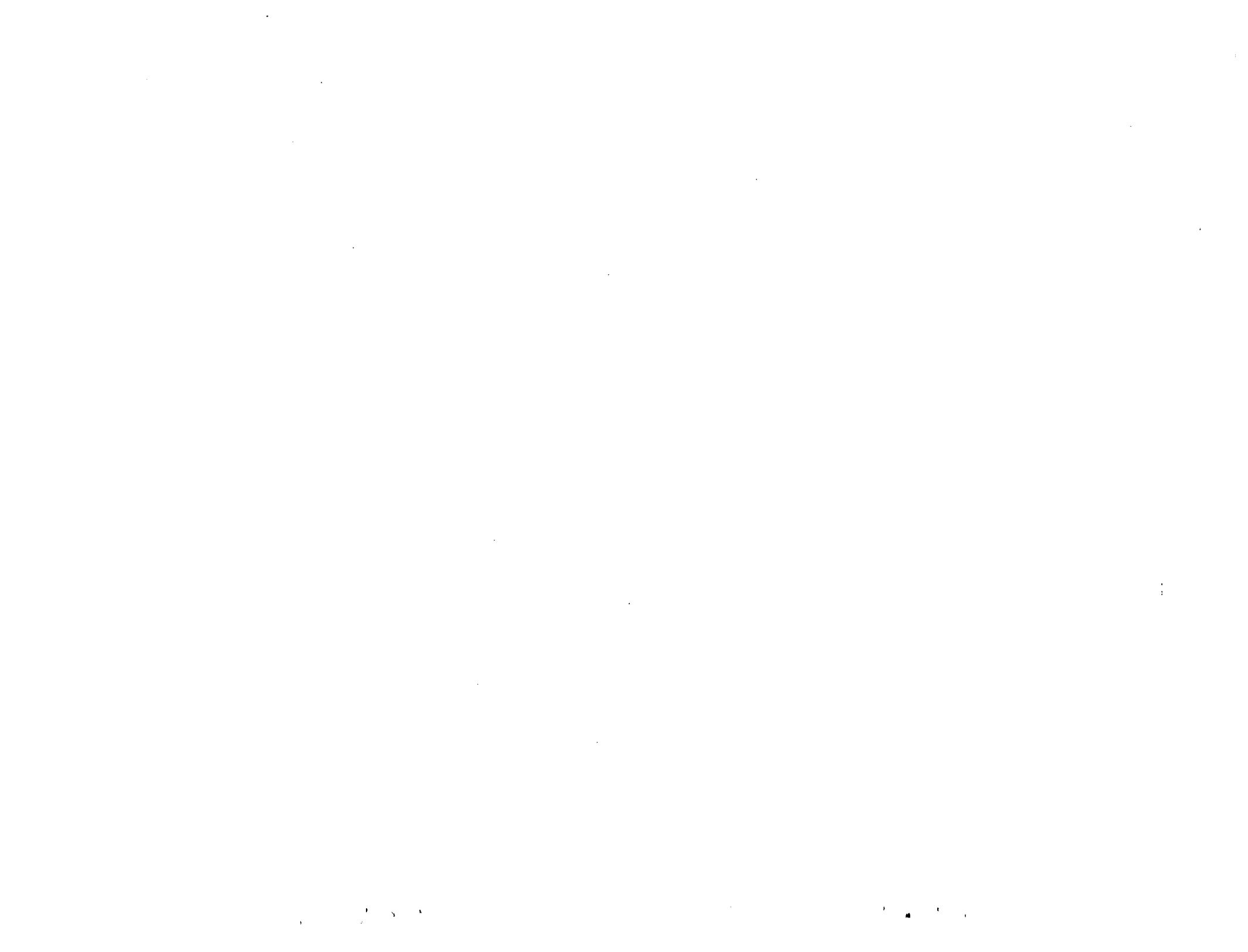
NEPAL
SECOND EDUCATION PROJECT
(TECHNICAL AND VOCATIONAL TRAINING)
Administrative Structure of the Western Region Center



(H) Indicates housing will be provided on campus.

(2A) Indicates appointment will be made at grade level 2A in the university service.

* Part-time teaching staff appointment.



