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INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PERFORMANCE AUDIT REPORT
ON
ETHIOPIA FIRST EDUCATION PROJECT (CR.84-ET)

February 5, 1975

Operations Evaluation Department

PREFACE

Credit 84-ET was closed in November 1972. The following report is an audit of achievements under this credit measured against the objectives on the basis of which it was originally approved.

The audit is based on a review of IDA records and files, and discussions held with Bank/IDA staff involved with the project. In addition, it draws heavily on an evaluation study, Post Evaluation of Education Project 84-ET, Fulfillment of Educational Objectives, carried out in 1973 by the Education Department.

Note: Currency Equivalents

	Currency Unit	Dollar (Eth\$)
1966 - 1971:	US\$ 1.00	= Eth\$ 2.50
1972:	US\$ 1.00	= Eth\$ 2.30

TABLE OF CONTENTS

	<u>Page No.</u>
SUMMARY	i - iii
I. Introduction	1
II. The Project	2
III. Project Implementation	4
IV. Project Costs	6
V. Project Operating Results	8
Quantitative	8
Qualitative	13
VI. Project Management	15
VII. Conclusions	16

LIST OF TABLES

Table 1: Costs of Physical Works by Item, Type of Work, Cost per Student Place; Actual vs. Estimates.	follows Page 7
Annex Table 1: Project Schools and Institutes by Province - Enrollments, Scheduling, Costs (Actuals vs. Estimated).	
Annex Graph 1: Actual Enrollment in Primary and Secondary Education 1960-71 and Enrollment for 1964-68 as Projected by Ethiopian Authorities and by Bank's Appraisal Mission in 1965.	
Annex Graph 2: Apparent Cohort Table ("drop out curve") in Government Schools in Grades 1-12, projections and actuals.	
Map: First Ethiopia Education Project	

SUMMARY

An IDA credit of US\$ 7.2 million was extended to Ethiopia in February 1966 (Credit 84-ET) to assist with financing of a US\$ 11.0 million equivalent education project. The central project item comprised construction or expansion, and equipping of 77 secondary schools. Also included were construction or expansion of two technical institutes, two primary teacher training institutes, and construction of a new training institute for secondary teachers of practical subjects.

Project justification was based mainly on the need to increase the output and quality of secondary school graduates, with a special emphasis on vocational training, in order to partially fill a midlevel manpower gap. The project was to add 20,400 new student places to the existing 31,000 places in Government secondary schools. These schools had catered for only 1% of the relevant school age population during 1964/65.

In order to improve the quality of education, revised academic and new diversified practical curricula (in commerce, agriculture, industrial arts and home economics) were to be introduced in the project secondary schools. Important credit conditions also called for creation of a Project Unit within the Ministry of Education; an increased annual output of 300 qualified secondary teachers of practical and academic subjects by the Haile Selassie I University; assurance that project laboratories and workshops be fully utilized; and creation of employer advisory committees to increase the relevance of the technical institute curricula.

With the exceptions of inadequate allowance of time for international tendering during early project implementation and, later, the slow distribution of equipment, the large construction/expansion and equipment program was carried out efficiently and in accordance with credit conditions. A construction delay, averaging one year for the secondary schools, made it necessary to postpone the final project closing date by almost two years to November 1972 though 75 of the 82 project schools and institutes had been completed by the original December 1970 closing date. The quality of project construction was generally good, and use of a simple and economical prefabricated steel structure, recommended by IDA, proved suitable to Ethiopian needs. However, maintenance at the completed project schools was inadequate, and as a result of an IDA request, a new maintenance unit was established in the Ministry of Education.

Total project costs were held very closely to the estimated US\$ 11.0 million equivalent, in spite of rising prices leading to a 21% construction cost overrun, and without major alteration of project content or quality. The overrun was offset by savings in consultant fees and equipment costs, and with use of contingencies. Both capital and recurrent project costs were less than estimated on an actual per student basis for the large secondary school item, due mainly to accommodation of a larger than planned number of students. Overall, the project absorbed one-third of total education investment expenditure over the implementation period and has contributed significantly to the rapid

growth of the share of Government revenue (from 13% in 1965/66 to 20% in 1970/71) devoted to recurrent education expenditures.

Initial operating results confirm partial achievement of quantitative project objectives, but suggest less success with educational objectives. The project secondary schools were accommodating over 82,000 students by 1972, 61% greater than the planned 51,400 capacity. The dropout rates in secondary schools have decreased, though an improved examination pass rate for grade 12 school leavers has not been attained. The relative share of secondary students in academic streams has increased in spite of plans for diversion of students to the practical streams. Planned increases in output of qualified Ethiopian academic and vocational secondary teachers by the University were delayed beyond the implementation period, but the targeted output from primary teacher training institutes was met by 1971/72. Finally, enrollments in the project's technical institutes did not increase as planned. Low Government priority attached to this type of education and a shortage of practical teachers prevented significant growth and improvement of the institutes.

In terms of educational objectives, early outcomes have not yet confirmed a significantly improved quality of secondary education. Implementation of the new comprehensive curricula in project schools remains incomplete, largely due to the major shortage of qualified teachers, in turn causing some temporary underutilization of facilities. Further underutilization resulted from a lack of student interest, especially in agriculture and industrial arts. Student interest in these fields has been notable only where possibilities for future modern employment were visible, generally in more developed regions. This outcome has been attributable in part to inadequate consideration of local socio-economic conditions prior to introduction of practical streams in some of the schools. The negative impact of over enrollments limited the possibility of implementing some recommended new teaching techniques. (For the long range, a limited enrollment policy has been recommended by IDA. Currently, a double shift system has been introduced in many project schools in an attempt to alleviate overcrowding.) For the two technical institutes, improved curricula were not developed during project implementation nor were coordinating commissions with employers established. With the exception of the teaching of science and agriculture, the quality of secondary teacher training has improved while primary teacher training has continued to over-emphasize preparation of students for entrance into academic secondary schools.

As regards project management, the most efficient of the implementing authorities was the Project Unit, in charge of the large construction/expansion program and currently in charge of the second and third IDA projects. Achievement of quantitative and educational project objectives, under the Ministry and the University, lagged. Inadequate supervision of project school teachers and principals by the Ministry was detrimental to operating results as was the low output of qualified teachers by the University.

Conclusions based on early project operating results suggest that the major project item, the 77 secondary schools, helped to meet a rapidly increasing demand for secondary education. Their major contribution to date has been an

increased output of academic grade 12 school leavers. The schools have not yet provided enough graduates of suitable quality to fill the midlevel technical manpower gap. The delayed progress towards vocational objectives, and the current budgetary burden of the project, suggest that initial spread of the diversified curricula should have been limited to a smaller number of schools.

In line with then prevailing education lending policy, IDA contributions to the project were limited mainly to concerns over the construction/expansion program. However, in terms of the project, and within the limits of the mid-1960s policy, IDA could have contributed more, especially in three areas. First, in view of the diverse socio-economic conditions of varying population groups and regions served by the project schools (about 70% of project school students were from rural backgrounds), the IDA/UNESCO preparation mission might have recommended preparation of pre-project regional studies to ensure that curricula be better-suited to local needs.

Secondly, given the project's vocational objectives, IDA might have assisted, from the beginning, in the financing of manpower studies and at least pushed for early contact with industry in the attempt to gear the diversified secondary curricula as well as the technical institute programs towards the economy's needs. Finally, IDA could have promoted greater cooperation among project implementing authorities of which the most knowledgeable was the Project Unit. A more complete view of project progress might have allowed for earlier recognition and correction of initial operating shortfalls. As regards the preparation of qualified teachers by the University, an explicit coordinating responsibility might also have been assigned to the Ministry of Education.

In spite of initial shortcomings, the project contributed to the build-up of the administrative and managerial capacity of the Ministry of Education and underlined the need for development of comprehensive educational planning. The second and third IDA projects have been designed to correct specific inadequacies and inequities of the existing system while awaiting final preparation of a new and balanced educational development strategy, stressing basic and rural education.

PERFORMANCE AUDIT OF ETHIOPIA

FIRST EDUCATION PROJECT (CREDIT 84-ET)

I. Introduction

The project for which IDA extended a first education credit to Ethiopia (Cr 84-ET, of February 1966) was the outcome of five years' planning, dating from a UNESCO/ECA-sponsored education conference held in Addis Ababa in 1961. On the basis of the recommendations of that meeting and the requirements for achieving the goals of Ethiopia's Second Five-Year Development Plan (1962-67), which emphasized industrial and agricultural development, the Government Planning Board proposed a tentative plan for the development of Ethiopian education. Subsequent review of the proposal by a UNESCO planning mission led the Government to conclude that the most urgent educational needs were to increase enrollments in primary and secondary education, and, in order to achieve those goals, to expand teacher training. Towards the end of 1963, just after the Bank/IDA's formal enunciation of its initial education lending policy, the Government requested IDA assistance for the expansion of secondary education.^{1/}

Advice provided during 1964 by a second UNESCO planning mission and an ILO/UNESCO advisory mission was incorporated into a draft project proposal which included expansion of secondary and midlevel technical education, expansion of training facilities for primary teachers, and the creation of training facilities for vocational secondary teachers. Total estimated capital cost was US\$ 13.2 million equivalent. A joint IDA/UNESCO preparation mission visited Ethiopia during November 1964 mainly to advise on the scaling down of the cost and size of the project. (IDA had suggested a limit of US\$ 9.0 million equivalent, including a US\$ 6.0 million credit, due largely to the paucity of IDA funds, but also to ensure that the Government could meet its own share of capital costs, all recurrent costs, and administrative and staffing requirements.) On the basis of the preparation mission's recommendations a reduced project, with an estimated capital cost of US\$ 9.26 million equivalent, was submitted to IDA in March 1965 and project appraisal took place during May of that year.

