

NYSEI '91 年間報告



NATIONAL YOUTH SERVICE ENGINEERING INSTITUTE

1991 PRINCIPAL'S ANNUAL REPORT

19TH NOVEMBER 1991

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## BACKGROUND

NYS Engineering Institute is a joint venture project between Kenyan and Japanese governments. The idea was conceived way back in 1984 to mark the twenty years of Kenya's independence and the good friendly relationship which has been existing between the two governments.

The NYS commenced on 1st September, 1964, that was immediately Kenya attained her independence.

The main objective was to have young men and women volunteering themselves to serve the young nation in various tasks of national building.

The government took part of its tasks to establish training institutions, where the volunteers would train to improve their knowledge and skills. The training also served as incentive to young people and it also prepares them to go out of the Service with confidence and ready to earn their daily living in the competitive world.

By 1984 the NYS had training institutions, offering various courses at artisan and craft levels. The next higher level of training was missing, that is, Technician and Diploma level. The establishment of NYS Engineering Institute was going to fill up this gap.

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When commenced, the NYS Engineering Institute would offer training to young men and women to the level of Technician Part III Certificate and Diploma Certificate in the fields of Electrical Engineering, Motor Vehicle Engineering, Construction Plant Engineering, Electronics Engineering and Mechanical Engineering.

The feasibility study was conducted in 1984, this was followed by the despatch of two basic design study missions from Japan, one in February, 1985 and the second in August, 1985. Other consultations missions were later despatched in accordance with JICA grant aid programme.

The main construction work was started in July, 1986, and the building plus training facilities were handed over to the Kenya Government on 15th August, 1988.

This was followed by the formal opening of the NYS Engineering Institute by His Excellency The President of Kenya, Mr. Daniel Toroitich Arap Moi on 8th December, 1988.

On the other hand, for Technical Co-operation of this project, Record of Discussions were signed by the representatives of both governments, and according to its content which became effective on 1st January, 1988, Japanese experts have been despatched by JICA since 1988, to prepare for a series of the Institute's activities.

The purpose of this Technical Co-operation is to provide advanced skill training to the students who are selected among NYS servicemen and women who meet the entry qualifications. The co-operation thus contributes to the social and economic development of Kenya.

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The NYS Engineering Institute opened its gates to the first group of 95 students on 14th August, 1989. These students were distributed equally to the five different Engineering training fields.

This group of students were to undertake a three year training programme leading to Technician Part III Certificate.

The next group of students joined on 17th December, 1990. This group had to undertake a Briding programme followed by main Diploma programme leading to Technician Diploma Certificate. This is the new programme the NYS Engineering Institute will continue with, which is in line with Kenya's new system of Technical Training Programme.

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### TECHNICAL CO-OPERATION

Technical Co-operation of Japanese Government has got various aspects. More often, it includes human elements. Even if a modern machinery is to be installed in a workshop, it cannot work effectively without proper planning of operation, management and maintenance.

For instance, experts despatch programme of JICA, one of the most typical form of technical co-operation, is to send Japanese experts in different fields to developing countries and, through their daily co-operation activities, to carry out technology transfer from them to their counterparts in the recipient countries, as a result of which it may help human resources development. It is the reason why technical co-operation means human co-operation.

NYS Engineering Institute is such a Technical Co-operation Project aiming at technology transfer, and for attaining its aim, comprehensive assistance has been designed during five years term of co-operation, i.e., from January, 1988 upto the end of December, 1992.



(1) Despatch of Experts

According to the Record of Discussions (R/D) between Kenyan and Japanese Governments, the following Japanese experts have been despatched for a long term service:

- (1) Chief Advisor (Team Leader)
- (2) Co-ordinator

Experts in the Field of:

- (3) Mechanical Engineering,
- (4) Motor Vehicle Engineering,
- (5) Construction Plant Engineering,
- (6) Electrical Engineering,
- (7) Radio, Television & Electronics Engineering.

Short-term experts are also despatched, when necessity arises, for smooth implementation of the Project.

Besides experts stipulated in R/D, through the Annual Joint Committee Meeting and the official request of the Kenya Government, long-term experts for Computer Programming and Mathematics have been despatched by JICA.

By November 1991, 13 (thirteen) long-term experts as well as 5 (five) short-term experts have been despatched in total. To date, there are 9 (nine) experts in the Institute.

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### TRAINING ACTIVITIES/PROGRAMMES

The Institute trains in five major fields, these are:

- (1) Electrical Engineering,
- (2) Electronic, Radio & T.V. Engineering,
- (3) Mechanical Engineering,
- (4) Motor Vehicle Engineering,
- (5) Construction Plant Engineering.

Apart from the five fields, the students also study Mathematics, Engineering Science, General Studies, Entrepreneurship, Engineering Drawing and Computer Studies.

### ENTRY REQUIREMENT

In all five fields of study, the entry requirement is the same. First and foremost, candidates must be servicemen/women of the National Youth Service.

The candidate must be of form four standard of education and must have passed with at least C minus in Mathematics, Physics or Physical Science and English Language. Candidates who have done any relevant technical subject will have an added advantage.

Each department takes twenty students; the students undergo a Bridging course followed by Diploma programme. The programme takes three years. The students are admitted into the Institute in the month of September, and the academic year ends in the month of July of the following year. Within the academic year, students go for holidays in December, April and August.

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Currently, the Institute is training three groups of students: The first group was admitted in September, 1989 and they are undergoing a three years' programme course leading to Technician Part III Certificate. The second group was admitted to the Institute in December, 1990 and they are undergoing the Bridging course which will be followed by the main Diploma programme, leading to Diploma Certificate. The third intake joined the Institute on 23rd September 1991; the group will follow similar programme as the second intake.

For the Technician courses, the students have to sit for the Kenya National Examinations Council's Exams at the end of every academic year. However, for the Diploma courses, the students do internal exams organised by the NYS Engineering Institute, and they only sit for the K.N.E.C. exams at the end of the three years' programme.

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Technician '89

Date of admission - 14th August, 1989  
Initial number - 79 male, 16 female : Total - 95  
Present number - 70 male, 14 female : Total - 84  
Course duration - 3¼ years  
Certificate to be attained: - Technician Part I, II & III

Present status

Students finished Part II examinations on  
12th November, 1991.

Students preparing to go for X-mas holidays. As from January, 1992,  
students to go for Industrial Training while awaiting for the  
results of the Part II exams from K.N.E.C. The successful  
students will join classes in May, 1992 for Part III and will  
have to sit for the K.N.E.C. Part III exams in November, 1992.