NEPALSECOND EDUCATION PROJECT(TECHNICAL AND VOCATIONAL TRAINING)Unit Area and Unit Cost Estimates

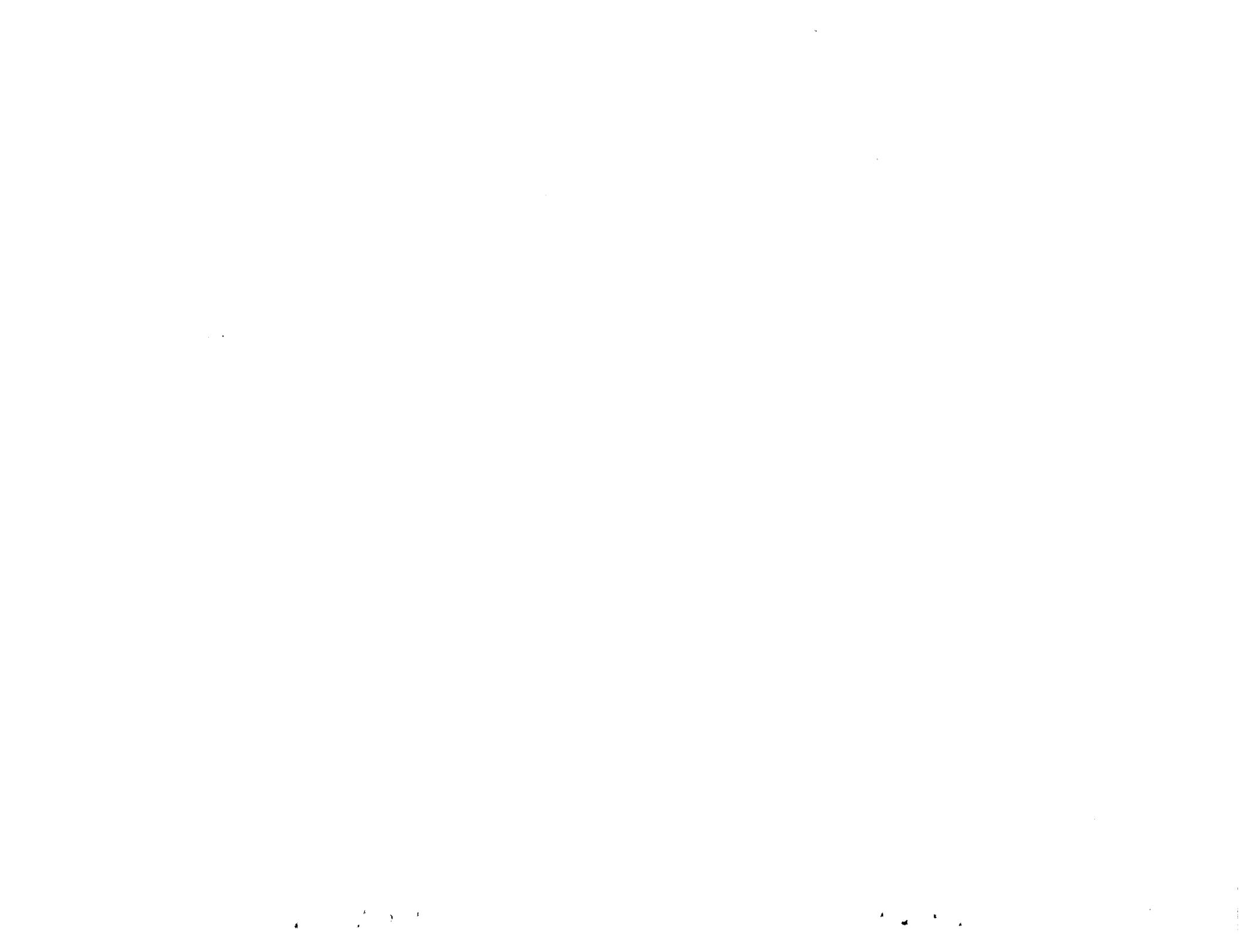
<u>Academic and Communal Facilities</u>	<u>This Project</u>	<u>Median Values of Bank-wide Similar Projects (78-80) a/</u>
Construction area per student place	12.5 m ²	14.1 m ²
Building Cost per m ² of gross area	US\$ 167 <u>b/</u>	US\$ 269
Construction cost per student place	US\$ 2,901 <u>c/</u>	US\$ 3,409
Furniture cost per student place	US\$ 311	US\$ 443
Equipment cost per student place	US\$ 3,818 <u>d/</u>	US\$ 3,115 (High value US\$6,009)
Total cost per student place	US\$ 7,030	US\$ 8,788
<u>Boarding Facilities</u>		
Construction area per boarding place	14.7 m ²	10.0 m ² (High value 18.2 m ²)
Building cost per m ² of gross area	US\$ 136 <u>b/</u>	US\$ 454
Construction cost per boarding place	US\$ 2,822 <u>c/</u>	US\$ 5,132
Furniture cost per boarding place	US\$ 302	US\$ 449
Total cost per boarding place	US\$ 2,318	US\$ 5,581
<u>Staff Housing</u>		
Area per staff housing unit	110 m ²	100 m ²
Building cost per m ² of gross area	US\$ 136 <u>b/</u>	US\$ 332
Total cost per staff house	US\$21,000 <u>c/</u>	US\$35,957