The appraisal mission found that the cost of the proposed project, of which the central item was the construction or expansion, furnishing and equipping of 84 secondary schools, had been significantly underestimated by the Ethiopians and the IDA/UNESCO preparation mission. All estimates had been based on construction and transport costs for the Addis Ababa area, whereas in other regions of the country these costs were often twice as high. The mission also found that

^{1/} The Bank/IDA was prepared to support, mainly through capital assistance, high priority projects, based on comprehensive sector planning, in the areas of non-university technical and vocational education, general secondary education and teacher training. The express developmental goal of the policy was to reduce midlevel manpower gaps in borrowing countries.

planned construction standards were too low, requiring relatively heavy maintenance expenditures. In addition, the project's 20,400 new secondary places were to have been provided on the basis of 1.0 m² per student, a space much smaller than the 1.5 m² recommended by IDA. Construction standards were upgraded and agreement on an increase in space per student (up to 1.25 m²) was attained. The appraisal mission estimated the revised total project cost to be US\$ 12.0 million equivalent and in view of the continuing shortage of IDA funds, recommended further reduction of the project. This was accomplished by setting a limit on the acceptable number of streams^{1/} for each secondary school, from two to ten streams for junior secondary schools and from two to eight for senior secondary schools, resulting in the elimination of seven less economically viable schools for a total of 77 project secondary schools. The final cost estimate was US\$ 11.0 million equivalent including contingencies and consultant fees.

II. The Project

Negotiations were carried out during January 1966 and the Credit Agreement was signed on February 16, 1966. Due to the US\$ 11.0 million equivalent final cost estimate, IDA had agreed to raise the amount of the credit from the proposed US\$ 6.0 million to US\$ 7.2 million. It was to cover 65% of total project costs -- 100% of the foreign exchange costs of construction, equipment, and furniture, estimated at US\$ 3.8 million, and 47% of all other goods, including consultant services. All procurement was to be carried out on the basis of international competitive bidding. The project was expected to be completed within four and a half years, and the closing date for disbursements was set for December 31, 1970. The estimated recurrent cost to be incurred by the completed project schools was US\$ 2.5 million equivalent per year. A description of project items and their costs follows:

^{1/} A stream consists in a complete series of grades, in Ethiopia 7 and 8 for junior secondary and 9 through 12 for senior secondary. One complete junior secondary stream would comprise one class of grade seven and one class of grade eight students, each class containing a recommended 40 students. For senior secondary, one stream would comprise a single class for each grade from 9 through 12, containing a recommended 35 students each, or 4 x 35 students; two streams would comprise 8 x 35 students.

	<u>Eth\$ Millions</u>		
	<u>Construction</u>	<u>Furniture & Equipment</u>	<u>Total</u>
1) 54 new secondary schools			
23 existing secondary schools	15.80	6.02	21.82 ^{a/}
2) 70 student hostels (for 32 schools)	0.97	0.16	1.13
3) 31 staff houses (for 31 schools)	0.64		0.64
4) 2 new primary teacher training institutes	0.43	0.23	0.66
5) 1 new practical teacher training institute	0.47	0.22	0.69
6) new accommodations for the Asmara technical institute, and relocation of Addis Ababa technical institute to existing modern buildings	0.91	1.65	2.56
Total	<u>19.22</u>	<u>8.28</u>	<u>27.50</u>
Total US\$ million equivalent	<u>7.69</u>	<u>3.31</u>	<u>11.00</u>

^{a/} Including facilities for adult trade training at two schools.

Reliable manpower data did not exist in Ethiopia in the mid-1960s. (A manpower survey is currently being implemented under the second education credit, Cr. 243-ET.) Project justification rested mainly on the need for expanding the pool of midlevel manpower by increasing the numbers of secondary and technical institute graduates. During the mid-1960s, over 90% of the 22 million Ethiopian population was rural, engaged in agriculture and mainly outside of the monied economy. Light industry and commerce were in their infancies. Development of modern agriculture and further growth of industry and commerce were considered seriously limited by the scarcity of trained manpower. At the same time, only 1% of the relevant population age group received any secondary education: those completing grade 12 of general secondary numbered under 1,000 during 1964/65 and of that number, less than 200 qualified for university entrance.

In addition, the demand for midlevel educational facilities was expected to increase as a result of Government emphasis on increasing primary enrollments (above the prevailing 10% of the relevant age group) and the numbers of qualified primary school teachers.

Qualitative improvement of secondary and midlevel technical education was as important a need as the expansion of the system. The Government had cited the high dropout rate as the most serious consequence of the poor quality of education (only 35% of students beginning in grade seven in Government secondary schools completed grade twelve), caused largely by inadequately

trained or untrained teachers in primary and secondary schools, and to a lesser extent, by a lack of equipment and teaching materials. Secondary and technical school graduates were ill-equipped to enter the labor market or the University. To improve the quality of secondary education, and its relevance to Ethiopian needs, the academic curriculum was to be revised and diversified curricula -- in commerce, industrial arts, home economics and agriculture -- were to be introduced in the project secondary schools. Revision of curricula at the technical institutes was also to be undertaken. To meet the demand for the necessary teachers of practical subjects in the project's diversified secondary schools and technical institutes, construction of a training institute at the Haile Selassie I University was included in the project, with technical assistance to be provided by a Utah University team, financed by USAID.

To help achieve project objectives, several conditions were included in the Credit Agreement and in supplementary letters. Of a more standard nature were special covenants calling for adequate maintenance of all project schools and equipment, and IDA approval of all consultants, advisors and contractors to be retained. In addition, a supplementary letter required that a Project Unit, consisting in a manager, chief architect, technical educator, accountant and supporting staff be established within the Ministry of Education, and that a firm (or firms) of architects be retained to undertake the architectural and engineering services required for the construction of project buildings and installation of equipment, under supervision of the Project Unit's chief architect.

While the Bank's direct contribution to the project was limited to the financing of construction and equipment, two supplementary letters covered educational objectives as well. The first, on teachers, confirmed that no reduction would take place in the number of qualified secondary teachers and that every effort be made to staff secondary schools entirely with qualified teachers. Supporting measures included Government provision of sufficient funds for hiring expatriate teachers and an expanded annual output of 300 junior and senior secondary teachers by the University's Department of Education. The second letter called for an increased quantity and improved quality of secondary and technical school graduates and of Ethiopian teachers. Measures to be undertaken included: modernization of curricula, teaching methods and examination procedures for the project schools, in conformance with Ethiopian needs; allowance of adequate time in curricula to ensure full use of all equipment and laboratory facilities; setting up of employer advisory committees to ensure that technical institute training be geared to employers' needs; development of practical teacher training facilities; and appointment of an experienced technical education advisor to the Ministry of Education.

III. Project Implementation

The Credit Agreement became effective on June 22, 1966, five months after signing, upon ratification by the Parliament. In spite of early delays, 75 of the project's 82 schools and institutes were completed and in use by the original closing date, December 31, 1970. Of the remainder, six secondary schools were completed by July 1971. Completion of the final school (a new

secondary near Addis Ababa) was delayed until October 1972 and the final closing date for disbursements was November 30, 1972.

Progress with construction was slightly delayed during the first months of implementation. Contract agreements with consultant architects (Mezzidimi of Italy and Tedros-Enau, a joint Ethiopian-Israeli venture) were not finalized until August 1966 and the Project Unit was inadequately staffed until 1967 when a full-time project architect (supplied by SIDA) was appointed.

All survey, design, tendering and awarding of construction contracts was to have been completed by September 1967, but invitations to bid for construction of the first 21 project schools did not go out until May 1967. With the exception of the delay with construction of the final school, caused mainly by inability to obtain a suitable site before 1970 and late selection of a contractor, construction progressed fairly smoothly after 1967, though in some cases individual delays were suffered at schools for which survey data and designs had been inadequate, and greater than anticipated quantities of work were required. Also, for a period of several months during 1969, the Government was behind in its payments for completed jobs and during that time contractors stopped work. As a result of the earlier delays in setting the construction process in motion and lesser ones suffered during implementation, the average construction delay for the large secondary school item amounted to almost a year (Annex Table 1).

Progress with preparation of equipment lists for international tender was likewise initially delayed, due to a lack of skilled personnel at the Ministry, but all imported equipment, as well as furniture and imported materials for furniture, had been received by the end of 1970. Final deliveries, however, could not be made until mid-1972 due to the general difficulty and high cost of internal transportation. In the interim, some of the furniture and equipment had been inadequately stored and suffered damage prior to installation, which was also improperly carried out in some cases.

During implementation, the project description was revised three times. The original and final contents are shown below:

Project Content

	<u>Original</u>	<u>Final</u>
1) New Secondary Schools	54	50 ^{a/}
2) Additions to Existing Schools	23	27
3) New Primary Teacher Training Institute	2	1
4) Conversion of Secondary School to Primary Teacher Training Institute	-	1
5) New Technical Institutes	1	-
6) Expansion of Existing Technical Institute	1	2
7) New Practical Teacher Training Institute	1	1
8) Student Hostels	70	17 ^{b/}
9) Staff Houses	31	29
10) Buses and Trucks	-	7 ^{c/}
11) Water Supply Installations at School Sites	-	22

a/ Includes schools rebuilt.

b/ 53 secondary hostel units converted to academic use; the remaining hostels were for the teacher training institutes.

c/ Items added for transport of student teachers and final delivery of equipment and furniture.