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Diploma '90

Date of admission - 10th December, 1990  
Initial number - 77 male, 13 female : Total - 90  
Present number - Remains unchanged  
Course duration - 3½ years  
Certification - Technician Diploma

At the end of every academic year, the students will be examined internally by the Institute, and any unsuccessful student will be dropped from the Institute. At the end of the three year programme, the students will have to sit for national examinations conducted by the K.N.E.C.

Current status

Currently, the students are doing their first year final examinations. The successful students will join second year classes in January, 1992, after their X-mas holidays.

Diploma '91

Date of admission - 23rd September, 1991  
Initial number - 79 male, 4 female : Total - 83  
Present number - Remains unchanged  
Course duration - 3½ years  
Certification - Like Diploma '90

Current status

Students doing their first term exams of the Bridge course. The students to proceed for the second term in January, 1992, after their X-mas holidays.

STUDENT'S RECORD AS OF 20TH NOVEMBER 1991.

	1989			1990			1991			REASONS FOR DROPPING OUT
	M	F	T	M	F	T	M	F	T	
ELECTRICAL	13	6	19	2	11	6	17	1	17	ONE FAILED PART I, ONE FAILED TO REPORT.
	15	5	20	0	15	5	20			
	18	0	18	0	18	0	18			
ELECTRONICS	12	8	20	3	11	6	17	1	17	ONE DESERTED, TWO FAILED PART I
	14	6	20	0	14	6	20			
	12	4	16	0	12	4	16			
MECHANICAL	18	1	19	1	17	1	18	1	18	EXPULSED FROM THE SERVICE
	17	1	18	1	17	0	17	0	17	EXPULSED FROM THE SERVICE
	17	0	17	0	17	0	17			
MOTOR	18	1	19	5	13	1	14	1	14	ONE EXPULSED FROM THE SERVICE
	15	2	17	0	15	2	17			ONE DESERTED THREE FAILED PART I
	16	0	16	1	16	0	15	0	15	DIED DUE TO ILLNESS
CONSTRUCTION	18	0	18	0	18	0	18			
PLANT	16	0	16	0	16	0	16			
	17	0	17	0	17	0	17			
	34	270		13	227	31	257			
SUMMARY	1989			1990			1991			
	M	F	T	M	F	T	M	F	T	
INITIAL	79	16	95	77	14	91	80	4	84	
DROPPED	9	2	11	0	0	0	0	0	0	
PRESENT	70	14	84	77	13	90	79	4	83	

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 National Youth Service Engineering Institute

		From: Aug. 1989		To: Sep. 1996				
Year	1989	1990	1991	1992	1993	1994	1995	1996
Course	8-910112 1 2 3 4 5 6 7 8 910112 1 2 3 4 5 6 7 8 910112 1 2 3 4 5 6 7 8 910112 1 2 3 4 5 6 7 8 910112 1 2 3 4 5 6 7 8 910112 1 2 3 4 5 6 7 8 910112 1 2 3 4 5 6 7 8 910112 1 2 3 4 5 6 7 8 910112 1 2 3 4 5 6 7 8 910112 1 2 3 4 5 6 7 8 9							

# Institute Run Plan

Year	1989	1990	1991	1992	1993	1994	1995	1996
Technician-89	==	==	==	==	==	==	==	==
Diploma-90	==	==	==	==	==	==	==	==
Diploma-91	==	==	==	==	==	==	==	==
Diploma-92	==	==	==	==	==	==	==	==
Diploma-93	==	==	==	==	==	==	==	==
Diploma-94	==	==	==	==	==	==	==	==
Diploma-95	==	==	==	==	==	==	==	==
Diploma-96	==	==	==	==	==	==	==	==
	Field Attachment	Field Attachment	Field Attachment	Field Attachment	Field Attachment	Field Attachment	Field Attachment	Field Attachment
	Contact Hours	Contact Hours	Contact Hours	Contact Hours	Contact Hours	Contact Hours	Contact Hours	Contact Hours

Establishment

The establishment for the Institute was approved on 7th December, 1988. The posts of Deputy Principal, Senior Lecturers, Lecturers, Assistant Lecturers, Laboratory/Workshop Technicians and Librarian were advertised in the local papers. This was followed by selection of qualified personnel to fill the posts through the Government recruiting body - the Public Service Commission. However, not all the posts were filled and the recruitment exercise is still going on.

The present status on staff recruitment is explained on page 13.

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As per the D.P.M's Institute's establishment, the table below shows the present status and set-up.

T A B L E 2

	Designation/Post Cadre	No. Approved	No. in Post	Vacant Number	Remarks
(1)	Principal	1	0	1	Deputy Principal acting on the post
(2)	Deputy Principal	1	1	0	
(3)	Dean of Students	1	0	1	
(4)	Senior Lecturer (H.O.D)	5	4	1	
(5)	Lecturers	15 物理·数学 (+4)	10 (+4)	5	
(6)	Assistant Lecturers	15	10 8	7	
(7)	Laboratory/ Workshop Technician	5	3	2	
(8)	Accountant	1	2	-1	
(9)	Librarian	1	0	1	
(10)	Senior Library Assistant	1	0	1	
(11)	Supplies Officer	1	1	0	
(12)	Supplies Assistant	1	0	1	
(13)	Executive Assistant	1	1	0	
(14)	Accounts Assistant	1	0	1	

TABLE 2 (Cont'd)

Designation/Post Cadre	No. Approved	No. in Post	Vacant Number	Remarks
(15) Shorthand Typist I	1	0	1	
(16) Shorthand Typist II	1	1	0	
(17) Copy Typist II	3	5	-2	
(18) Instructors	3	5	-2	
(19) Catering Assistant	2	2	0	
(20) Senior Cook	1	1	0	
(21) Cook	6	4	2	
(22) Senior Audio/Visual Officer	1	0	1	
(23) Audio/Visual Assistant	1	0	1	
(24) Storeman	2	6	-4	
(25) Telephone Operator	2	2	0	
(26) Boiler Attendant/ Artisans	3	8	-5	
(27) Driver	7	9	-2	
(28) Subordinate Staff	7	10	-3	

T O T A L:            90            83            To be recruited posts - 26  
 Over recruited posts - 19

\*NB\* Where the recruited number is more than approved posts, the extras are personnel seconded from NYS Headquarters.

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Out of the approved establishment, 83 personnel have been recruited. This represents 92% of the establishment. As mentioned earlier, the recruitment exercise is still going on.