a/ Source: CPS, October 1980 (Unit Area and Unit Cost Estimates in Education Projects). Mid 1980 figures were increased by 15% to cover the 16 months difference.

b/ Excludes site development.

c/ Includes site development.

d/ Equipment costs are comparatively high because they include initial operation materials, installation costs and spares. They also include allowances for air freight transportation for some equipment.



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SECOND EDUCATION PROJECT

(TECHNICAL AND VOCATIONAL TRAINING)

ANNEX 2
Table 3

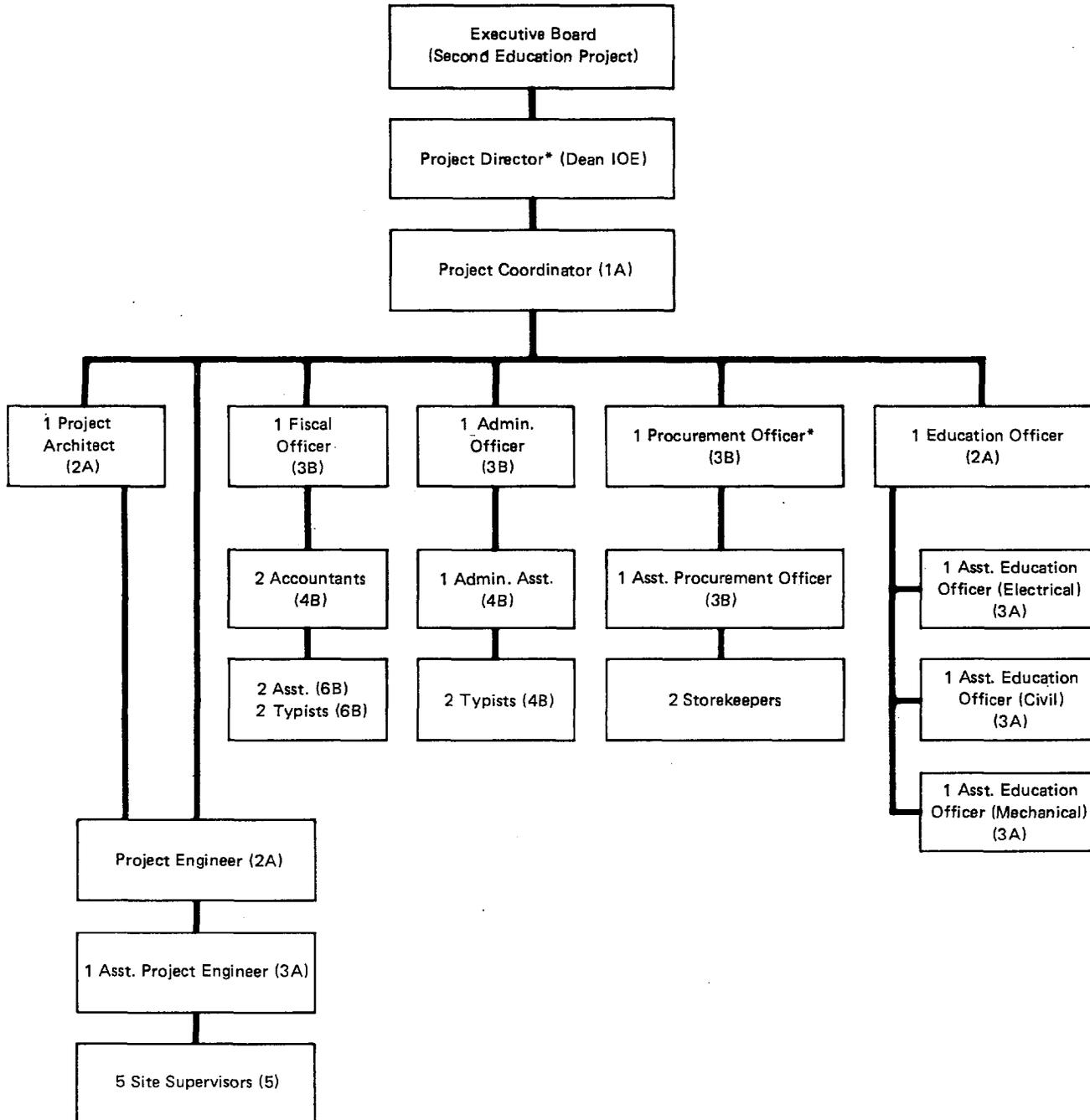
Contingency Allowances

EXCHANGE RATE: 1 US \$ = 13.200 NEP.RS

SCALE FACTOR: (000)'S (000)'S

	SITE DEVELPM		BUILDING		FURNITURE		EQUIPMENT		PROF. SERVCS		SALARIES		CONSUM/MAINT		CONSULTANTS		STUDIES/RPTS		TOTAL PROJECT COSTS			
	LOCAL	FOREIGN	LOCAL	FOREIGN	LOCAL	FOREIGN	LOCAL	FOREIGN	LOCAL	FOREIGN	LOCAL	FOREIGN	LOCAL	FOREIGN	LOCAL	FOREIGN	LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL	
CONTINGENCIES (AS % OF PROJECT COST):																						
UNFORESEEN	15.0	15.0	15.0	15.0	10.0	10.0	10.0	10.0	5.0	5.0	-	-	15.0	15.0	-	-	5.0	5.0				
PRICE ESCALATION	39.2	23.5	31.1	18.6	43.5	26.0	39.9	23.9	19.6	17.0	38.4	31.4	68.9	40.4	25.9	22.8	20.9	17.5				
TOTAL	60.0	42.0	50.8	36.4	57.9	38.6	53.9	36.3	25.6	22.8	38.4	31.4	94.3	61.5	25.9	22.8	27.0	23.3				
PROJECT COST (WITHOUT CONTINGENCIES):																						
(000)'S NEP.RS	11994	5140	25701	17134	2719	2719	5649	32010	4857	540	13082	0	758	1769	802	4544	5940	1980	71501	65836	137337	
