THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF LABOUR AND SOCIAL WELFARE
NATIONAL VOCATIONAL TRAINING DIVISION
(NVTD)
MANAGEMENT MEETING
, ON
VOCATIONAL/OCCUPATIONAL TRAINING
1977
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NATIONAL VOCATIONAL TRAINING DIVISION
MANAGEMENT MEETING
ON
VOCATIONAL OCCUPATIONAL TRAINING
THURSDAY 20TH--FRIDAY 215T, 1977
IFM 1977- DSM. 95: l,
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FORWARD

Development ofa National Training Programme is a long process and it involves a lot offac tors.

The purpose ofthis meeting on Vocational/Occupational Traihing was to involve Industrial managers and trainers in the devetopment of Vocational Training. There are many ways Wthh can be used to get Inputs fr om managers and trainers in various government and parastaml Institutions.

It was very encouraging to hnd out that the conference managed to bring together various management personalitics at diHeran lcvels and their awarenoss and feelings of vocatxonal trammg problems was well co nceived.

We hope that N.V.T.D. Managemcnt will continue to involve managers and trainers in every planning stage in order to develope sound and acceptable vocational training programme which should suit the needs o f the country in particular the countries philosophy of socialism and sclfrclicacc.

M. H. MANYANGA,
Director

PARTICIPANTS DESIGNATIONS AND CATEGORIES
(a) Company/Industry Executive Chairman.
(b) Company/Industry General Managers
(c) Company/Industry Executive Engineers.
((1) Company/Industry Personnel and Group Training Managers.
(6) Company/Industry Senior Personnel and Training OHicers.
TYPE OF- COMPANIES REPRESENTED
(a) (N.D.C. Group Companies and Parastatal Organsizations.
(b) Small Industry Development Organization (SIDO)
(c) Construction Industries.
-Building.
-Civil.
-Road.
-Structural.
(d) Engineering Companies
---Mechanical.
-Electrical
--Metal.
(c) Textile Industries.
MGarment Manufacture.
wCloth Making.
(1') GovernmentMinistries.
--Labour and Social Welfare.
HManpower Development.
wNational Education.
#Works.
mlndustries.

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ATTENDANCE LIST-THURSDAY OCTOBER 20TH FRIDAY 218T, 1977

Name

S. M. Shauri
Tom I Ringia
E. L. Lutanjuka
D. Sijaona
A. Ruhilabache
M. M. Kahinga
E. I. M. Hanti
C. E. K. Mwakyusa
S. F. Rukundwa
M. L. Ole Mctili
R. A. Letara
B. L. Saguwalu
K. A. Deruu
E. W. Shetto
A.A.Nje1ekelu
S. Q. H. Zaid
O. S.Jum21
A. T. Hariri
R. Mwajasho ..
H. Gaspar Lyaruu
A. Kanyilili

Tumbo N. S. K.
S. J. Isanzu
R. D. Reuben
C. Lukoo
.l. A. Deslin
N. E. Lcma
L. R. Mahimbo
M. M. Z. Maganga
S. M. Wangwe
J. M. Masikini
A. Y. Gondwe
O. J. Kitlya
Said Nyange
M. Idd ..
M. R. Haji
A. E. Mwanjesu
0. Mwambungu
S. Braiden
Xaver Gama
E. A. ShewaHi
Catherine Harvey
M. Kafuku
C. Rugalabumu
R. C. Utukulu
A. M. Senkondo
D. L. Kishe
M. Ramzan
N. D. Mhenga
A. S. Njelekcla
M. M. Cosmas
C. R. Ngaja
’ T. T. P.C. Morogoro.

No. of Employees	Organization Position in the Organization Working
W	
Mtibwa Sugar Estate Limited.	Senior Administrative Officer.
Tanzania Distilery Ltd. (KONYAGI).	Sales Manager.
N.B.C.	Staff Training Manager.
Registrar of Buildings.	Training Ofiicer.
Capital Development Authority Dodoma.	Group Training Manager.
Capital Development Authority Dodoma.	Manpower Development.
Ministry of Industries.	
Metal Box (T) Limited.	Personnel Manager.
Tanzania Fishnets. Limited.	Training Manager.
NEDCO	General Manager.
Kibo Paper Industries Limited.	PersonnalManager.
Tanzania Portland Cement	Executive Chir man
TANESCO.	Executive Engineer.
N.T.C.	Manapoper Development and Training Officer.
N.P.F.	Personnel and Training Manager.
Kiltex Dar es Salaam.	General Manager.
General Tyre Arusha.	Personnel Manager.
Tanganyika Packers Ltd.	Industrial Relations and Education Officer.
Tanzania Fertilizer Co.	Administrative Manager.
Car & General	Eutectic - of Castolin.
U of D FOE	Industrial - Cordinator.
Bora Shoos.	-