Apart from the approved posts, NYS Headquarters has seconded other extra personnel to ease the running of the Institute. These are as shown below:

TABLE 3

Designation/Post/Cadre	Number Seconded	Duties Assigned
Commandant	1	Unit's Commanding Officer
Deputy Commandant	1	Assistant to Commandant
Section Commander	2	General duties
Section Officer	9	General duties
Clerical Officer	9	Clerical duties in Registry, Supplies, Accounts and other areas.
<b>T O T A L:</b>	<b>22</b>	

Thus in total, the unit is having 105 members of local staff.

Apart from the local staff, JICA has attached 9 Japanese experts.

The composition is as follows:

One Team Leader/Chief Advisor

One Co-ordinator

Seven experts

- One for Electrical
- One for Electronics
- Two for Mechanical
- One for Motor Vehicle
- One for Construction Plant
- One for Mathematics

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INSTITUTE'S BUDGET

(a) G.O.K. Input

In 1990/91 Fiscal Year, the Institute was allocated ~~Kf~~375,679 for various items including staff salaries, running expenses, library expenses, training expenses, etc.

During the period, the Institute had what we may call smooth running. However, not all the funds which were allocated for library expenses were utilised. This was mainly for two major reasons:

- (1) Unavailability of most technical books in the local market,
- (2) Government procurement and payment procedures.

All the same, the Institute is putting more efforts and emphasis on procurement of textbooks. Attached is the Table of expenditure for the 1990/91 Fiscal Year.

TABLE 4 NATIONAL YOUTH SERVICE ENGINEERING INSTITUTE  
EXPENDITURE FOR 1990/91 FISCAL YEAR

SUB-HEAD	AMOUNT ALLOCATION	I T E M N A M E	TOTAL EXP.	BALANCE
	KSHS.		KSHS.	KSHS.
101-4	150,000.00	Transport	150,000.00	NIL
101-4	150,000.00	"	150,000.00	NIL
101-4	100,000.00	"	87,834.00	12,166.00
111-3	40,000.00	Travel & Accommodation	22,146.00	17,854.00
120-0	10,000.00	Postal & Telegrams	250.00	9,750.00
140-0	800,000.00	Electricity/Water Conservation	798,135.00	1,864.25
160-x	1,152,000.00	Food	1,152,000.00	NIL
160-x	558,000.00	"	547,113.10	10,886.90
173-1	1,440,000.00	Library	653,351.50	786,648.50
174-x	440,000.00	Stationery	425,971.70	14,028.30
175-8	80,000.00	Advert/publicity	17,064.00	62,936.00
190-1	27,000.00	Miscellaneous	22,615.65	4,384.35
194-4	1,135,000.00	Training	1,350,000.00	NIL
194-4	175,000.00	"	132,490.95	42,509.05
220-7	460,000.00	Purchase of Plant & Equipment	453,850.90	6,149.10
250-9	80,000.00	Maintenance of Plant & Equipment	29,838.00	50,162.00
085-x	10,000.00	Servicemen & Women Leave Allowance	7,610.50	2,389.50
260-9	45,000.00	Maintenance of Buildings	39,480.00	5,520.00
101-5	95,000.00	Transport	93,628.05	1,371.95

For this current Financial Year 1991/92, the Institute was allocated Kf336,400. The slight cut is due to the country's economy. However, plans are underway for negotiations with The Treasury for re-allocation of funds to the most affected areas.

The Institute has gone a long way in procurement of various items and materials, and as of 30th November, 1991, the expenditure is as shown on Table 5.

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TABLE 5

STATION NYS ENGINEERING INSTITUTE EXPENDITURE  
AS AT 30TH OCTOBER, 1991

SUB-HEAD	AMOUNT ALLOCATION		I T E M N A M E		TOTAL EXP. TODATE	COMMIT.	TOTAL EXP. & COMMITS.	BALANCE
	KSHS.		KSHS.	KSHS.				
101-4	240,000.00				208,566.00	-	208,566.00	31,434.00
101-5	100,000.00	AIE			52,416.00	-	52,416.00	47,584.00
111-3	46,000.00				30,830.00	1,950.00	32,780.00	13,220.00
111-2	18,000.00	AIE			-	-	-	18,000.00
120-0	14,400.00				132.00	-	132.00	14,268.00
140-0	800,000.00				476,365.85	4,000.00	480,365.85	319,634.15
160-x	1,200,000.00				889,879.65	301,065.15	1,190,954.15	9,054.85
173-1	995,000.00	AIE			208,252.05	388,737.25	596,989.25	398,010.75
174-x	440,000.00				439,057.15	-	439,057.15	942.85
175-8	111,600.00				3,750.00	-	3,750.00	107,850.00
190-1	28,000.00				11,467.55	-	11,467.55	16,532.45
194-4	1,000,000.00				605,833.35	218,522.40	824,355.75	175,644.25
198-7	20,000.00				-	-	-	20,000.00
220-7	400,000.00				232,614.55	-	232,614.55	167,385.45
250-9	80,000.00				79,919.30	-	79,919.30	80.70
199-6	20,000.00	AIE			10,443.00	65,395.70	10,443.00	9,557.00
250-x	10,000.00	AIE			7,000.00	-	7,000.00	3,000.00
085-x	25,000.00	AIE			1,515.95	260.00	1,775.95	23,224.05
260-6	100,000.00	AIE			14,620.00	-	14,620.00	85,380.00

(b) Government of Japan's Input

Since 1988 when the Co-operation Period started, the Government of Japan through JICA has constantly been assisting the Institute financially. The JICA fund is divided into two major groups: Consumables (usually purchased locally) and training equipment (normally purchased from Japan). For 1990/91 Fiscal Year, the consumables amounted to 13,991,400.00 Yen (thirteen million, nine hundred ninety one thousand, four hundred Japanese Yen).

During the same period, the amount for purchase of equipment was 15,000,000.00 Yen (fifteen million Japanese Yen).

This Japanese Financial Year, the fund allocated for consumables is 12,200,000 Yen (twelve million two hundred thousand Japanese Yen), and the fund for equipment is 30,000,000 Yen (thirty million Yen).

The table on Page 20 (A) shows the Government of Japan's input distribution over the years.