(000)'S US\$	909	389	1947	1298	206	206	428	2425	368	41	991	0	57	134	61	344	450	150	5417	4988	10404	
% FOREIGN EXCHANGE		30.0		40.0		50.0		85.0		10.0		0.0		70.0		85.0		25.0			47.9	
CONTINGENCIES (AMOUNTS):																						
UNFORESEEN																						
(000)'S NEP.RS	1799	771	3855	2570	272	272	565	3201	243	27	-	-	114	265	-	-	297	99	7145	7205	14350	
(000)'S US\$	136	58	292	195	21	21	43	243	18	2	-	-	9	20	-	-	23	8	541	546	1087	
PRICE ESCALATION																						
(000)'S NEP.RS	5403	1388	9197	3668	1301	779	2478	8404	999	96	5025	0	601	822	208	1035	1304	363	26515	16555	43070	
(000)'S US\$	409	105	697	278	99	59	188	637	76	7	381	0	46	62	16	78	99	27	2009	1254	3263	
SUBTOTAL																						
(000)'S NEP.RS	7202	2159	13052	6238	1573	1050	3043	11605	1241	123	5025	0	715	1087	208	1035	1601	462	33660	23760	57420	
(000)'S US\$	546	164	989	473	119	80	231	879	94	9	381	0	54	82	16	78	121	35	2550	1800	4350	
% FOREIGN EXCHANGE		23.1		32.3		40.0		79.2		9.0		0.0		60.3		83.3		22.4			41.4	
TOTAL PROJECT COST (WITH CONTINGENCIES):																						
(000)'S NEP.RS	19195	7299	38753	23372	4291	3769	8692	43615	6099	663	18107	0	1473	2856	1010	5579	7541	2442	105161	89596	194757	
(000)'S US\$	1454	553	2936	1771	325	286	658	3304	462	50	1372	0	112	216	76	423	571	185	7967	6788	14754	
% FOREIGN EXCHANGE		27.5		37.6		46.8		83.4		9.8		0.0		66.0		84.7		24.5			46.0	
TOTAL CONTINGENCIES:	AS % OF TOTAL PROJECT COST		29.5		AS % OF PROJECT COST WITHOUT CONTINGENCIES		41.8															

