

19351

Distr.  
LIMITED

PAM/AIHTTR/GC/III-S/8/81  
May 1981

Original: ENGLISH

ECONOMIC COMMISSION FOR AFRICA  
African Institute for Higher Technical  
Training and Research  
Extraordinary Meeting of the Governing  
Council  
Addis Ababa, 15-16 June 1981

AIDE MEMOIRE  
ON THE FINAL REPORT ON THE TECHNICAL FEASIBILITY STUDY  
FOR THE AFRICAN INSTITUTE FOR HIGHER  
TECHNICAL TRAINING AND RESEARCH

AIDE MEMOIRE  
ON THE FINAL REPORT ON THE TECHNICAL FEASIBILITY STUDY  
FOR THE AFRICAN INSTITUTE FOR HIGHER  
TECHNICAL TRAINING AND RESEARCH 1/

The report presents an overall faithful reflection of the objectives of the Institute which it reassuringly apprehends, and a consistent evolutionary development of the curricular resources and infrastructural supports for realizing them, if anything erring on the side of caution in the growth of operations. This is evidenced in its "non-dedicated space" approach and the implications of shared facilities and equipment: but it could affect the take-off schedules of individual centres whenever the technological servicing of a centre inter-disciplinary needs require appreciable contributions by such later-starting centres as, in particular, the Centre for Electronics and Communications Technology, the Inter-disciplinary Industrial Production Centre and the Centre for Basic Sciences and Medical Technology. It is still necessary to define fully the substitute arrangements for providing in the early phase the services required from such Centres, and this will be taken up by the core staff of the Institute as soon as they come on board; but as shown below they will also need some preparatory enabling actions by the Host Government.

The following detailed commentary on the report may help member States in its evaluation.

1. Preface

An error occurs in the table on p.1-2: in addition to the four centres that will have taken off by 1983, namely Agricultural Engineering and Food Technology; Technical Teacher Educator Training; Electromechanical Engineering; and the Industrial Production Centre; two years thereafter Electronics and Communications Technology makes the 5th, not the 4th Centre. On the other hand the footnote on the same page refers to the provision of some services by the centres mentioned, not their going fully on stream. (members of the Academic Board have since amended the "Physical ..... Sciences" to read "Basic ..... Sciences")

2. Educational Framework

The described development of satellite campuses should include as one reason the growing space demands to house new courses, especially where these

---

1/ Previously submitted as EXCO document 80/6

have strong subregional flavours. Whether or not such campuses become eventually independent will of course depend on Governing Council decisions.

Page 2-1 correctly underlines the innovativeness and flexibility that characterise the proposed Master Plan. These are concomitants of the major departure of the Institute's programmes from traditional engineering education programmes, through its emphasized practical re-orientation of trainees and trainers, chiefly by project drilling in and outside the inter-disciplinary Industrial Production Centre; this aspect is well spelt out in 2.2. The distinction between the two programme types is correctly identified with that between the "systems approach" in Engineering education, which teaches the articulation and operation of whole machines and production lines, and the "components approach" that concentrates on machine parts and their analyses.

Section 2(e): the last sentence should be modified to "of the five in highest priority ..... delayed to be phased in with the permanent facilities". In 2.2.(f) it is most important to be clear on the major line/s to be pursued by the Industrial Production Centre. A reason for starting with the softer technology of text-book production is that while this can fulfill a long-felt need provided it takes care not to duplicate the nationally quite amply available routine text productions, it does not need as much a lead-time or capitalisation as the medium-hard technology of electric motors and generators. But the technological spin-offs from the two bear so little comparison that Council should set its face steadfastly to launching the latter line as soon as practicable.

2.2(h): Bilingual instructions are one factor that argues for a high staff/student ratio. So do the individualized training needs of practical projects of the plant-overhaul type. Both factors can be moderated by the provision of very good reprographic and audio-visual facilities, a well-defined area where donor collaboration will be sought.

2.3. "Students" will be mainly of the "mature" type (hence probably better called "trainees" as in the Headquarters Agreement, Article VI 12/vi) with appreciable work-experience, rather than fresh 'O-level' passés. Nevertheless it is felt that the stringencies of accommodation will probably limit the availability of married quarters to some 25%, and for the shorter courses (say not longer than 12 months) trainees might be required not to bring their families.

Fig.1 on enrolment projections shows the high-sounding enrolment total of 6,100 in 10 years; but this is in fact small, expressed as an average of 120 trainees per member State most of which already have and need several times that number in the various national fields of technology.