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## STAFF TRAINING & DEVELOPMENT PROGRAMME



GOVERNMENT OF JAPAN'S FINANCIAL INPUT

CONSUMABLES

YEAR	ITEM	APPROVED
1988/89	Training materials	1,202,203 Yen
1989/90	Training materials Car hire Textbooks	5,768,000 Yen 2,425,000 Yen 463,000 Yen
1990/91	Training materials Pamphlets/Advertising Renovations Technical exchange	6,734,000 Yen 1,500,000 Yen 9,853,000 Yen 1,965,000 Yen
1991/92	Training materials Calendars/Advertising Technical exchange	8,700,000 Yen 1,500,000 Yen 2,000,000 Yen

EQUIPMENT

YEAR	APPROVED
1988/89	37,360,160 Yen
1989/90	10,000,000 Yen
1990/91	15,000,000 Yen
1991/92	30,000,000 Yen

STAFF TRAINING (LOCAL)

YEAR	APPROVED
1990/91	1,000,000 Yen
1991/92	1,000,000 Yen

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STAFF ACTIVITIES/PROGRAMMES

(a) Recruitment

As was stated earlier, the staff recruitment exercise started in May, 1989, and the exercise is still going on.

By 1990 Joint Annual Meeting, the training staff was as follows:

Deputy Principal/Ag. Principal - 1

POST \ Department	Mechanical	Electrical	Motor Vehicle	Construction Plant	Electronics	Maths	Science	General Studies
Senior Lecturer (H.O.D)	1	1	0	1	1	-	-	-
Lecturer	0	1	0	0	0	2	1	1
Assistant Lecturer	3	2	1	2	1	0	0	0
Instructor	0	0	1	1	1	0	0	0
Lab/Workshop Technician	1	1	1	0	1	0	0	0
Machinist/ Artisan	2	0	0	0	0	0	0	0

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During the period, the Institute recruited 8 lecturers, however, only four of them turned up, and out of the four, two left to join other organisations. Efforts have been put to have replacement recruitment. This was slowed down due to Government embargo on employment which was effected in January, 1991. However, considering that this is a new Project under joint venture, negotiations were done and recruitment had to continue. Possible candidates were recruited and out of them, three reported; it is unfortunate that one of them left on 11th November, 1991. All the same, consultations are almost finalised to have all vacant posts within the establishment advertised. The adverts are expected to be in the dailies any time.

Todate, the status of training staff is as shown on page 23.

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TABLE 6

PRESENT STATUS OF TRAINING STAFF

Deputy Principal/Ag. Principal - 1

DEPARTMENT POST	MECHANICAL	ELECTRICAL	MOTOR VEHICLE	CONSTRUCTION PLANT	ELECTRONICS	MATHS	SCIENCE	GENERAL STUDIES
Senior Lecturer (HOD)	1	1	0	1	1	-	-	1
Lecturer	1	1	2	2	1	2	1	1
Assistant Lecturer	2	2	1	2	1	0	0	0
Instructor	0	0	2	2	1	0	0	0
Lab/Workshop Technician	0	1	1	0	1	0	0	0
Machinists/Artisan	2	1	1	0	1	0	0	0

(b) STAFF TRAINING

(i) Local Training

Two Instructors have been studying at the Kenya Technical Teachers' College - (K.T.T.C); the two will be joining the Institute in January, 1992 for Teaching Practice and thereafter, for deployment.

Another one Instructor is at Kenya Polytechnic for a two year Higher National Diploma Programme.

Through consultations with the Chief Advisor, the Institute has earmarked two Teaching Staff for local training - one at K.T.T.C. and the other at Kenya Polytechnic. The two are to take effect from January, 1992.

(ii) Overseas Training

For the current 1991/92 Japan Fiscal Year, the Institute has been offered five individual training courses in Japan. For these training opportunities, requests have already been forwarded to the Japanese Government, through the relevant authorities.

(c) Staff Development

A Staff Development Programme has been drafted and forwarded to the relevant authorities for consideration.

(d) Staff Upgrading

This issue is still being pursued with the relevant authorities.

(e) Staff Housing

The issue of land has not been resolved yet. The issue is still being pursued.

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Co-operation Period

The current five years Co-operation Period will be expiring on 31st December, 1992.

Considering that the first group will leave the Institute in December, 1992. (The examination results will be out around March, 1993), and the first Diploma group will leave sometime in 1994, then for proper feedback for both sides, the Co-operation Period should be extended to at least 31st December, 1994.

Secondly, considering that due to our delay in recruitment of staff, it has not been very easy to implement the RL on training of personnel and Technical Transfer Programmes, then extension of Co-operation Period will enhance Technical Transfer.



Appreciation

On behalf of the entire NYS Engineering Institute's community, I thank the Japanese Government, through JICA, for the generous contribution in establishing the Institute, and the continued support, financially and technically; and the despatch of the experts to make the project a success. The fruits of this Project will benefit not only the present generation but generations to come. This will continue enhancing better understanding and co-operation of the peoples of Kenya and Japan.

T H A N K   Y O U

Eng. G. K. Munuku

Ag. Principal

NYS ENGINEERING INSTITUTE

The Director  
NYS Headquarters  
P. O. Box 30397  
NAIROBI

(Attn. Mr. C. T. Waweru)  
AD (T)

REF: STAFF TRAINING & DEVELOPMENT PROGRAMME

Enclosed please find Staff Training & Development Programme to cover the next five years. Please note that for the programme to be effective, it is suggested for re-establishment and creation of extra teaching and technical posts. This is taken into consideration that the Institute will be offering four years Diploma as compared to the original design of two years Technician Part II certificate.

We should not forget that we are aiming to attain the same level with other national polytechnics which are offering similar programmes.

**ENG. G. K. MUNUKU**

Eng. G. K. Munuku  
Ag. Principal  
FOR: Commanding Officer  
NYS ENGINEERING INSTITUTE

C O N F I D E N T I A L

NATIONAL YOUTH SERVICE ENGINEERING INSTITUTE

STAFF TRAINING AND DEVELOPMENT PROGRAMME

COVERING FIVE YEARS

1992/93 TO 1996/97

Ag. Principal - Eng. G. K. Munuku

C O N T E N T S

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## AIMS AND OBJECTIVES

The programme is aimed at providing a clearly planned and well co-ordinated staff development within the Institute for the next five years. The programme will also provide planned Staff Training Programme which will ensure appropriate training opportunities in both Technical skills and academic upgrading. This will enable the staff to acquire the necessary qualifications, specialization and experience required for efficient performance of their duties. The programme will also prepare the staff for advancement within the field of specialization.

The programme when implemented, will attract, motivate and retain suitably qualified staff in the Institute.

Emphasis should be laid on academic post-graduate training and professional training of engineers, who should form the bulk of the staff; and at present, are being attracted to other ministries like Ministry of Public Works and Ministry of Transport and Communications; where this type of programme is well established and very clear to new graduates. (We have already lost some lecturers to these ministries, though they get employed on the same salary scale).