Tea Authority. -
Amboni Limited. Group Training Manager.
Habari Printers. -
Brooke Bond Liebig. #
Y.M.C.A. Vocational Principal
Training Centre.
KENAF. Training OfEccr.
Personnel Manager.
University. Senior Lecture.
TAPA . Technical Coordinator.
Tanzania Battlers Limited. General Manager.
N.P.C. Works Manager.
Blanket Manufacture.
Blanket Manufacture.
Training omcer .
Personnel Officer.
TACONA. Ag. Workshop Manager.
Brooke Bond Liebig. Personnel Director.
A.T.E. Deputy Executive Director.
Business Machines Limited. Workshop and Training
Manager.
D.T. Dobie. Workshop Manager.
Tanzania Twine & Rope _
CUSO. -
MECCO. Personnel and Admini-
stration Manager.
TAPA. _
NUTA. Principal.
Tegry Plasticr. _
Matsushita Electric Co. _
Kiltex, Dar es Salaam Quality Control and
Training Manager.
Sunguratex. DSM. Administration and
Personnel Manager.
N.P.F. Personne. Manager and
Training.
TANESCO. -
N.H.C. Training OHicer.
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4,000
70
450
450
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3,000
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822
400
2,218
1,700
4,600
40
3,000
26
144
400
640
640
5,160
90

76
700
600
600
474
194
696
2,000
2,456

53.
54.
55.
56.
Name
Organization
Position
Collande
E. Muwanga (Miss)
Major Mnyupe
Andrew Stevenson
Engineering University
Dar es Salaam
S.I.D.A. Dar es Salaam
National Service
U.N.D.P.
vii
Lecture
ll!
No. of Employees
in the Organi-
zation Working
Ill

u MANYANGA
A
M.
A. THUMAN
P.
E.
N: NGOWI
M. H. MANYANGA
O. MWAMBUNGU
A. D. MROSSO
V M. COLLANDEW
KEY SPEAKERS TO THE MEETING
Director N.V.T.D.
Asst. Director N.V.T.D.
Lecture Faculty of Enginneering University of Dar es Salaam.
Senior Industrial Training O&iccr and Head of inplant’rraining
N.V.T.D.
SECRETARY OF THE MEETINGS
.. Director N.V.T.D.
CHAIRMAN TO THE MEETING
Deputy Executive DirectorAssociatlon of Tanzania Empioyers (ATE)
MEETING ORGANIZER AND CO-ORDINATOR
Head Instructor Training Unit N.V T.D.

MEETING OBJECTIVES

1. To inform Senior Management Personnel of the role of the Natiunat Vocational Training Division N.V.T.D. in the National Development of Vocational/Trade/Occupational Skills through the pmxers granted in the Vocaticnal training in the Act, 1974.

2. To develop an approach to setting training policies and training budget within individual organizations Consisted with the provisions of the Vocational training Act, 1974.

MAIN AGENDA

1. The Vocational Training Act, 1974:
wIts meaning, purpose and powers granted.
_Planning and execution by N.V.T.D., Minist ry of Labour and Social Wetfare.
-Its Scope for broadening and up grading National Occupational Skills.
huIts limitations. ’

2. The Implementation: of Vocational/Occupational Training:
w-Vocational/Trade Schools and Centres.
-Employment of Vocational Trainees.
-The Apprenticeship Scheme.
w-Appointment and responsibility oftraim’ng ofhcers.
w-Training of Instructors, Training thcers and Supervisors.
--V-Training Budgets.

3. National Co-ordination of Training:
#Intemal Co-ordination; the training ofhcer and management.
wNational Co-ordination by N.V.T.D.
_-The link with the Ministry of Manpower Development.

4. Training and the Transformation of the h’lanufacturing Industry in Tanzania:
--Selecting the proper Methods.
wExtcrnal/Imemal aids.
wOrganizational and the Pyramid of C rafts Cadre in advancement and level 0f operating.
MDesign/Research.

5. Manpower Planning for the Provision of Training in Industry:
-Where to obtain them.
-Utih’zing Local Personnel and resources.
wManpower Inventory.
wClasification of Technical Skills through Trade Tcstg and other C riteria 01" Measuren’t cm.