## 2.4 Staffing Framework

The crucial value of the correct staffing policy right from the start cannot be over-emphasized in face of the need for the very particular types of technical balance and motivation required for innovative problem-solving. These types are going to be very hard to find on the market anyway, and the attractions of the Institute to them must equal at least the best in the region. (Members of the Academic Board have commented in more detail on this).

The terminally attained staff-student ratio of 1/12 includes both teaching, workshops and administration, and implies a teaching staff/student ratio of at most 1/6, which is not too high considering the special needs for practical project drills.

3. Space requirements: the report's recommendations are possibly over-cautious: they suggest launching only some technical teacher programmes in the year 1981, and adding in 1982 some electro-mechanical and agricultural engineering courses shorn of their electronics requirements (which last is academically unsatisfactory). Part of their reasons is the assumption that the available starting facilities will be limited to the Kenya Polytechnic and the Technical Teachers College. This leaves out contributions from the University engineering faculty and some others which are indicated in the documents that spell out the host facilities.

Given all these contributions and a timely cash flow, the starting programmes should be able to match well those given in the document on course structure and commencing programmes. However the response of the host country is still awaited on a request by the Institute that its envisaged list of these sources of take-off facilities be confirmed.

## 4. Equipment Requirements (with appendices 5 & 6)

This hardware section is the core of the report and goes into very useful depth in detailing in appendix 5 the equipment for the earliest courses (1981-3), and in providing guidelines in appendix 6 for the technical centres, once they come into operation, to do the same for the longer term programme. The coverage is full in terms of our envisaged programmes, and the consultant's idea of an inter-disciplinary workshop is excellent and fully conforms to our philosophy and goals. However the physical relationship of this workshop with especially the Inter-disciplinary Industrial Production Centre, still has to be worked out so as to avoid unnecessary duplication. It should also be made clear that, as we suspect, the Initial Programme Equipment list is additional to host facilities referred to earlier. Rough line-by-line cost estimates in appendix 6 for the base years 1980 would have made these guidelines as useful quantitatively as qualitatively and would throw more light on the block estimates of #4; this will be taken up by specialist staff of the Institute.

The time-table (pp.4-7 to 4-12) strictly refers to operations on the permanent site rather than to only the starting up of these operations. As seen in appendix 5 many activities in the 1983 column will have commenced in 1981 or 1982. Such apparent discrepancies as the scheduled launching of the agricultural engineering and food technology laboratories in the table for 1985 still need correcting; this centre of highest priority should be in very mature operation quite before then in both its Food Technology and Agricultural Engineering programmes. Moreover if the Phase II centres start up as timed in Fig. 1, p2-6, the workshops shown against them for the end of the decade in 1990, must come on stream earlier.

## 5. Site and Buildings

5.2/A Relocation of the Institute's temporary offices in the older part of the Polytechnic Buildings is being tried to eke out slightly more space than in their first situation. There is no doubt that space so taken up by the Institute is a considerable sacrifice by the Polytechnic, no matter for how short a period. The re-location also alters Fig.5 completely. The Institute is in touch with the Government through the Ministry of Higher Education over the matter of telephone services into the premises, which has presented quite a difficult problem.

5.3 and 5.4 Despite efforts it has not been possible to ascertain whether any objectionable interference between the permanent site facilities and the posts and telecommunication radio-monitoring station is a possible problem. It would of course be best to move all non-institute activities from this area.

The functional grouping of the various facilities on the campus (fig.12) is well thought out, but the use of some higher rise buildings than proposed to avoid congestion by the end of the decade, might be looked at again. A very large portion of the campus, and correspondingly of the cost estimates in section 6, has been used up for hostel accommodation, as we feared in the basic document on Philosophy, Planning and Structure. It is proposed there that this facility, like catering be contracted out as an off-campus commercial undertaking. Apart from other conveniences this would enable the close group of academic buildings in the centre to be more spaced out.

6. Cost Estimates: Much of the cost magnitudes arise from the high escalation (compound interest) factor of 15%. The costings do not of course allow for consultancy and other earnings by the Institute, which are aimed to attain by 1990 20-25% of the total recurrent budget. Also the elimination of hostel buildings from the total cost estimates of Fig. 9, p6-3, would considerably depress the cost of non-academic space, possibly by as much as 40% or the same order by which the elimination of direct catering by the Institute would depress recurrent expenses. Table I shows the overall estimated reductions during Phase I.

## 7. Architectural and Engineering Design Implementation

Serious attention must be directed here to the critical dates identified for the implementation programme and to the securing of the means and resources to ensure that they are met. We agree fully with the need for the kind of organizational capability spelt out here for managing the complex design and construction of the Institute buildings.