...../2

Brief History

The NYS Engineering Institute is a joint venture project between the governments of Kenya and Japan. The idea was conceived in 1984 as a gesture of the good friendly relationship which has been existing between the two governments.

The realization of NYS Engineering Institute was aimed at increasing the capacity and diversity of training courses within the National Youth Service for the young men and women who have volunteered themselves to the call of voluntary Nation Building. The Institute was also to provide training on technical skill and knowledge to a higher level than was existing in the National Youth Service. The graduands of the Institute would in turn provide high level skilled manpower to the National Youth Service, other government ministries and private industrial sector. The graduands would also be source of instructors of the National Youth Service Vocational Training Centres offering Artisan and Craft courses.

The Kenyan Government undertook to acquiring of the land, fencing and tarmacking work, and acquisition of furniture.

The Japanese Government undertook the construction of buildings and supply of equipment. The construction work started in July 1986 and the buildings and equipment were handed over to the Kenyan Government on 15th August 1988. This was followed by the official opening of the Institute by His Excellency The President Daniel Toroitich Arap Moi on 8th December 1988.

The Institute was designed to train technicians upto Part III level of the Kenya National Examinations Council; which is a three years' programme. However, due to the changes which are undergoing the education system, the Institute is offering Diploma courses, which is a three year programme, with one year Bridging course. Thus in effect, the Institute is conducting four years' Diploma programme.

...../3

The Institute trains in five major fields:-

- \* Electrical Installation
- \* Radio, T.V. & Electronics
- \* Mechanical Engineering
- \* Motor Vehicle Engineering and
- \* Construction Plant Engineering

Besides the five major courses, there are common subjects which are done by all departments. These are:-

Mathematics  
Engineering Science  
Computer Studies  
Entrepreneurship Education and  
General Studies

The Institute is planning to have Computer Studies as a separate department, which will train in both Software Engineering and Hardware Engineering. However, this will only be possible when enough qualified staff are recruited in the Institute - (there was one Japanese expert for one year assignment, but the assignment period ended before a Computer Lecturer was appointed).

According to "Record of Discussions" (RD), it was agreed on a five year co-operation period between the two governments. This was effected on 1st January 1988 and was to end on 31st December 1992. The co-operation period was aimed at promoting technical transfer and co-operation between the two countries for the benefit of NYS Engineering Institute. According to "RD", Japan Government through J.I.C.A. agreed to train Kenyan staff on various equipment in the Institute in order to enhance technical transfer. It was agreed that one staff from each department was to be sent to Japan for technical training every year.

...../4

According to "RD", the two governments agreed that there will be yearly consultation meetings to review the progress of the project. In one of the meetings, it was found necessary to have academic upgrading courses for the staff; and as first step, J.I.C.A. has agreed to sponsor staff to the Kenya Technical Teachers' College for one year diploma courses. J.I.C.A. also agreed to sponsor staff in local polytechnics for Higher National Diploma. So as of todote, there are three training areas being offered by J.I.C.A. However, the training has not been effective due to shortage of teaching staff, and the Institute has been losing a number of these opportunities.

...../5



P R E S E N T   S T A F F   E S T A B L I S H M E N T

The present staff establishment as per D.P.M.'s Letter Ref. No. DPM 20/4/135A Vol. II/(61) of 7th December 1988 is as shown below:-

016 NYS ENGINEERING INSTITUTE - RUARAKA 91/92

POST	JOB GROUP	APPROVED	IN POSITION	VACANT
Principal	N	1	0	1
Deputy Principal	M	1	1	0
Dean	M	1	0	1
Senior Lecturer	L	5	5	0
Lecturer	K	15	7	8
Assistant Lecturer	J	15	9	6
Accountant II	J	1	1	0
Laboratory Technician	H	5	4	1
Librarian II	H	1	0	1
Supplies Officer II	H	1	0	1
Instructor/Operator	G	3	4	-1
Executive Assistant	G	1	1	0
Shorthand Typist I	G	1	0	1
Supplies Assistant	G	1	1	0
Senior Library Assistant	G	1	0	1
Accounts Assistant	G	1	0	1
Senior Audio Visual	F	1	0	1
Shorthand Typist II	F	1	1	0
Catering Assistant	F	2	2	0
Senior Cook	E	1	1	0
Audio Visual Assistant	D/E	1	0	1
Copy Typist	D	3	5	-2
Storeman II	D	2	7	-5
Telephone Operator	D	2	2	0
Cook	D	6	6	0
Boiler Attendant	D	3	3	0
Driver III/II	C/D	7	7	0
Subordinate Staff	A/B	7	7	0
<b>T O T A L:</b>		<b>90</b>	<b>74</b>	<b>16</b>

P R E S E N T S T A F F S T R U C T U R E

The staff in post at present are distributed as shown in the table below:-

POST	"JC"	AUTOMOTIVE ENGINEERING	CONSTRUCTION PLANT ENGINEERING	MECHANICAL ENGINEERING	ELECTRICAL ENGINEERING	ELECTRONICS ENGINEERING	COMMON STUDIES
Sr. Lecturer HOD	L	1.	1. Arshford	1. Muraguri	1. Charo	1. Nyaga	1. Mwaura (Mrs)
Lecturer	K	1. Odongo 2.	1. Nyakwaka 2.	1. Mutinda 2.	1. Kamau 2.	1. Magwaro 2.	1. Magiri 2. Nyota 3. Waite 4.
Assistant Lecturer	J	1. Wanyoike 2. 3.	1. Wairia 2. Ikua 3.	1. Ruto 2. Mung'oma 3. Musembi	1. Okeeno 2. Okong'o 3.	1. Bitok 2. 3.	
Laboratory Technologist	H	1. Kinoti	1.	1.	1. Mwangi	1. Wambugu	
Instructor	G	1. Mulga	1. Mureithi 2. Kiboi			1. Wambui	
Machinist	F			1. Mwanja 2. Mathenge	1. Ndeti	1. Ngugi	

Current Staff Qualifications

The staff qualifications range from Bachelors Degree, Higher National Diploma, Technician Part III, Technician Part II and support staff who have Craft Certificates.