The amendments did not significantly alter the project, and mainly involved a change from new construction to expansion of existing facilities at project schools and institutes. Student hostels were converted to classrooms in order to meet growing student demand for access to secondary schooling. In the case of the two primary teacher training institutes, however, 250 student places were added to those planned.

Procurement procedures, as specified by IDA, were carried out without delay after the final preparation of construction specifications and equipment lists. However, during early implementation, a bidding period of only 60 days, as opposed to the 90 days recommended by IDA, made it difficult for many foreign-based suppliers to compete and completely excluded others. As a result of complaints received, and insistence on the part of IDA, the extended bidding period was adopted in 1968. As had been anticipated, all construction contracts were awarded to locally-based firms.

Despite some minor defects resulting from early inadequate supervision by the consultant architects, the quality of project construction was generally good. Use of a simple prefabricated steel frame structure was successful with regard to ease of transport and speed of construction, and well suited to the country's needs (other East African countries subsequently expressed interest in using similarly economical structures for their IDA Education projects). Overall, physical implementation, under the Project Unit, was carried out efficiently in view of the large number of project schools and their geographic dispersion. However, a maintenance problem became evident during 1972, after most project schools had been finally accepted and the maintenance responsibility had been turned over to the Ministry of Education. Maintenance was largely non-existent and deterioration of buildings and furniture had already begun. The problem was due largely to insufficient budget allocations for maintenance. An absence of Government emphasis on the importance of maintenance further contributed to neglect of the problem. In 1972, a new maintenance division was established in the Ministry's Education, Construction and Maintenance Department -- as a condition for the second IDA project -- to improve maintenance at the project, and all other Government schools.

IV. Project Costs

Total actual cost was very close to that estimated, as shown below, in spite of continuing price increases beginning in 1967 with the closure of the Suez Canal. The 21% construction overrun was offset by savings in consultant fees and equipment costs, and with use of contingencies.

Costs - Actuals vs Estimates (Eth\$ millions)

	<u>Est.</u>	<u>Actual^a</u>	<u>% Actual/Est.</u>
Construction, Site Development	16.3	19.7	121
Furniture	3.1	3.1	100
Equipment	3.7	3.4	92
Consultants' Fees	2.3	1.1	48
Contingencies	2.3	-	-
Buses, Trucks, Generators	-	<u>0.7</u>	-
TOTAL	<u>27.7</u>	<u>28.0</u>	<u>101</u>

^a/ Actual (or final estimate) as of September 30, 1971.

Total cost overruns for the 77 secondary schools averaged 14% but 19% for construction, as seen on Table 1 (in detail on Annex Table 1). Capital cost per planned student place in the new schools exceeded the estimate by 40%. However, unanticipated enrollment growth lowered the costs on an actual per student basis (Table 1). Construction overruns for the primary teacher training institutes were over 100%, largely due to the agreed expansions of capacity. The very large 185% construction overrun for the new institute at Jimma, however, resulted in an actual cost per student place 70% greater than estimated. As regards the technical institutes, the only overrun suffered was for the re-building/expansion of the Addis Ababa facilities, originally to have been relocated in existing buildings. The decision to expand, rather than rebuild the Asmara Institute, cut construction costs to 24% of estimated. For the technical institutes, a large reduction in the equipment component of the investment was the main cause for the low cost per planned student place, though in terms of the very low actual enrollments, costs per actual student place were considerably higher. Finally, a greater than planned equipment expenditure for the Practical Teacher Training Institute (only very preliminary lists existed at the time of project appraisal) led to the 68% overrun in costs per planned student place. The 200% overrun in actual cost per student place was temporary, reflecting understaffing of the institute and the consequent inability to absorb capacity enrollments (270 students) during the first few years of operations.

Foreign exchange costs of the project were somewhat overestimated for construction goods and underestimated for furniture and equipment, as seen in the List of Goods.

Credit 84-ET: List of Goods
(US\$ million)

	<u>Estimate</u>	<u>Final</u>	<u>% Actual/Est.</u>
Imported Construction Goods	1.73	1.36	79
Imported Furniture Goods	0.48	0.93	195
Imported Equipment	1.25	1.41	112
Other Goods, Consultants	3.40	3.50	103
Unallocated	<u>0.34</u>	-	-
TOTAL	<u>7.20</u>	<u>7.20^{a/}</u>	<u>100</u>

a/ An exchange adjustment of US\$ 1.467 million was added after final disbursement.

The appraisal mission had judged the Government's share of capital costs, as well as all recurrent project costs, reasonable in view of Ethiopia's limited financial resources. For the major secondary school item, accounting for 80% of total project expenditure, capital costs per student accommodated have actually been less than estimated as a result of the rapid growth of enrollments (20% greater than planned in 1971 and 61% by 1972). A 1970 sample

Table 1. Ethiopia First Education Project: Credit 84-ET
Costs of Physical Works by Item, Type of Work,
Cost per Student Place; Actuals vs. Estimates
 (Eth\$ Thousands)

	<u>Construction</u>	<u>% Act/Est</u>	<u>Furniture</u>	<u>% Act/Est</u>	<u>Equipment</u>	<u>% Act/Est</u>	<u>Total</u>	<u>% Act/Est</u>	<u>Cost per Planned Student Place</u>	<u>% Act/Est</u>	<u>Cost per Student Place Actual 1972</u>	<u>% Act/Est</u>
1. <u>Secondary Schools</u>												
New	9,881.5	125	1,419.5	102	1,004.7	112	12,305.7	121	733	140	432	82
Expanded	7,677.9	113	1,350.4	92	1,289.2	96	10,317.5	107	370	-	191	-
Sub-total	17,559.4	119	2,769.9	97	2,293.9	102	22,623.2	114	442	-	274	-
2. <u>Primary Teacher Training Inst.</u>												
Addis Ababa	478.1	224	124.1	310	32.1	62	634.3	208	846	90	850	91
Jimma	750.3	285	95.6	233	33.3	59	879.2	244	1,598	170	1,604	171
3. <u>Technical Institutes</u>												
Addis Ababa	312.3	164	18.5	43	348.9	55	679.7	78	523	80	1,137	175
Asmara	134.6	24	20.9	48	278.4	42	433.9	34	609	35	1,475	84
4. <u>Practical Teacher Training Inst.</u>	452.2	116	104.4	116	405.7	441	962.3	170	3,564	168	6,415	302
<u>Total Physical Works</u>	19,686.9	120	3,133.4	100	3,392.3	91	26,212.6	113	-	-	-	-

Source: Annex Table 1

survey has shown that recurrent costs per student at the secondary schools have also been less than estimated.

Firm judgment as to the financial burden on the country imposed by the project cannot be made. Total investment in education at all levels during the main period of project implementation (1965/66-1970/71) was Eth\$ 70.0 million, of which about Eth\$ 50.0 million equivalent was covered by foreign assistance. The Eth\$ 22.6 million secondary project item absorbed approximately one-third of investment expenditure over the period. For the recurrent costs, the appraisal mission had estimated an increase attributable to the completed project of Eth\$ 6.25 million per year, out of a total of Eth\$ 13.6 million for all Government secondary schools. The actual recurrent cost for all secondary education was Eth\$ 15.0 million in 1970/71, 10% greater than estimated, largely as a result of continually increasing teachers' salaries, and of the accommodation of significantly larger numbers of students, mainly at the project schools (Annex Table 1). Average recurrent costs per secondary student decreased from Eth\$ 151 in 1966/67 to Eth\$ 134 in 1970/71, again mainly due to the greater number of students enrolled and to some reduction in maintenance allocations. The recurrent cost per student at the diversified project secondary schools (Eth\$ 167 for junior and Eth\$ 347 for senior secondary), accounting for 55% of total enrollments in Government secondary schools in 1970/71 (61,000 out of 111,700), was much higher than the average, although about 15% less than estimated.^{1/} The large number of project secondary schools have, therefore, contributed significantly to the growth of the share of total Government revenue, from 13% in 1965/66 to 20% by 1971/72, devoted to all recurrent education expenditures. The present 20% level is considered to be the upper desirable limit by IDA and the Ethiopian authorities.

V. Project Operating Results^{2/}

Quantitative

Overall, the major quantitative goal of the project, to allow for expansion of secondary school enrollments, was achieved and surpassed during

^{1/} Comparison of both capital and recurrent costs in project and non-project Government secondary schools would not be meaningful for several reasons. First, over one-third of the project's secondary schools were expansions, not clearly separable from existing facilities. Second, the project schools comprised nearly 100% of Government senior secondary schools. The remaining secondary schools were mainly smaller junior and junior-senior secondary schools offering incomplete streams, some of them housed in facilities intended for use at the primary level. Finally, the major additional capital and recurrent costs incurred by the project schools, over the long-run, were those associated with the large-scale introduction of the diversified facilities, which were not available in the traditional academic secondary schools.

^{2/} This section relies heavily on an evaluation study of Cr. 84-ET, Post Evaluation of Education Project 84-ET, Fulfillment of Education Objectives, carried out in 1973 by the Education Department. All data for which no source is listed have been taken from that study.

the project implementation period. By 1968/69, 3.8% of the secondary school age population was enrolled, and 5% by 1971/72, whereas the appraisal target had been set for only 2.1%. Other quantitative objectives, as expressed in supplementary letters, were only partially, or not at all met. Some progress was made in reducing the high secondary school drop-out rates, but an increased rate of examination passes at the senior secondary level was not attained. Diversion of student interest from the academic to the practical streams has not yet been achieved to the extent planned, nor has the number of students in the two project technical institutes increased as anticipated. While preparation of primary teachers went roughly as planned, less progress was made with the output of qualified secondary teachers, which was consistently below the targeted 300 per year during project implementation.