On implementational progress, some members of the Academic Board have met twice (in August and October) and reviewed and approved with a few modifications that have now been incorporated, the initial programmes, the academic structure and philosophy of courses and centres and the interim conditions of service of officials, of the Institute. The Director-General took up residence at the Headquarters of the Institute in Nairobi in August, and the construction of temporary office accommodation (for 1980-83) in the premises of the Kenya Polytechnic has started. But the approval of the Final Report and Master Plan scheduled for August also has yet to be done. Also the delay in recruiting the core staff of the Institute is affecting the CPI schedule. It is hoped that the present Executive Committee meeting will find the effective means to avoid further delay.

AFRICAN INSTITUTE FOR HIGHER TECHNICAL TRAINING AND RESEARCH  
 - FIRST PHASE (1981-85) BUDGET ESTIMATES -

	1981	1982	1983	1984	1985
<b>A. Trainee</b>					
<u>Population:</u>	100	360	960	1 700	2 150
Cumulatively:	100	460	1 420	3 120	5 270
<b>B. Full time teachers:</b>	10	20	50	90	100
	(US\$ millions)				
<b>C. Recurrent Costs:</b>					
(i) staff emoluments part-time + full time):	0.63	1.00	2.50	4.00	4.50
(ii) expendable materials	0.17	0.30	0.60	0.80	1.00
total recurrent	0.80	1.30	3.10	4.80	5.50
cumulative recurrent	0.80	2.10	5.20	10.00	15.50
<b>D. Capital Costs:</b>					
(i) equipment	.073	5.35	4.74	4.50	4.99
(ii) buildings	.034	10.94	10.00	10.00	14.45
total capital	.107	16.29	14.74	14.50	14.44
cumulative capital	.107	17.27	31.03	45.52	64.02
<b>E. Savings:</b>					
(i) hostel costs 40% of D(ii)	-	4.80	4.00	4.00	5.73
(ii) estimated consultancies:	-	-	-	0.30	0.75
(iii) total savings	-	4.80	4.00	4.30	6.53
(iv) cumulative savings	-	4.80	8.80	13.10	25.23
<b>F. Gross Annual Costs</b>					
<u>Less E(iii)</u>	0.907	12.79	13.84	15.00	13.41
<u>Gross cumulative costs</u>					
<u>Less E(iv)</u>	.907	14.57	27.43	41.73	59.19

Distr.  
LIMITED

PAMM/AIHTTR/GC/III-S/7/81  
May 1981

Original: ENGLISH

ECONOMIC COMMISSION FOR AFRICA

African Institute for Higher Technical  
Training and Research

Extraordinary Meeting of the Governing  
Council

Addis Ababa, 15-16 June 1981

CONFIDENTIAL

NAMES OF SHORT-LISTED CANDIDATES



POST	RECOMMENDED	OTHER QUALIFYING CANDIDATES IN RECOMMENDED ORDER (*Indicates need for readvertisement)
<u>Administration</u> 1. Deputy Director-General 2. Chief Administrative Officer 3. Senior Administrative Officer 4. Chief Finance Officer	Readvertisement for a francophone necessary  Dr. S. O. Odede  Mr. I.N. Faye Mr. P. Rwezahura	Prof. P.B. Vitta Prof. E.B. Kwakye  Mr. A. Begashaw Mr. J.M. Lwabi  Mr. A.A. Asare
<u>Teaching</u> 1. <u>Technical Training Centre</u> (a) Chief Officer (b) Principal Officer or Lower	Dr. O.A. Ajayi  Mr. P.O. Okaka	*
2. <u>Electromechanical Engineering Centre</u> (a) Chief Officer (b) Principal Officer or Lower	Dr. Ing. F.O. Kwami  Dr. A.H. Awad	Dr. W.A. Morcos
3. <u>Electronics and Communications Centre</u> (a) Chief Officer (b) Principal Officer or Lower	Dr. S.L. Mikhail  Dr. S.P. Sabberwal	Dr. A.I. Saleh  *
4. <u>For Service Courses Four Principal Officers in</u> (a) Engineering mathematics (b) Physics (c) Chemistry (d) Industrial Engineering (e) Social Science +	Not yet done by Selection Committee	* Prof. P.B. Vitta Dr. T.O.K. Audu  Dr. A.A. Cudjoe Dr. I. Diop Mr. I.N. Cjok

+ (e) to cover also the History of Technology courses.