NEPAL
SECOND EDUCATION PROJECT
(TECHNICAL AND VOCATIONAL TRAINING)
Project Implementation Unit Organization



(2A) indicates appointment will be made at grade level 2A in the university service grades.

*Part-time appointment, to be shared with PIU of the First Education Project

NEPALSECOND EDUCATION PROJECT(TECHNICAL AND VOCATIONAL TRAINING)Forecast of Expenditures and Disbursements

<u>IDA Fiscal Year and Semester</u>	<u>Expenditures</u>		<u>Disbursements</u>	
	<u>Semester</u>	<u>Cumulative</u>	<u>Semester</u>	<u>Cumulative</u>
<u>1982</u>				
1st (July 81 - Dec. 81)	0.06	0.06	-	-
2nd (Jan. 82 - June 82)	0.19	0.25	0.06	0.06
<u>1983</u>				
1st (July 82 - Dec. 82)	0.83	1.08	0.18	0.24
2nd (Jan. 83 - June 83)	1.97	3.05	0.75	0.99
<u>1984</u>				
1st (July 83 - Dec. 83)	2.47	5.52	1.82	2.81
2nd (Jan. 84 - June 84)	2.48	8.00	2.31	5.12
<u>1985</u>				
1st (July 84 - Dec. 84)	2.49	10.49	2.33	7.45
2nd (Jan. 85 - June 85)	2.44	12.93	2.34	9.79
<u>1986</u>				
1st (July 85 - Dec. 85)	1.01	13.94	2.33	12.12
2nd (Jan. 86 - June 86)	0.19	14.13	1.55	13.67
<u>1987</u>				
1st (July 86 - Dec. 86)	0.21	14.34	0.16	13.83
2nd (Jan. 87 - June 87)	0.19	14.53	0.12	13.95
<u>1988</u>				
1st (July 87 - Dec. 87)	0.22	14.75	0.17	14.12
2nd (Jan. 88 - June 88)	-	14.75	0.18	14.30

Estimated Effectiveness Date: April 1982.

Estimated Closing Date: June 30, 1988.

NEPAL

SECOND EDUCATION PROJECT

(TECHNICAL AND VOCATIONAL TRAINING)

Related Documents and Data Available in the Project File

A. General Reports and Studies Related to Education

1. Education Programs in the Fifth Plan (1975-80), Ministry of Education, Kathmandu, 1977.
2. Nepal - The Fifth Plan (1975-80) in Brief, National Planning Commission, Kathmandu, April 1979.
3. Basic Principles of the Sixth Plan (1975-80), Ministry of Education, Kathmandu, 1977.
4. Nepal - Education and Development, Unesco, July 1975.
5. Education and Development (Special Issues on Higher Education), National Education Committee, CERID, Kathmandu, 1978.
6. Education and Development, Trends and Issues, Center for Educational Research, Innovation and Development, Kathmandu, 1979.
7. Teacher Education in Nepal, Dr. Kedar N. Shrestha, Tribhuvan University, Kathmandu, 1980.
8. Education Management in Nepal, Dr. Kedar N. Shrestha, Tribhuvan University, Kathmandu, 1980.
9. Civil Service Journal, Public Service Commission, Kathmandu, April 1980, No. 4.
10. The Role of Supervision in Improving the Teaching/Learning Process in Nepal, A.C.R. Wheeler, Consultant IIEP, Unesco, Paris.
11. Nepal, Education Sector Memorandum, Report No. 3583-NEP, September 4, 1981.

B. Reports and Studies Related to the Project

1. Feasibility Study - IOE Western Region Campus, prepared for the World Bank, Institute of Engineering, Kathmandu, April 1980.
2. Feasibility Study - IOE Western Region Campus, Interim Report prepared for the World Bank, Institute of Engineering, Kathmandu, April 1979.