DAY ONE:
DAY Two: FRIDAY OCTOBER 215T:
PROGRAMME-OCTOBER 20TH-215T, 1977
THURSDAY, OCTOBER 20m:
8.00 a.m.- 9.30 am.
9.30 a.m.--10.00 am.
10.00 a.m._10.30 am.
10.30 a.m.-11.00 am.
11.00 a.m._11.30 am.
11.30 a.m.-12.00 am.
12.00 a.m.v-12.30 p.m.
12.30 p.m.- 1.30 pm.
1.30 p.m.- 2.00 pm.
8.00 a.m.-# 8.30 am.
8.30 a.m.- 9.00 am.
9.00 a.m._10.00 am.
10.00 a.m.-10.30 am.
10.30 a.m.-11.00 am.
10.00 a.m.-l 1.30 am.
11.30 a.m.--12.30 p.m.
12.30 p.m.-- 1.30 pm.
. Manpower Planning for the Provision of Training in Industry (A. Athumani).
. Group discussion.
. Reporting and open forum with panel discussion.
. Working on Resolutions. Ndugu Athumani.
. Closing by Ndugu R. Makutika, Labour Commissioner.
.SOCIAL HOUR.-
Registration.
Opening by Ndugu Mlipano.
Assist. Principal Secretary Ministry of Labour and Social Welfare.
Review last conference Resolutions by M. H. Manyanga.
BREAK
The Vocational Training Act. Ndugu M. H. Manyanga.
Syndicate and group discussion on the topic.
Reporting and open f orum with panel discussion.
LUNCH BREAK.
The implementation of Vocational/Occupational Training Act. by Ndugu
A. Athumani.
National Co-ordication of Training By Ndugu Ngowi.
Group discussion.
Open forum with panel discussion on the topic.
Training and the transformation of the manufacturing Industry in Tanzania Ndugu
by Collande.
BREAK.
Group discussion.
Reporting and open forum with panel discussion.
LUNCH BREAK.

NATIONAL VOCATIONAL TRAINING DIVISION
PAPERS PRESENTED
TO
THE MANAGEMENT MEETING
ON
VOCATIONAL/OCCUPATIONAL TRAININ G
OCTOBER 20TH-FRIDAY, 218T
IFM_1977
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THE VOCATIONAL TRAINING ACT, 1974

By 1V1. H . AIanyanga

INTRODUCTION

Ever since indipentience, industry in this country has been short of skilled labour. This has generally been so, even in those parts of Tanzania whete the general demand for labour has been relatively small. There is no doubt that shortages of skilled labour has been an important factor in holding back the rate of econ omic development and expansion.

The uneven quality of train_ng given by employers arid the views that shortages of skilled labour had been a persistent constraint on economic expansmn were therefore the major factors behind the Vocational Training Act, 1974.

1. The General Conditions of Training Apprentices:

The Vocational Training Act, 1974, which makes provisions for the regulation of the training of apprentices and other persons in employable occupations, outlines the conditions of training of apprentices. Under the Act, training schemes can be established for regulating the Training ofapprentices.

2. Training Schemes Under the Act:

The first National Training Scheme for training apprentices is just about to be published by the Minister of Labour and Social Welfare. This Scheme which outlines the general working conditions and training of apprentices, lays down speicific training standards for apprenticeship programmes to be introduced in Industry and other Institutions.

3. The Primary Aim of the National Training Scheme for Apprentices:

The scheme is primarily designed to promote, develop and regulate systematic apprenticeship training programmes in Industry to ensure that. all apprentices m the skills covered by the Scheme, receive adequate training in accordance with the standards prescribed under the scheme.

The scheme is primarilly concerned with Formal and Non-Formal education. Formal and Non-Formal education according to Philip Coombs widely known definitions are 2w

Formal Educationze-tlis the hierarchically structured ehronologically graded educational system, running from primary school through the University including, in addition to general academic studies of a variety of specialized programmes and institutions for full time technical and professional training?

Vocational Training Centres, Technical secondary schools, and Mission Trade Schools for the purposes ofthis scheme fall in the formal education system.

Non-FomtaluEducation:this any organised educational activity cutside the established formal system-whether operating separately or as an important feature for some broader activity-that is intended to serve identifiable clienteles and learning objectives?

industrial Schools like Mwadui, T.P.C., Sugar Institute, D.T. Dobie, Hotel School, MTAVA, National Transport Institute fall in this category.

It is important to know that Formal and Non-Formal educational form a continuum and not two quite ditTerent models.