The 1965 appraisal mission's forecast for primary and secondary enrollments proved inaccurate, as shown below and on Annex Graph 1: at the primary level enrollments grew more slowly than expected, as a result of continuing high drop-out rates (voluntary or forced, as shown on Annex Graph 2), especially in rural areas lacking teachers and facilities, while enrollments in secondary education greatly exceeded expectations as a result of rapidly increasing demand and an uncontrolled enrollment policy.

Enrollment and Enrollment Ratios^{a/} 1963-1970
(Government and Private Schools)

<u>Year</u>	<u>Primary Education</u>		<u>Secondary Education</u>	
	Estimate (1965)	Actual	Estimate (1965)	Actual
1963/64	-	317,000 9%	-	33,000 1.4%
1964/65	-	348,000 10%		40,300 1.7%
1966/67	590,000	410,000	45,000	60,300
1968/69	850,000 21%	514,000 13%	54,000 2.1%	98,600 3.8%
1970/71	-	656,000 16%	-	136,000 5%

Note: The figures exclude students in the Ethiopian Orthodox Church reading schools or "NEBABET" for children from age 7-12, estimated at over 300,000.

^{a/} The % of relevant population age-group enrolled.

As regards the project secondary schools, targeted final enrollments had been met, on average, by 1968/69, and exceeded thereafter, totalling 61,000 in 1971 and over 82,000 by 1972, as shown below:

Enrollments in Project Secondary Schools

	<u>Planned (for 1968/69)</u>	<u>Actual(1972)</u>	<u>% Actual/Est.</u>
New Schools	21,212	28,457	134
Expanded Schools	30,021	54,008	180
Total	<u>51,233</u>	<u>82,465</u>	<u>161</u>

Source Annex Table 1.

Appraisal projections of the desired share of students to be enrolled in the practical courses have proved overly optimistic thus far, as shown below:

Enrollment in Government Comprehensive
Senior Secondary Schools by Subject Area

<u>1965</u>	<u>Academic</u>	<u>Ind. Arts</u>	<u>Business</u>	<u>Home Economics</u>	<u>Agriculture</u>	<u>Total</u>
Projected	55%	12.5%	15%	5%	12.5%	100%
Actual						
1969	9,100 62%	2,000 14%	3,000 20%	400 3%	300 1%	14,800 100%
1970	24,100 69%	2,700 7%	5,000 14%	1,000 3%	2,000 6%	34,800 100%
1971	40,200 74%	4,000 8%	6,300 12%	1,600 3%	2,000 3%	54,100 100%
1972	54,200 75%	5,800 8%	7,900 11%	2,200 3%	2,200 3%	72,200 100%

The academic stream has continued to be the most popular and has actually absorbed an increasing share of secondary students. It is still too early to judge final results due to the newness and incomplete implementation of the diversified curricula, but the early low level enrollments in agriculture and the declining share in industrial arts have led to the closing down of agricultural facilities in some schools and the underutilization of materials and equipment at other schools where industrial arts streams have been continued for very small classes.

Another quantitative objective of the project was to reduce the high drop-out rates and to increase the examination pass rates of secondary students. The appraisal mission projected retention rates on the basis of Government assurances that measures would be taken to remedy the situation. During implementation, automatic promotion schemes were introduced at several levels; attendance regulations were strengthened; and unnecessary repetition rules were eliminated. As shown on Annex Graph 2, the projected 1973/74 retention rate was attained by 1971/72, with about 7,000 students attending grade 12. For the secondary schools, the drop-out rate did decrease and examination pass rates improved at the junior secondary level though not for senior secondary, as indicated below:

Drop-out and Examination Pass Rates
in Ethiopian Secondary Education^{a/}

1965 Drop-out rates	65%
Examination passes	20%
1971 Drop-out rates	10% jun. sec. and 54% sen. sec.
Examination passes	60% jun. sec. and 18% sen. sec.

^{a/} The 1965 rates are based on the single-cycle, six-year secondary system used until 1965/66 when the two-year junior and four-year senior cycles were introduced.

A further objective of the secondary expansion was to maintain the student/teacher ratio and class sizes at educationally acceptable levels. The average class size increased by 38%, to 38-39 students, from 1963/64 to 1970/71, which was considered reasonable though many individual schools suffered from overcrowding. Introduction of double shifts (of the 77 project schools, 32 were on double shifts by 1972), in conjunction with a reduction in the students' timetable from 40 to 30 periods per week, allowed for an increase in the student/teacher ratio greater than the increase in class sizes -- considered educationally desirable -- and shown below.

Secondary Education
Class Sizes and Student/Teacher Ratios

	<u>1963/64</u>	<u>1965 Appraisal Estimate for Project Schools</u>	<u>1970/71</u>
Student:Teacher Ratio	20	22-25	34
Average Class Size	28	35-39	38-39

Additional quantitative objectives had been set for the supply of secondary and primary teachers, and graduates of the technical institutes at Asmara and Addis Ababa. The 1965 appraisal overestimated the future supply of trained Ethiopian secondary teachers, and the relative situation as regards qualified teachers actually deteriorated, as shown:

Secondary Teachers in Government Schools

<u>Secondary Teachers</u>	<u>1963/64</u>		<u>1970/71</u>	
	<u>number</u>	<u>% of total</u>	<u>number</u>	<u>% of total</u>
Ethiopians: trained	100	7%	280	9%
untrained	800	51%	1,940	59%
Expatriates: Peace Corps	320	approx.	150	
Asians	300		900	
Others	<u>30</u>	<u>42%</u>	<u>10</u>	<u>32%</u>
Total	1,550	100%	3,280	100%

The mission had forecast a total annual output of 300 secondary teachers (of practical and academic subjects) for 1965-1970, with 22% of all secondary teachers fully qualified Ethiopians by 1970. Output reached the targeted level much later in the implementation period and only 9% of all secondary teachers were qualified Ethiopians by 1970/71. Continued reliance on large numbers of expatriate teachers was necessary throughout the period.

The delayed build-up of qualified Ethiopian secondary teachers was largely a result of slow progress by the Haile Selassie I University as regards output of junior secondary and academic senior secondary teachers. The University was directly responsible for the training of junior secondary teachers until 1969 when a new institute, under the Ministry of Education, was opened in Addis Ababa. Output from this institute's two-year program was only 84 in 1971, 69% of the targeted annual output of 122 by 1970. New facilities, provided under the second IDA credit, were expected to allow for a larger annual output of 300 junior secondary teachers, the number considered necessary to reduce the shortage at that level. The University fell considerably behind in its preparation of academic senior secondary teachers (a four-year B.A. program). There were roughly 400 graduates from 1963 to 1972, less than 50% of planned.

Delays were also suffered with the preparation of teachers of practical courses. Physical construction of the Practical Teacher Training Institute included in the project was delayed for almost a year due to lack of coordination among the Utah team, the University and the Project Unit. The first graduates, about 30 teachers, 40% of a planned annual output of 75, finished in 1969. By 1973, the Institute was adequately staffed and enrollments were at capacity, but the impact of the new practical teachers on the comprehensive secondary schools had not yet been significant. During project implementation, most teachers of practical subjects were graduates of the country's technical institutions.

At the primary level, the two teacher training institutes included in the project were to have provided 400 qualified teachers per year by 1968/69, raising total annual output from the five Government institutes to 1,100. By 1971/72 output was about 1,200. A special crash course at the University had added 380 teachers in that year. Although slightly delayed, progress under this item was satisfactory. However, the project targets were low in view of the actual number of teachers necessary to allow for the planned expansion of primary education: a teacher shortage contributed to the shortfall in primary enrollments over the 1966-71 period.

At the project technical institutes, enrollments were to have increased to 2,065 by 1969, but had grown only from 825 in 1965 to 900 by 1971. This very small increase is partially attributable to continuing qualitative weaknesses in curricula and to the scarcity of teachers, caused in turn by the slow build-up of output from the Practical Teacher Training Institute. More importantly, the Government assigned a low priority to the technical institutes during the period of project implementation, and budgetary allocations were also low; the diversified secondary schools presented a less costly solution to coping with a rapidly increasing demand for access to secondary education.

Qualitative

The educational objectives of the project have proved far more difficult to attain than the quantitative. Implementation of the new comprehensive curricula in the project secondary schools remains incomplete. As a result, initial outcomes have not confirmed a significantly improved quality of education. This is largely a temporary problem, caused by a lack of qualified teachers, especially for the practical courses and science. A further cause of incomplete implementation of new teaching methods has been the negative impact of overenrollments. As regards the appropriateness of the new diversified curricula, early results have indicated that too little emphasis was placed on the needs and developmental prospects of individual regions, and of the rural population. The quality of education provided by the project technical institutes has not yet improved since none of the planned measures -- development of improved curricula, provision of qualified teachers, establishment of effective lines of communications with employers -- were completed during project implementation.

As regards secondary teacher training, and with the exception of agriculture and science, quality has been considered satisfactory. The quality of output from the Government's primary teacher training institutes has continued to suffer from the same weaknesses as primary education: too little emphasis on practical and rural-related training, and too much emphasis on preparation of students for admission to academic secondary programs.