The actual distribution is as shown below:-

Bachelors

- |                  |                           |                    |
|------------------|---------------------------|--------------------|
| (1) Mr. Muraguri | - Senior Lecturer (H.O.D) | Mechanical         |
| (2) Mr. Mutinda  | - Lecturer                | Mechanical         |
| (3) Mrs. Mwaura  | - Senior Lecturer (HOD)   | Common Studies     |
| (4) Mr. Magiri   | - Lecturer                | Science            |
| (5) Mr. Nyota    | - Lecturer                | Maths              |
| (6) Mr. Waite    | - Lecturer                | Science            |
| (7) Mr. Odongo   | - Lecturer                | Motor Vehicle      |
| (8) Mr. Nyakwaka | - Lecturer                | Construction Plant |

Higher National Diploma

- |                  |                         |             |
|------------------|-------------------------|-------------|
| (1) Mr. Charo    | - Senior Lecturer (HOD) | Electrical  |
| (2) Mr. S. Kamau | - Lecturer              | Electrical  |
| (3) Mr. Magwaro  | - Lecturer              | Electronics |

Technician Part III

- |                     |                                   |                    |
|---------------------|-----------------------------------|--------------------|
| (1) Mr. S. Nyaga    | - Senior Lecturer (HOD)           | Electronics        |
| (2) Mr. A. Njoroge  | - Senior Lecturer (HOD)           | Construction Plant |
| (3) Mr. F. Wanyoike | - Assistant Lecturer<br>& Ag. HOD | Motor Vehicle      |
| (4) Mr. Bitok       | - Assistant Lecturer              | Electronics        |
| (5) Mr. Wairia      | - Assistant Lecturer              | Construction Plant |
| (6) Mr. Ikua        | - Assistant Lecturer              | Construction Plant |
| (7) Mr. Mung'oma    | - Assistant Lecturer              | Mechanical         |
| (8) Mr. Musembi     | - Assistant Lecturer              | Mechanical         |
| (9) Mr. Ruto        | - Assistant Lecturer              | Mechanical         |
| (10) Mr. Okeeno     | - Assistant Lecturer              | Electrical         |

Technician Part III cont....

- (11) Mr. Okong'o - Assistant Lecturer Electrical
- (12) Mr. Wambugu - Workshop Technician Electronics
- (13) Mr. H. Mwangi - Workshop Technician Electrical
- (14) Mr. Muiga - Instructor Motor Vehicle
- (15) Miss Macharia - Instructor Electronics
- (16) Mr. Mureithi - Instructor Construction Plant

Technician Part II

- (1) Mr. Kinoti - Workshop Technician Motor Vehicle

Final Proficiency

- (1) Mr. Mwanja - Machinist Mechanical
- (2) Mr. Mathenge - Machinist Mechanical
- (3) Mrs. E. Ngugi - Machinist/Operator Electronics
- (4) Mr. Ndeti - Machinist/Operator Electrical

Trade Test Grade I

- (1) Mr. Kiboi - Instructor Construction Plant

PROPOSED STAFF STRUCTURE

For effective training and also to allow for Staff Training and Development Programme, each department should consist of the following staff:-

Academic Staff

- One Principal Lecturer/HOD - Job Group "N"
- Three Senior Lecturers - Job Group "M"
- Three Lecturer I - Job Group "L"
- Six Lecturer II - Job Group "K"
- Six Lecturer III - Job Group "J"
- Three Assistant Lecturers - Job Group "H"

...../9

Support Staff

Technicians

One Principal Engineering Technician	- Job Group "L"
One Senior Engineering Technician	- Job Group "K"
One Engineering Technician I	- Job Group "J"
One Engineering Technician II	- Job Group "H"
Two Copy Typists	- Job Group "E"
One Subordinate Staff	- Job Group "B/C"

With the above figure, it will also allow for the departments to be engaged in research work, fabrications, manufacturing and assembling of prototype design which are geared towards providing cheaper and economical items to the general public, thus upgrading living standards of the Kenyan society.

The duties and responsibilities of each of the above officers is as detailed below:-

Assistant Lecturer - Job Group "H"

This is the lowest teaching grade, and the duties will basically be:-

- (i) Teaching in the subject(s) of specialization,
- (ii) Preparing scheme and record of work according to the syllabus and
- (iii) Undertaking necessary research work in the relevant field under the guidance and supervision of a senior officer.

Minimum qualification should be Technician Part III and technical Diploma in Education, with two years' experience.

...../10

Lecturer III - Job Group "J"

The duties of Lecturer III will be:-

- (i) Carrying out teaching duties in the subject(s) of specialization,
- (ii) Preparing teaching materials and
- (iii) Carry out research work under his/her field under the guidance and supervision of a senior officer.

Minimum qualification should be Higher National Diploma in the relevant field and one year experience.

Lecturer II - Job Group "K"

Duties at this level involves:-

- (i) Giving lectures in the field of specialization,
- (ii) Preparing course materials
- (iii) Undertaking course administration as Course Officer and
- (iv) Carrying out research work under the guidance and supervision of a senior officer.

Minimum qualification should be Bachelors degree in Engineering from a recognised university.

Lecturer I - Job Group "L"

At this level, duties and responsibilities involve:-

- (i) Performing specialized and advanced training duties,
- (ii) Preparing teaching materials suitable for training at the appropriate level of training,
- (iii) Directing courses that may be assigned,
- (iv) Carrying out research in the relevant field, and
- (v) Performing any other duties that may be assigned.

Minimum qualification should be Bachelors degree and three years' working experience.

Senior Lecturer - Job Group "M"

At this level, duties and responsibilities are similar to those of Lecturer I, but in addition, the officer will:-

- (i) Conduct research for publication and production projects,
- (ii) Undertake consultancy work in his field with a view to produce learning materials and design plans for production projects,
- (iii) Initiation, formulation and implementation of new training strategies,
- (iv) Conduct high level seminars/workshops, symposia and co-ordinate courses and programmes.

Minimum qualifications - Bachelors in Engineering and having registered with Engineers' Registration Board.

Principal Lecturer/HOD - Job Group "N"

As the Head of Department, "Principal Lecturer" is expected to provide highly specialized inputs in teaching, development of training materials, development of researched projects, research and consultancy. He will also be expected to:-

- (i) Provide the necessary administration and management of the department,
- (ii) Provide the necessary liaison between his department and other departments,
- (iii) Co-ordinate research, consultancy and evaluation of Training Programmes,
- (iv) Formulate strategies for training to meet the needs of the public and private sector,
- (v) Initiate, formulate and co-ordination of research work geared towards production of items of economic importance,
- (vi) Promote co-operation and group work to enhance proper usage of materials and manpower.