This is because the people to who these training programmes are addressed are of ten one and the same. Since the broadest objectives of V ocational Training are :7 v-

(a) Helping people to gain marketable skills, and upgrading the skills of persons already employed.

(b) Enabling individuals to acquire knowledge and experience specitic to their needs.

We are all aware that, the apprenticeShip system in Europe wasihtroduced to preserve the exercise of a craft which already existed and by restrictions on entry to maintain the economic posxtion of those who already practised this craft. Therefore the apprenticeship system in Europe was not primarily desxgned to increase the supply of skilled labour.

In Tanzania there are prectically ho established crafts to protect, therefore it is my belief that the dominat need is for more hexible Apprenticeship training system rather than close imitation of a system which cnvolved under quite different circumstances.

4. Execution of Vocational Training:

Vocational training is defined asM"actiVities which essentially aim at providing the Skil lS, knowledge and attitudes
required for employment in a particular occupation; group of related occupations or a fun ction in any field of economic
activity including agriculture, industry commerce, catering and tourist industries, hotel , public and private services?
V ocationitl training is usually divided into three parts:
(i) basic or pre-apprenticeship training which is usually undertaken in Vocational/techni cal schools.
til) practical training on the job which is undertaken with the employer under supervisio n by government implant
training officers.
tiii) Supplementary training course which includes practical training and theoretical ins truction related to the trade,
which is conducted at it training centre or at other approved training establislunent.
5.- ?The Nationnl Vocational Training Council:
Under the Act. provision is made for the establishment of National Vocational Training Co uncil and Training
Committees. The council is composed of representatives from employers (ATE) employees (N UTA) and the government.
The function of the council is to advise the Minister of Labour and Social Welfare all ma tters relating to apprenticeship
training. The council may establish trainng committees to exercise functions of the counc il in relation to trainng in specified
occupations. l

ADVANTAGES OF SYSTEMATIC APPRENTICESHIP TRAINING

Productivity, maintenance and effectiveness of any industry largely depend upon the quality and quantity of its trained technical manpower. There is no beatter way of producmg compentent, adaptable, skilled craftsmen than by means of comprehensive systematic training scheme.

No organised modern society can progress without skilled workers. Such skills do not happen._they have to be learnt.

They can be learned partily by haphazard training and error (standing by will) over the years. This method is costly to employers, in time; wastage of material, demage and misuse of equipment and accidents. Lack of formal training denies them the opportunity of acquiring knowledge, ability and skill to enable them to progress. In Tanzania the trade of motor vehicle mechanics is the very good example of a skill that most of the people practiSing it have learnt it through the method of trial and error. Although some of these mechanics are to some degree competent, but they are not adaptable; their work is costly in employers time they misuse equipment ,wastage of materials and they contribute in the increase of motor accidents. These motor mechanics have emerged from the informal education system which according to Philip Coomh's informal education uis the life long process whereby every individual acquires attitudes, values, skills and knowledge from daily experience and educative influences and resources in his or her environment?

If these mechanics are exposed to a systematic upgrading training programme which will equip them with the basic motor mechanic skills and knowledge their working methods and their appreciation of technolgy and technological innovations will improve.

In the Metal trades the informal education is very minimal because these skills were mainly practised in very few industries and their tools and equipment are very expensive for an individual tradesman to possess. Also an atnount of basic education is necessary for reading measuring instruments at little bit of mathematics for calculations and drawings interpretations.

Because of the above constraints, the Metal trades. skills were neglected, and people were not eager to acquire the skills.

This is well supported by Messers C. E. Baker, M. R. Bhagavan, P. M. von Mitshoke Colland e and D. V. Wield research paper on Industrial Production and the Transfer of Technology in Tanzania 1974. The absence of Metal Trades skills in most industries in Tanzania is attributed to three main constraints.

(i) The type of technology used in producing certain products is imported, i.e. machinery were manufactured in a foreign country.

(ii) Most of the major spare parts are produced by manufactures.

(iii) Absence ol'steel and design facilities.

Since the above Variable are not manufactured in Tanzania, it is dilhcult for any industry to set up to big workshop for producing some of the major spares because it will also require a design section: and the importation of appropriate type of steels In the absence of local steel, and design facilities industries in Tanzania decided to stock a lot of major spare parts and by procuding very minor types 01' spares such as bolts and nuts. You will not be able to find alot of skilled workers in the Metal Trades.