Results from the Education Department's evaluation study suggest that the introduction of the practical courses and revised academic curricula in the project secondary schools has not yet significantly affected the quality of student learning. The development of diversified curricula and syllabuses progressed slowly under the USAID/Utah team and was not completed until 1972.

In the interim, implementation of practical programs and use of new materials and equipment in the project schools suffered from the shortage of qualified teachers as well as from a lack of final guidelines for teaching. Implementation of prescribed new teaching methods for the academic curricula developed by the University and the Ministry also suffered, largely as a result of the lack of teacher exposure to the new techniques. Frequent turnover of expatriate teachers was also detrimental as regards the quality of education provided. In-service training for non-qualified teachers was to have been provided by the Ministry and reinforced by supervisory visits of the Ministry's Inspectorate. Very little support materialized, however, largely as a result of the Ministry's reluctance to incur the necessary expenditures, especially for travel to more remote areas. In addition, the Inspectorate lacked an adequate supply of qualified experts, mainly for the practical subjects, mathematics and science.

The continued use of traditional teaching methods has also resulted from overenrollments, which have limited the possibilities for group work and/or individual study. In 1969/70, the Bank began recommending a limited enrollment policy though a growing demand for access to secondary education opportunities has so far prevented implementation of such a policy. Partial adjustment has been made through the shortening of the students' weekly timetable and introduction of double shifts, but it is too early to judge the educational impact of these measures. In the long run, a policy to limit enrollments will still be needed and is envisaged at the present time under the recent education sector plan. The plan calls for the matching of secondary and technical institute enrollments to labor market demands.

A further cause of early underutilization of new teaching aids and equipment for the practical courses, has been the lack of interest on the parts of school principals and students. All project schools were built and equipped to provide for two or more of the four practical programs on a standardized basis. In practice, interschool variance in allocation of time for the practical subjects has been great. An important underlying reason for incomplete utilization, especially in the cases of the agricultural and industrial arts, was inadequate consideration of the socio-economic situations of the areas surrounding each school, prior to selection of practical streams. Interpretation of results of a 17-school survey indicated that students expressed an interest in agriculture or industrial arts in regions where the possibilities for modern employment in those fields existed -- generally in the more economically advanced regions.

Some problems have also been experienced with implementation of the new curricula specific to the teaching of particular subjects. Of the academic subjects, science teaching has been the weakest. For the schools surveyed, traditional textbook teaching dominated in spite of the existence of the newly equipped laboratories. This outcome has been partially attributed, in the evaluation study, to instructor responsibility for loss or damage of materials used, and a recommendation has been made to cover such costs under recurrent Government expenditures. More importantly, science teachers were inadequately prepared. The third IDA credit, Cr. 417-ET of 1973, includes provisions for improving the teaching of science at the university level and for improving the Science Curricula Development Center of the Ministry.

Aside from a greater demand for secondary education, and some growth of family incomes, part of the increasing relative share of students completing

grade 12 may be indicative of quality improvements in the teaching of other academic subjects, in spite of continuing low examination pass rates for senior secondary students (practical courses, other than commercial, have no terminal examinations). While early results may suggest the need for further revision of examination methods, part of the problem may also be attributable to the students' weekly timetable. An increasing amount of class time spent on languages, 15-20% for English, the language of instruction, and 15-20% for Amharic, the national language, for students from non-Amhara areas, has resulted in less time available for other subjects.

Of the practical subjects, teaching has been weakest for agriculture. Curricula were inadequately developed, largely as a result of failure to include an agricultural education expert on the USAID/Utah team, or in the Ministry, during project implementation. This situation has been corrected under the second IDA credit. For home economics, classroom equipment was found largely unused, or broken. In the evaluation study, this problem is explained as a socio-economic phenomenon -- a lack of familiarity with equipment, possibly to be overcome by better training of teachers. The same was true for many of the industrial arts facilities, where a shortage of consumable student materials also existed. Of the practical streams, commercial teaching was the most successful, both in terms of student interest and equipment use.

Finally, the quality of education at technical institutes did not improve during project implementation; revision of curricula was not undertaken. A decision to cut the project's equipment component for the two institutes, and the adult trade training facilities, was probably well justified, since in neither case had improved curricula been developed. The proposed build-up of effective communications between the technical institutes and commerce, industry and Government did not materialize, in part due to the low Government priority assigned to technical education. Further, the development of industry and commerce proceeded haltingly during the period of project implementation; in retrospect, it was perhaps overly optimistic to expect that new enterprises could or would voluntarily assist with the development of such training programs. Technical assistance has been provided under the second IDA credit to set up lines of communication with employers, though effective coordination and final curricula planning will not be possible until the results of the current manpower survey become available.

VI. Project Management

The responsibility for project implementation was divided among the Project Unit in the Ministry of Education, the rest of the Ministry and the University. While construction was carried out efficiently by the Project Unit, implementation of other project objectives by the Ministry and the University lagged, as evident from the operating results.

The appraisal mission had noted that the Ministry, as reorganized during the early 1960s, was adequately structured, but lacking in qualified personnel, especially for the research and statistical units. The Ministry's School Inspectorate was also inadequately staffed. The quality and efficiency of educational management by the Ministry was expected to improve during project implementation, as the numbers of qualified Ethiopians increased and continued

technical assistance was made available. Over the period, progress was made in providing the Ministry with necessary expertise (with considerable assistance from SIDA and USAID) especially for future sector planning. This progress has been reflected in the Ministry's recent completion of a comprehensive education sector study and the ongoing manpower survey.

Vis-a-vis the project, however, a slower build-up of the 14 Provincial Inspectorate Offices resulted in inadequate supervision of project school staff. The lack of guidance provided to project school teachers was a partial cause of the early incomplete implementation of new curricula and teaching methods. This situation should be corrected as in-service training, to be provided under a new National Council for Teacher Education (NCTE), is introduced, and as the output of qualified secondary teachers is increased. Inadequate administrative guidance for school principals was also detrimental to project operating efficiency and a partial cause of insufficient maintenance of facilities. In an effort to improve administrative capabilities of the principals, special training is to be provided by the Academy of Pedagogy, assisted under the second IDA credit.

The Ministry's delayed initiation of even an initial effort to establish effective communications with employers also impeded attainment of project educational objectives. Similarly, the shortfall in output of qualified academic secondary teachers, the direct responsibility of the University's Department of Education, reflected a lack of coordination between the Ministry and the University. In the future, the NCTE will be in charge of such coordination.

The most efficient of the implementing authorities was the Project Unit. The project was the first large-scale school construction program undertaken by the Central Government. Its successful completion, without major change or deletion of project items, was a significant achievement. The Unit's strength increased throughout project implementation and it is now in charge of the second and third IDA projects. Presently, it is a division of the Ministry's Department of Construction and Maintenance and consists in a project team (with a coordinator and an educational expert), a construction team, a maintenance team, and a land acquisition team. As a result of ready availability of travel funds, the Project Unit gained a comprehensive view of the situation of secondary education throughout Ethiopia during implementation of the first project. The build-up of the Ministry's institutional strength gained impetus during, and partially as a result of, project implementation. However, as regards the project, further progress might have been made had the Ministry benefitted more directly from the knowledge and experience gained by the Project Unit, through greater cooperation between the two.

VII. Conclusions

Conclusions drawn from early project operating results confirm that the first IDA project's large secondary school construction/expansion item was highly justified in terms of meeting a growing demand for access to secondary education in Ethiopia. Less has been accomplished as regards the project's major vocational emphasis. Increasing numbers of academic secondary school leavers have met some labor market needs, but a significantly increased output of vocational secondary school and technical institute graduates has not yet

been attained. The mid-level manpower gap has persisted, necessitating continued reliance on expatriate craftsmen and technicians, and a recent trend towards increasing unemployment of secondary and technical institute graduates has suggested the continuing need for improved quality and revised content of curricula.

Although it is still too early to judge the final effectiveness of the 77 comprehensive project secondary schools (a tracer study is to be carried out as a follow-up to the recent education sector survey), initial operating outcomes have not confirmed anticipated benefits. A major quantitative objective of the project has been achieved: the project secondary schools have provided for an expansion of secondary school enrollments beyond expectations (though the overall secondary enrollment ratio, 5% in 1971, remains one of the world's lowest). While output of qualified secondary school teachers fell below expectations, recent increases indicate that demand will be met in the future. However, a significantly improved quality and increased effectiveness of vocational training, in terms of labor market needs, has not yet resulted from the introduction of the new diversified secondary curricula. The major contribution of the project schools to date has been an increased output of traditional academic secondary school leavers, while the share of students enrolled in practical streams has been less than expected.

The early lack of success with the project's vocational education objectives has resulted largely from the scarce supply of qualified teachers, which in turn has caused some underutilization of new equipment and teaching methods. Inadequate consideration of prevailing socio-economic conditions prior to introduction of the practical curricula in project schools and a lack of coordination with employers as regards relevance of the training provided, in the absence of reliable manpower statistics, further impeded achievement of project objectives.

The relatively high recurrent costs of the project schools and slow progress towards achievement of desired vocational objectives suggest that the introduction of the diversified secondary program, while a step in the right direction, should have been limited to a smaller number of schools. Early and continuing revision and adjustment of the practical curricula introduced, vis-a-vis student and labor market needs (as reliable information about manpower requirements becomes available), could then have improved the effectiveness of subsequent investments in comprehensive secondary education.