...../12

Workshop/Laboratory "Engineering Technician II" -- Job Group "H"

The duties will basically be:-

- (i) Preparing and setting materials, tools and equipment for teaching practicals,
- (ii) Routine check of the conditions of various equipment in the department,
- (iii) Undertaking repair work of the faulty equipment.

Minimum qualification should be Technician Part III and two years' experience.

Workshop/Laboratory "Engineering Technician I" -- Job Group "J"

The duties will be similar to those of Technician II. In addition, "Engineering Technician I" will:-

- (i) Undertake work on fabrication and assembling of prototype researched projects,
- (ii) Undertake work on modification of equipment deemed necessary through failure rate, and researched study on the equipment.

Minimum qualifications should be Higher National Diploma and one year experience.

Workshop/Laboratory "Senior Engineering Technician" -- Job Group "K"

The duties will be similar to those of "Engineering Technician I". In addition, "Senior Engineering Technician" will:-

- (i) Undertake testing of equipment and test gears to ascertain that their performance is in conformity with acceptable international standards,
- (ii) Undertake test work on the researched prototype projects, and tabulation of data for further analysis and research.

...../13



Workshop/Laboratory "Principal Engineering Technician" - Job Group "L"

The duties will include all those for "Senior Engineering Technician". In addition, he will be charged with:-

- (i) Ensuring safety working environment in the workshop/laboratory,
- (ii) Compilation of up-to-date record on status of each part of machinery, tools and equipment,
- (iii) Compilation of the required components, spares, tools and test gears.

Copy Typist - Job Group "E"

The Copy Typist will be responsible for all typing, photocopying, duplication, cutting stencil and other office management work.

Subordinate Staff - Job Group "B/C"

The duties of the subordinate staff will be sweeping of staff offices taking messages and any other general duty assigned by the Head of Department.

...../14

STAFF SUMMARY SHEET

POST	"JG"	EI	EE	ME	MV	CP	COMMON STUDIES	TOTAL	REMARKS
Principal	P	1	1	1	1	1	1	1	
Principal Lecturer/HOD	N	3	3	3	3	3	3	7	The seventh one to be appointed as Deputy Principal
Senior Lecturer	M	3	3	3	3	3	3	18	
Lecturer I	L	3	3	3	3	3	3	18	
Lecturer II	K	6	6	6	6	6	6	36	
Lecturer III	J	6	6	6	6	6	6	36	
Assistant Lecturer	H	3	3	3	3	3	3	18	
P.E.T.	L	1	1	1	1	1	1	6	
S.E.T.	K	1	1	1	1	1	1	6	
E.T. I	J	1	1	1	1	1	1	6	
E.T. II	H	1	1	1	1	1	1	6	
Copy Typist	E	2	2	2	2	2	2	15	The extra to be used in Principal's office, Deputy Principal's office and General Administration office =DO=
Subordinate Staff	B/C	1	1	1	1	1	1	10	
<b>T O T A L:</b>	29	29	29	29	29	29	29	182	

STAFF TRAINING REQUIREMENT

From the present staff qualifications and the projected staff qualifications, it is evident that three major areas of training should be given attention.

(1) Post-graduate Training

According to our level of training and projected research work, the bulk of the staff will be Engineers. At present, this group possess Bachelors degree. In order to improve their work in lecturing and research, it is absolutely necessary to organise for their training in Masters degree and other post-graduate academic learning. This will give them confidence and also act as a motivator to most of the young graduate Engineers, who are at present being attracted to organisations and ministries with this type of training.

Since at present the technical co-operation signed under "R/D" does not include this type of training, then it is advisable to approach the Directorate of Personnel Management in view to allocating NYS Engineering Institute five positions every year, which D.P.M. usually receive from Britain, Canada, West Germany, United States of America and other countries.

It should also be necessary to bring this issue up to 1992 Mission from Japan on the overall review of the five years co-operation period, and suggest on signing another five years co-operation period as from 1st January 1993; and this to be among the area of co-operation.

...../16

(2) Upgrading Higher National Diploma to attain Bachelors Degree

In order to cater for the staff who are already in the Institute and who possess Higher National Diploma, it is essential to arrange for their training to obtain Bachelors degree. This will create at least knowledge and skills gap between these lecturers and the final year Diploma students. Otherwise, they will not have enough confidence while handling this group.

Like past graduate training, this type of training was not covered in the "R/D". It is my suggestion once again, for the Directorate of Personnel Management to be requested to assist. This can be done with consultations of D.P.M., Ministry of Education and our local universities. All the same, the issue should also be discussed with the Review Mission.

In this area, two to three positions per year would be a suitable number.

(3) Upgrading Technician Part III Holder to obtain Higher National Diploma

Like holders of Higher National Diploma, this group of officers will be teaching students to a higher level than what they possess. Again, this can lead to both students and staff losing interest with the subject; on top of students losing confidence with the teachers.

This type of training was discussed with Chief Advisor and also the annual Consultation Committee; and J.I.C.A. agreed to sponsor few vacancies for training of staff in local polytechnics. However, the programme has not taken off due to lack of enough teaching staff; and even if we were to send some staff to the national polytechnics, the sponsorship will be for only up to December 1992 when the present co-operation period ends; and the rest should be covered by the next co-operation period.

...../17

It is my recommendation that the proposed staff structure should be adapted and implemented in regard to staff recruitment so that Staff Training Programme can be easily implemented.

(We have not been utilising training opportunities offered by J.I.C.A. locally and in Japan effectively due to shortage of enough teaching staff).

In this area, to cater for the already existing staff, three to four positions every year would be a suitable number.

### Other types of Training

Apart from the three academic types of training, other short courses/ seminars should also be considered. This should include:-

- (1) Administration and Management Courses,
- (2) Equipment Maintenance Courses,
- (3) Systems Design and Planning Courses,
- (4) Computer Aided Design and Manufacturing Courses,
- (5) Production Engineering Courses,
- (6) Short Courses on Teaching Methodology, among others.

The Administration and Management courses should be negotiated with the Directorate of Personnel Management to take place in Kenya Institute of Administration, Arusha (Tanzania) or any other convenient Training Institute. One or two positions per year would be convenient to start with.

The Equipment Maintenance courses are already in progress, though as mentioned earlier, the shortage of staff is hindering the smooth running of the programme under J.I.C.A.

The particulars for the other courses will depend on the particular discipline, however, most of them are among those offered to D.P.M. by donor countries like Britain, Canada; etc. For these courses, one to two vacancies per year are suitable to start with.

The programme would achieve a figure of about 12 staff trained in different levels every year. It would also motivate, attract and retain qualified staff in the Institute for effective lecturing and research work.