Throughout project preparation and the major implementation period, IDA participation, in line with the prevailing education lending policy, was confined largely to concerns over physical content. Several contributions were made by IDA, most importantly, the early insistence on higher more durable construction standards, and the timely emphasis on improved maintenance procedures, as required by credit conditions. Minor project savings might have resulted had IDA required completion of detailed surveys and designs prior to implementation of expansion/construction works, and pushed for more adequate supervision; but on the whole, IDA's participation in the construction program was helpful and adequate. Very little was contributed by IDA to the achievement of quantitative and qualitative educational objectives of the project prior to or during implementation. Later, under the second and third projects, provisions

were made for technical assistance to correct educational shortcomings under the first project. However, in terms of the project, and the earlier policy in which it was conceived, IDA could have contributed more, specifically in three areas: by requiring regional or local socio-economic studies prior to introduction of the comprehensive programs at project secondary schools; by early promotion and perhaps financing of systematic manpower studies; and, by helping to achieve (through more explicit credit conditions) more effective coordination among the project authorities.

The selection of practical streams for project schools, as based on simple economic mapping, did not allow for adequate consideration of socio-economic conditions of various population groups within the schools' catchment areas. Equitable distribution of education was not an issue at the time of the first IDA project, and all project schools were located in urban or semi-urban areas. Nonetheless, a survey of 17 project schools, carried out by IDA staff, concluded that 70% of all students were from rural environments and backgrounds, and represented population groups previously excluded from access to secondary education. With additional pre-project study, conducted on the basis of schools within the same or similar regions, and focussing on the needs of the population groups represented, the basis for choice and planning of relevant practical streams for each school would have been strengthened, and temporary underutilization of facilities at some schools might have been avoided. (It should be noted that the project facilities are simple and flexible, easily allowing for changing curricula and interchange of equipment.) In many cases underutilization resulted from teacher inability to fully implement or adapt prescribed curricula and teaching methods to student needs, rather than from irrelevance of curricula, per se. The recommended studies could also have served as a basis for strengthening teacher orientation. Particularly as regards the agricultural streams, the usefulness of such studies would have been their contribution to the development of attractive practical programs, rather than to their elimination. In areas where modern farming and related industries did not exist, and where parents and students alike continued to prefer the traditional academic streams, the early development of more convincingly useful rural-oriented agricultural curricula might have been a major impetus towards acceptance of practical training.

Direct support of pre-project regional studies would have been beyond the limits of IDA education policy at the time, and of available time and expertise -- likely requiring participation of sociologists and anthropologists. However, recognition of the need for planning studies, and a recommendation by the IDA/UNESCO preparation mission that appropriate technical assistance be obtained by the Ministry for implementing such studies, would not have been contradictory considering the large number of project schools, spread throughout the diverse regions of the country. They were not, as under some IDA projects of the period, a separate and smaller group of schools catering mainly to urban populations.

Given the important vocational objectives of the project and the absence of manpower data, IDA might have placed more emphasis on trying to assure the effectiveness of training to be provided by the project schools. It is surprising that IDA did not try to pressure the Government to begin the systematic collection of manpower data and to at least attempt to establish the planned

committees for coordinating educational planning with the needs of employers, called for specifically in the case of the project technical institutes. Under the first project IDA might have assisted directly in the financing of a manpower survey. In conjunction with a reduced secondary project item, the appropriateness of curricula to manpower needs could then have been judged prior to widespread introduction. A later step might have included IDA support for apprenticeship schemes for students in the diversified curricula and technical institutes, at least in the Addis Ababa area, where most of the country's medium and large scale industry is concentrated, as a further means to modify and improve the technical curricula. Financing of manpower surveys and apprenticeship schemes would not have been likely in terms of the lending policy of the mid-1960s, but in view of the tentative nature of project justification, IDA might have contributed limited support. At most, such experimentation might have speeded attainment of project vocational objectives and at least, it would have contributed to an earlier understanding of the obstacles to be overcome.

The lack of coordination among the Project Unit, the Ministry and the University jeopardized initial operating outcomes at the project schools. The separation of the three groups, in practice, caused an evolution of physical facilities ahead of, and in isolation from, necessary educational inputs -- including new curricula and qualified teachers. Greater interdependence among the responsible project authorities could have promoted a more comprehensive view of project progress and earlier recognition and resolution of initial shortcomings. Specifically, for preparation of teachers, IDA had been overly optimistic as regards the productive capacity of the University. Greater assurance might have been obtained, especially as no IDA technical assistance was provided for this item, through more explicit credit conditions and direct assignment of partial implementation responsibility to the Ministry of Education.

In spite of these problems the IDA project was partially responsible for setting in motion the process of building the administrative and managerial capacity of the Ministry of Education and for underlining the need for comprehensive education planning. In retrospect, IDA might have considered a smaller more experimental program as a first education project for Ethiopia. Under more recent education policy, this has been done. The second and third IDA projects have been designed to assist with correction of specific inadequacies and inequities of the system, on an interim basis, while awaiting final development of a solid strategy for balanced educational development in Ethiopia -- stressing widespread low cost basic education and teaching of rural skills.

Ethiopia First Education Project: Credit 84-ET

Project Schools and Institutes by Province - Enrollments, Scheduling, Costs (Actuals vs Estimated)

	Capacity ^{1/}			Completion Date (Construction)			Cost (Eth\$ thousands)						Total		% Act./ Est.
	Planned Enrollment	Actual Enrollment	% Act./ Est.	Est.	Act.	Aver. Delay ^{2/} (months)	Construction		Furniture		Equipment		Est.	Act.	
							Est.	Act.	Est.	Act.	Est.	Act.			
I. Secondary Schools															
Addis Ababa Province															
4 new secondary	1,346	1,553	162 ^{3/}	8-10/69	10/70-10/72	23	718.0	910.0	148.0	152.4	97.0	108.5	963.0	1,170.9	122
7 expansion/rebuilding	6,988	13,083	187	7/68-10/69	3/69-6/71	9	1,465.0	1,618.7	336.0	325.3	324.0	326.9	2,125.0	2,270.9	106
Arusi Province															
2 new secondary	390	347	89	3-8/69	7/71	26	241.0	376.1	36.0	40.0	18.0	28.1	295.0	444.2	150
7 expansion	1,348	2,755	204	10/68	4/70	16	484.0	550.0	89.0	87.4	59.0	36.4	632.0	673.8	107
Hale Province															
1 expansion	622	1,040	167	9/68	9/69	12	190.0	299.3	35.0	36.4	44.0	43.6	269.0	379.3	141
Bedimdir Province															
3 new secondary	780	1,275	163	8/68-3/69	8/69-7/70	13	441.0	540.1	70.0	78.8	34.0	42.6	545.0	661.5	121
1 expansion	964	1,344	147	9/68	8/69	11	60.0	64.3	20.0	10.3	15.0	15.5	95.0	90.1	95
Eritrea Province															
6 new secondary	2,184	1,957	90	7-11/69	10-12/69	none	759.0	700.3	155.0	120.7	75.0	85.2	989.0	904.2	92
6 expansion/rebuilding	6,596	8,658	131	8/68-11/69	9/68-12/69	3	1,420.0	1,440.7	358.0	285.2	294.0	291.1	2,072.0	2,017.0	97
Gama Gofa Province															
1 new secondary	234	337	144	9/69	7/70	11	172.0	249.5	24.0	25.8	11.0	14.3	207.0	289.3	140
1 expansion	622	1,050	169	9/68	10/69	13	169.0	246.8	32.0	30.7	44.0	44.7	247.0	322.2	132
Golan Province															
2 new secondary	702	864	123	12/68	8/69	9	297.0	381.5	51.0	58.3	24.0	28.4	174.0	268.2	125
2 expansion/rebuilding	1,476	4,020	272	10/68-1/69	8-10/69	10	595.0	600.7	98.0	99.4	84.0	105.0	677.0	805.1	119
Hara Province															
3 new secondary	1,402	2,366	169	10/68-6/69	10/68-7/70	6	585.0	731.0	100.0	105.2	68.0	73.5	753.0	909.7	120
2 expansion	1,929	2,894	150	9/68	7/70	10	186.0	268.1	58.0	54.5	110.0	97.9	354.0	420.5	119
Jijjaber Province															
2 new secondary	624	531	85	8/68-6/69	7-11/70	21	447.0	519.0	55.0	61.0	22.0	28.4	524.0	608.4	116
1 expansion	388	781	201	7/69	10/70	16	54.0	66.9	10.0	14.8	34.0	44.7	98.0	126.4	129
Kaffa Province															
2 new secondary	390	755	194	4/68-3/70	10/68-7/70	12	241.0	309.3	36.0	42.0	18.0	28.1	295.0	379.4	129
1 rebuilding	1,088	2,204	202	5/69	7/70	15	192.0	219.8	35.0	32.3	31.0	27.2	258.0	279.1	108
Shoa Province															
7 new secondary	4,312	6,105	142	9/68-10/69	11/68-1/71	6	1,553.0	2,067.3	276.0	295.4	200.0	218.3	2,029.0	2,581.0	127
4 expansion/rebuilding ^{5/}	3,806	7,667	201	7/68-9/69	12/68-8/70	8	781.0	862.3	164.0	154.9	149.0	148.0	1,094.0	1,165.2	106
Sidamo Province															
4 new secondary	2,142	1,889	88	2/6-9/69	10/69-8/70	9	863.0	1,232.7	147.0	147.7	85.0	91.9	1,095.0	1,472.0	134
1 rebuilding	1,126	1,575	140	10/68	1/70	16	470.0	439.5	83.0	76.3	39.0	28.7	592.0	544.5	92
Tigre Province															
2 new secondary	778	1,316	169	4/69-12/69	10/69-9/70	8	329.0	424.9	61.0	66.2	49.0	58.9	439.0	550.0	126
2 expansion	2,136	3,740	175	6/68-1/69	9/68-10/69	7	414.0	523.1	85.0	81.5	57.0	51.2	556.0	655.8	118
Wollega Province															
4 new secondary	1,440	2,577	179	4/69-12/69	10/70-4/71	11	589.0	673.6	117.0	108.0	68.0	110.0	774.0	891.4	115
1 rebuilding	932	1,197	128	10/68	4/70	19	423.0	477.7	67.0	61.4	55.0	28.3	545.0	567.4	104
Wollo Province															
3 new secondary	2,488	4,285	172	7/68-1/69	10/68-10/69	11	667.0	766.2	116.0	118.0	129.0	88.6	912.0	972.8	107
Subtotal	51,233	82,465	161	-	-	11	14,705.0	17,559.4	2,864.0	2,769.9	2,237.0	2,293.9	19,806.0	22,623.2	114
II. Teacher Training Inst.															
Addis Ababa^{6/}															
Haram final expansion ^{6/}	750	746	99	12/68	3/69	3	213.0	478.1	40.0	124.1	52.0	32.1	305.0	644.1	208
	550	548	99.6	9/68	10/69	14	263.0	750.3	41.0	95.6	56.0	33.3	360.0	879.2	244
III. Technical Inst.															
Addis Ababa															
Asmara	1,300	598	46	4/69	11/69	8	190.0	312.3	43.0	18.5	630.0	348.9	863.0	679.7	79
	729	301	41	4/69	5/70	13	569.0	134.6	43.0	20.9	660.0	378.4	1,272.0	433.9	34
IV. Practical Teacher Training Inst.															
	270	150	56	7/68	2/68	none	391.0	452.2	90.0	104.4	92.0	405.7	573.0	962.1	108
Total Cost: Physical Facilities							16,331.0	19,686.9	3,121.0	3,133.4	3,727.0	3,392.3	23,179.0	26,212.6	113
Cost of Architectural Services							1,623.0	1,096.4	312.0	28.1	367.0	-	2,302.0	1,124.5	49
Cost of Buses, Trucks ^{7/}													-	377.4	-
Cost of Generators, Pumps, Wells ^{7/}													-	366.7	-
Uncommitted													2,302.0	-	-
Grand Total							17,954.0	20,783.3	3,433.0	3,161.5	4,094.0	3,392.3	27,783.0	28,001.2	101