Eng. G. K. Munuku  
Ag. Principal  
NYS ENGINEERING INSTITUTE

## NYS の職階







DIRECTORATE OF PERSONNEL  
MANAGEMENT  
P.O. Box 30650  
NAIROBI, KENYA  
7th December 1958

# CONFIDENTIAL

Permanent Secretary/Administration,  
Office of the President,  
NAIROBI

(Attn: Mr. J.T.N. Sabari)

*AD A jobs  
CFO (Admin)*

ESTABLISHMENT: NATIONAL YOUTH SERVICE

*Please note and  
arrange to fill the  
urgent posts mentioned  
for these above  
required to proceed to Japan*

You are hereby authorized to establish the following posts *training*  
for the Engineering Institute, National Youth Service, during the  
current financial year:

- 1 post of Principal, Job Group "N"
- 1 post of Deputy Principal, Job Group "M"
- 3 posts of Senior Lecturer, Job Group "P" (Head of Department)
- 5 posts of Lecturer I, Job Group "K"
- 10 posts of Assistant Lecturer, Job Group "J"
- 5 posts of Laboratory Technician, Job Group "H"
- 1 post of Accountant II, Job Group "H"
- 1 post of Librarian II, Job Group "H"
- 1 post of Supplies Officer II, Job Group "H"
- 1 post of Executive Assistant, Job Group "G"
- 1 post of Shorthand Typist I, Job Group "G"
- 1 post of Supplies Assistant I, Job Group "G"
- 2 posts of Catering Assistant, Job Group "F"
- 1 post of Shorthand Typist II, Job Group "F"
- 3 posts of Plant Operator/Instruction, Job Group "F"/"G"
- 1 post of Senior Library Assistant, Job Group "C"
- 1 post of Senior Audio Visual Officer II, Job Group "C"
- 1 post of Senior Cook, Job Group "E"

CONFIDENTIAL

- 3 posts of Copy Typist II, Job Group "D" —
- 2 posts of Storeman II, Job Group "D" —
- 2 posts of Telephone Operator, Job Group "D" —
- 2 posts of Cook, Job Group "D" —
- 3 posts of Boiler Attendant, Job Group "D" —
- 7 posts of Driver, Job Group "C"/"D" —
- 7 posts of Subordinate Staff, Job Group "A"/"B" —

The following posts should be established for the same Institute during 1989/90 Financial Year: —

- 1 post of Dean of Students, Job Group "M"
- 5 posts of Lecturer I, Job Group "K"
- 5 posts of Assistant Lecturer, Job Group "J"
- 1 post of Accounts Assistant, Job Group "G"
- 1 post of Audio Visual Assistant, Job Group "D"/"L"
- ~~4 posts of Cook, Job Group "D"~~

It has also been agreed that the following posts be established in 1990/91 Financial Year for the Institute.

- 5 posts of Lecturer I, Job Group "K"

Please take necessary action.

**B. E. MWANGI**

B. E. Mwangi  
PERMANENT SECRETARY/DIRECTOR OF  
PERSONNEL MANAGEMENT

Mr. J.T. arap Leting,  
Permanent Secretary/Secretary to  
the Cabinet & Head of Public Service,  
Office of the President,  
Nairobi

Mr. C.S. Mwangi,  
Permanent Secretary,  
Ministry of Finance,

Please refer to my letter  
ref. no. P.M.S. 101/62/29

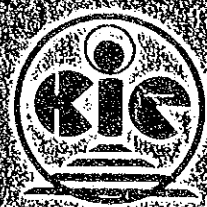
M. Langat,  
Director of National Youth Service,  
Office of the President,  
N.A.S.

Mrs. K.K.K. Kinalat,  
Secretary,  
Public Service Commission,  
N.A.S.



Kenya Institute of Education HANDBOOK (表紙のみ)

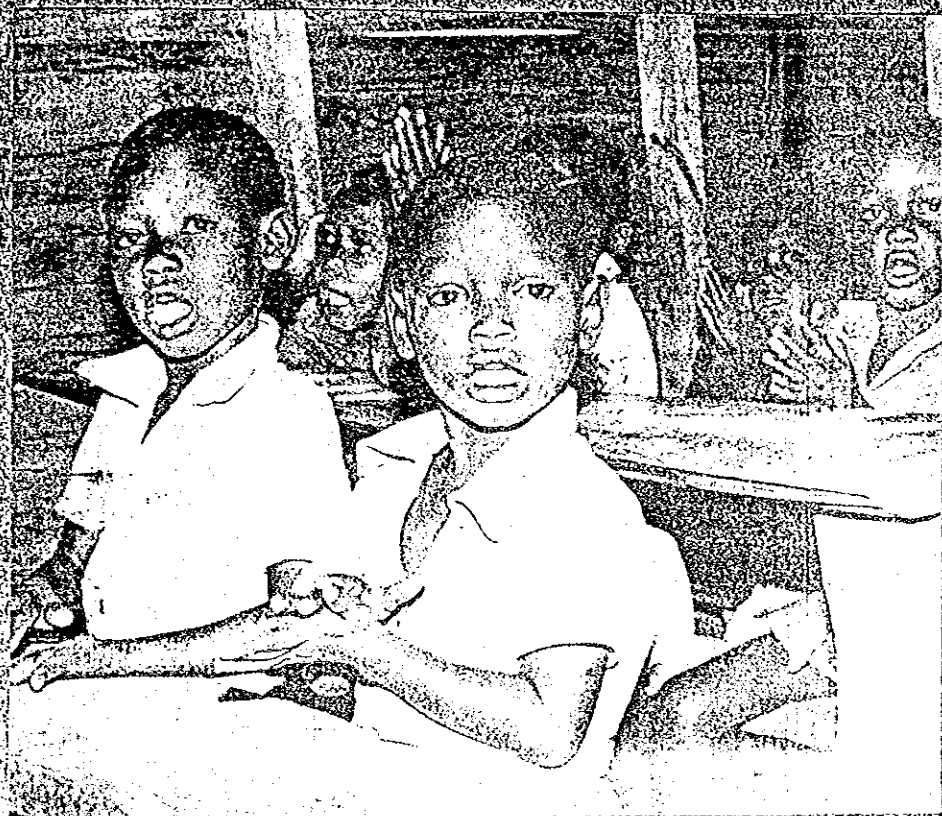




# Kenya Institute of Education

## HANDBOOK

SILVER JUBILEE EDITION  
(1957-1982)



JICA