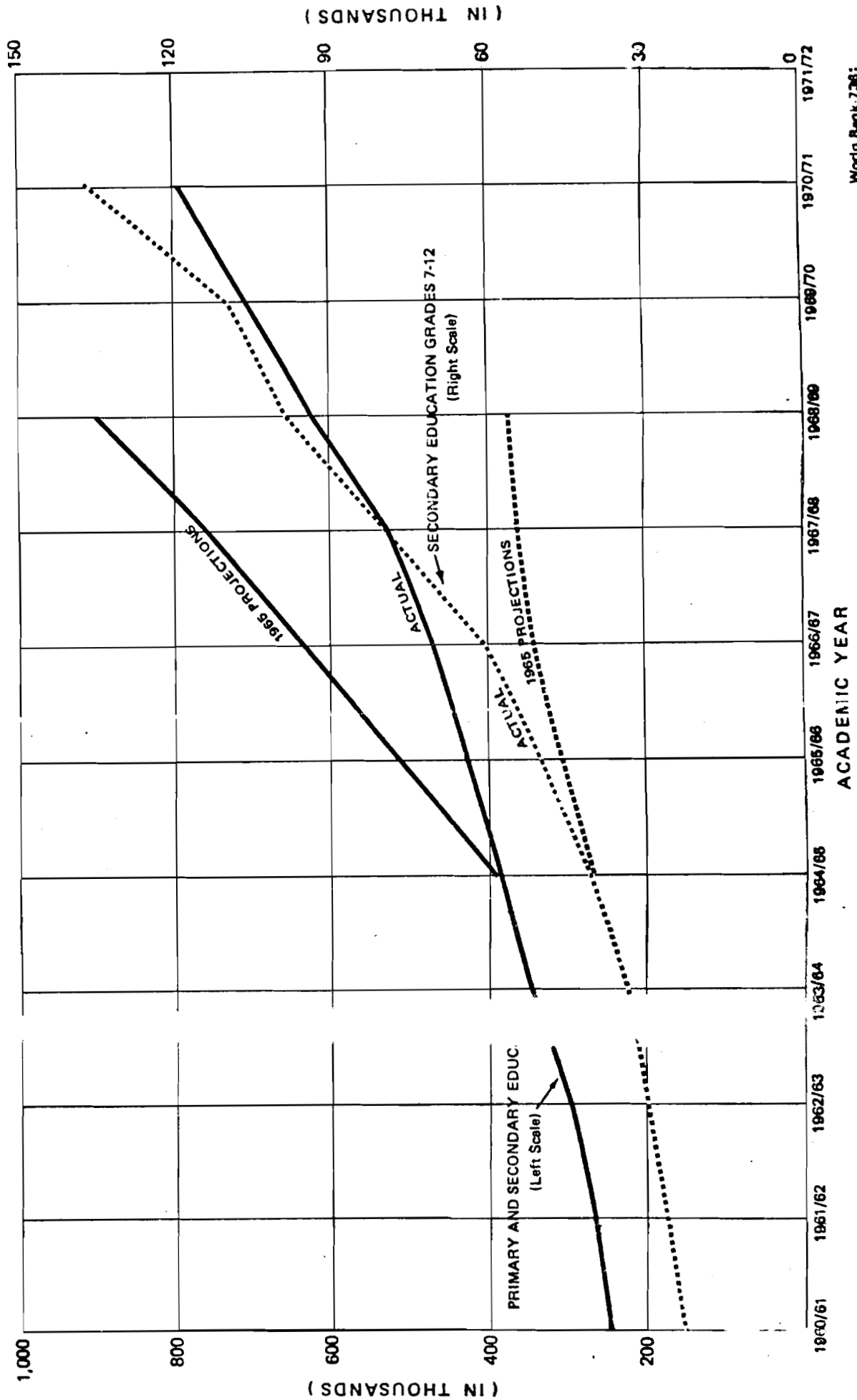
Note: (1) Costs are based on actuals or final estimates at September 30, 1971, prior to US\$ devaluation, but with all funds committed. (2) Four new secondary schools, for which the credit provided only equipment, are included under expansion/rebuilding.

- 1/ Capacity: Planned secondary enrolments based on amended capacity of project schools, actual enrolments are for May 1972; actual enrolments for teacher training institutes, technical institutes, and practical institutes are for September 1971.
2/ Average delay: mean of actual delays for each category of schools, i.e., new or expansion/rebuilding, for each province.
3/ 7. based on subtraction of planned enrolment of 1,088 for 1 new school not yet completed, but for which the 1,088 were included in planned capacity.
4/ Includes trade extension at one expanded school (Dire Dawa), for which total cost was Eth\$ 20.9 thousand.
5/ Includes trade extension at one expanded school (Nasareth) for which total cost was Eth\$ 20.9 thousand.
6/ 250 student places were added to each primary teacher training institute under amended project.
7/ New items added to project.

Sources: Appraisal Report (TO-505a) January 25, 1966.
Progress Report: Credit 84-ET, September 30, 1971
Full Supervision Report: Credit 84-ET, August 21, 1972

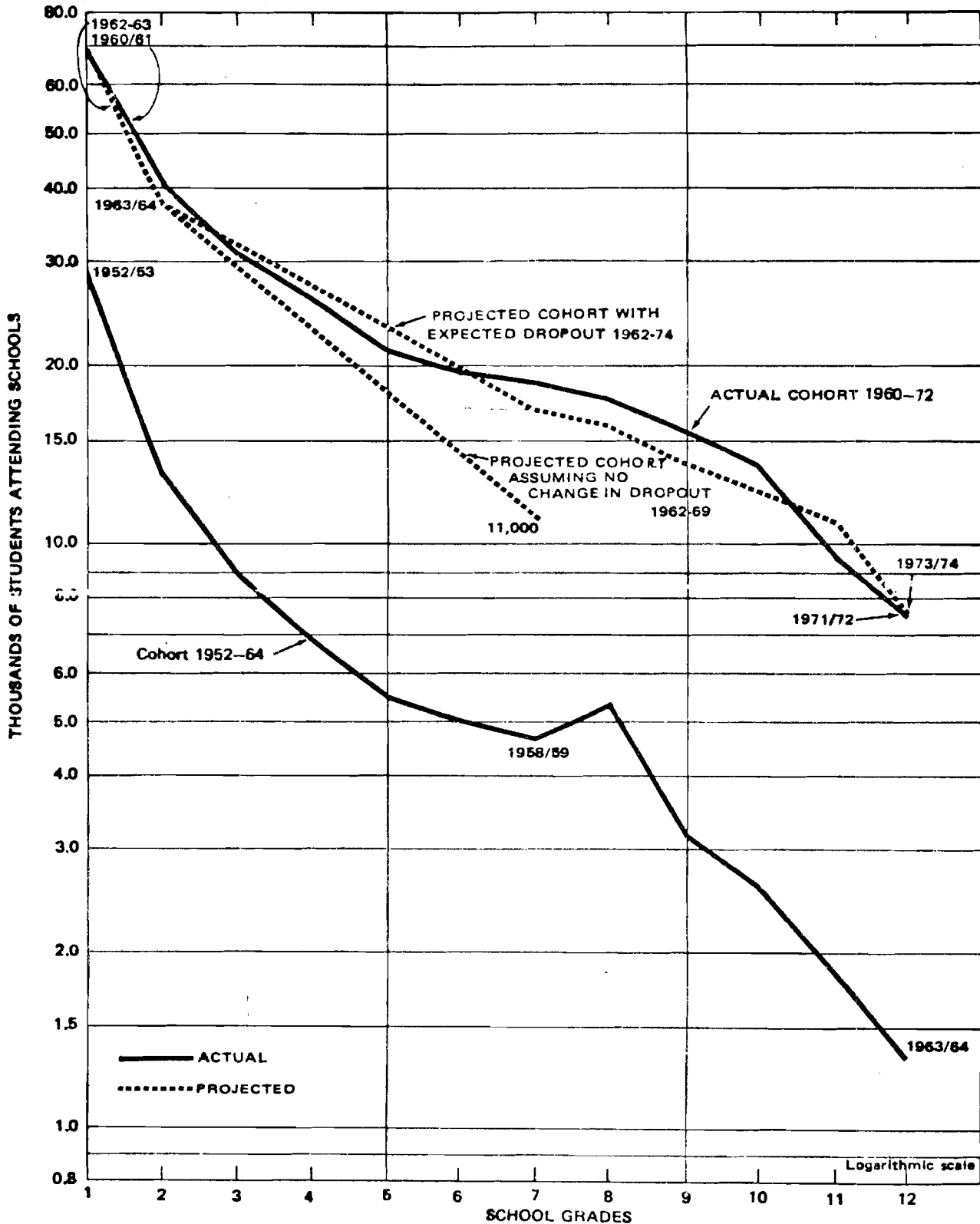
ETHIOPIA
POST EVALUATION OF FIRST EDUCATION PROJECT 84ET

Actual Enrollment in Primary and Secondary Education 1960-71 and Enrollment for 1964-68 as projected by Ethiopian Authorities and by Bank's Appraisal Mission in 1965.



ETHIOPIA POST EVALUATION OF FIRST EDUCATION PROJECT 81ET

Apparent Cohort Table ("drop out curve") in government schools in Grades 1-12 (1952-64) projections by 1965 Bank appraisal mission (1962-74) and actual development (1960-72).



ETHIOPIA EDUCATION PROJECTS

ADDIS ABABA

- 1/RSJ Shimellis Habte
- 2/ESJ Prince Makonnen
- 3/ESJ Menelik II
- 4/RSJ Medhane Alem
- 6/ESJ Empress Menen Girls
- 7/ESJ Haile Selassie I
- 8/NSJ Koife
- 9/NSJ City Hall
- 10/NSJ Singelle
- 11/NSJ Meffin Harar
- 11a/RSJ Asfaw Wossen

ERITREA PROVINCE

- 21/ESJ Haile Selassie I, Asmara
- 22/ESJ Prince Makonnen, Asmara
- 23/NSJ Asmara I
- 25/RSJ Asii Ugri
- 26/RSJ Decamare
- 27/RSJ Keren
- 28/NSJ Asii Kaieha
- 30/NSJ Asii Quala
- 31/NSJ Asii Teklezan
- 32/NSJ Agordat
- 33/NSJ Saganeti
- 34/ESJ Massawa

HARAR PROVINCE

- 42/ES Medhane Alem
- 43/NSJ Asbe Tafari
- 44/ESJ Dire Dawa
- 45/NSJ Jij Jija
- 46/NSJ Harar

SHOA PROVINCE

- 53/ESJ Ambo
- 54/ESJ Jhion
- 55/NSJ Enaieber
- 56/NSJ Hosanna
- 57/NSJ Shashamane
- 58/ESJ Debre Berhan
- 59/NSJ Debre Sina
- 60/ESJ Nazareth
- 61/NSJ Debre Zeit
- 62/NSJ Addis Alem
- 63/NSJ Fitche

ILLUBADOR PROVINCE

- 47/ESJ Haile Selassie I, Gore
- 48/NSJ Matu
- 49/NSJ Bedelle

KAFFA PROVINCE

- 50/ESJ Miazia 27, Jimma
- 51/NSJ Bonga
- 52/NSJ Agaro

SIDAMO PROVINCE

- 64/RSJ Ras Desta, Yirgalem
- 65/NSJ Soddo
- 66/NSJ Dilla
- 67/NSJ Neghelli
- 68/NSJ Wondo

ANUJI PROVINCE

- 12/ESJ Asela (Has Dargie School)
- 13/NSJ Sire
- 15/NSJ Rabi

GAMU GOFA PROVINCE

- 35/ESJ Arba Minch
- 36/NSJ Gidole

BALE PROVINCE

- 16/ESJ Azmach Degelehan, Goba

GOJAM PROVINCE

- 37/RSJ Debra Markos (Negus Tekle Haimanot)
- 38/ESJ Bahir Dar
- 39/NSJ Danghila
- 40/NSJ Fenote Selam

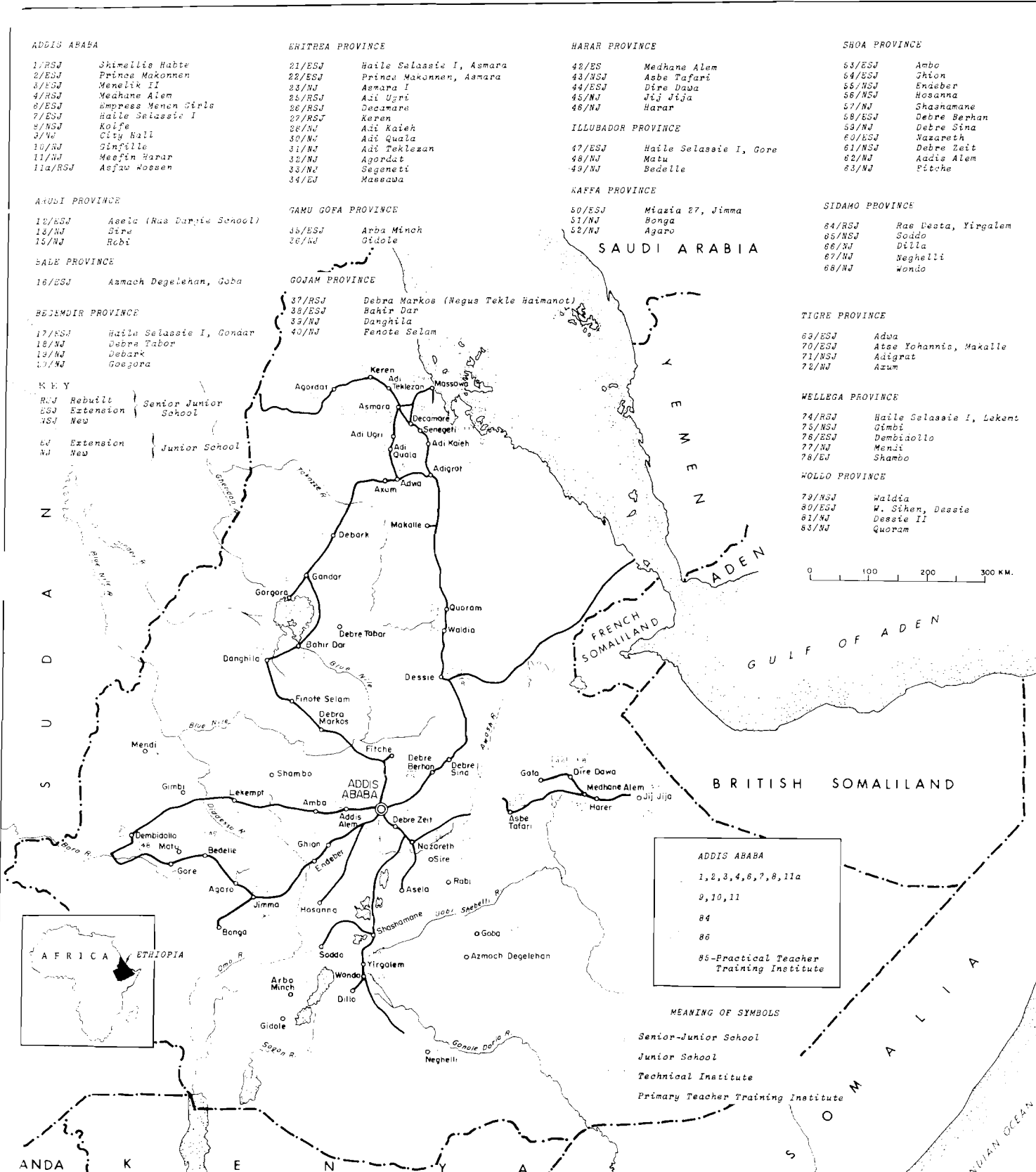
BEJJAMOIR PROVINCE

- 17/ESJ Haile Selassie I, Gondar
- 18/NSJ Debra Tabor
- 19/NSJ Debark
- 20/NSJ Gogjora

K. E. Y.

- RSJ Rebuilt Senior Junior School
- ESJ Extension Junior School
- NSJ New Junior School

- ES Extension Junior School
- NS New Junior School



ADDIS ABABA
1, 2, 3, 4, 6, 7, 8, 11a
9, 10, 11
84
86
85-Practical Teacher Training Institute

MEANING OF SYMBOLS
Senior-Junior School
Junior School
Technical Institute
Primary Teacher Training Institute