Another factor which contributed to the lack ofskilled workers in the metal trades is that there is not any manufacturing industry where machines and tools are produced. Metal trades are the key skills in the manufacturing industry.

In the absence of such a base you cannot think of transfering such skills for the purpose of trying to maintain imported technology. A base of manufacturing and assembling is of fundamental importance if we have to embark on the training of skilled workers in the Metal trades for the Engineering Industry. This will automatically solve the problem of spare parts.

By this I mean you can not think ofmanufacturing spare parts for water pumps ifyou cannot manufacture one. Indeed, during the process of manufacturing the engineering process of moulding, casting, rolling

, turning milling, shaping, black-
smith, instrumentation etc, are brought together, reinforced by the design capabilities of engineers and technicians to solve
a felt need of a Certain society. This is where lam convinced that the societyis values, culture, attitudes must provide
conditions for technological developments and invovations. These conditions must be supported by appropriate educational
systems: since nowadays machines, material exploitations, equipments and manpower are becaming costly each year.
Machines and equipment are more complex, added skills and knowledge are therefore needed to operate them efficiently
and to cope with the many techniques now applied in Industrial development and progress.
Technology is part of us.
We either use technology or we do everything with our hands, but because our hands. legs. eyes etc. are now represented in
a certain type of technology we ought to know how to utilize the benefit of mans enventio n effectively and this i.. only
through systematic apprenticeship training designed to provide specialised skills and knowledge geared to the specific needs
OFthe countryis industries.
Training programmes must be developed in such a wav that individual development is encouraged and the stimulation
of ones creative potentials. This means people whose training and education have made them free and flexible and not
those who have merely learned to perform a task however useful. If science is taught, it should be of thought to lay the
foundations of an objective and experimental approach to nature, rather than technological training. Training Centres or
Technical Schools should be a vehicle ofattitudes, encouraging individual development and the apprecication of technology
and sctenee as tools for soctal and economic development
Employers must try 1-) increase the energy and motivation of their employees to improve by encouraging continuous
education, prowding incentives and by conducting research on the job training programmes for craftsmen, technicians
and engineers. Employers must also encourage research by providing research projects for techinians and engineers.
Conclusions:
For the .suceessful implementation of the Act. constructive partinership between industries and tthe National Vocational
Training Diwsion 1s Vital. The N.V.T. D. success depends on the feed back and Corporation from employers, Trade Unions
and Ectucationalists. A joint planning and integration of training and further education between Employers Employees
educationahsts IS the first step in the development ofsystematie apprenticeship training scheme. , ,
lhe aim of the act is to stimulate firms to develop new approach to the trainintY of tl ’ ’ w
. . . L 1e re uired sk ll
their own forescable needs. lhus it IS helpful to distinguish between :- a q 1 ed orkers to meet
(a) Training arranged by particular employers to meet their own immediate needs;
(b) Training going beyond the obvious needs of particular em lo ers but necessar
an in dustry as awhole; p y y to meet the foreseeable needs of
(0) Training given to individuals to meet national economic needs, going beyond the obvious needs of particular innps-
tries.
2

((1) Training given to individuals to enable them to take new or better jobs which they c
annot get without first acquiring
new skills.
(6) The contribution of education.
We must be careful not to assume that once we have got a law the purpose of the law shoul
d be achieved 1n whole or in
part. Tanzanians generally assume that when the Parliament adopts a policy and appropriat
es money fo1 it and when the
parent Ministry arranges a programme, hires people, spends money, and carries out act1vit
ies disigned to implement the
policy, the effects of the policy will be felt by the society and the effects will be tho
se intended by the policy
Unfortunately these assumptions are not always warranted. The National experience with pu
blic corporatio 113 indicates
the need for careful appraisal of the real 1mpact of public policy.
We must distinguish between upolicy outputti and policy impact. The impact of a policy is
 its effect on real world
conditions. The impact of a policy includes:#
(1) Its impact on the target situation orgroup.
(2) Its impact on situations or groups other than the target. (Spillover effects).
(3) Its impact on future as well as immediate conditions.
The above framework will help us to find out whether the Vocational Training Act. 1974 wi
ll be able to
accomplish its objectives. Gentlemen I request you to propose the period to conduct this
appraisal.
Appendix I shows the proposed TrainingScheme.
Appendix II shows the number of Vocational Trainees placed in manufacturing Industry sinc
e 1969. There is an
indication that most of the tranees are employed by Government departments. Therefore mos
t of nunufacturing
Industries recruit their skilled workers from the non-formal educational system. Therefor
e, ttthere is a total divorce
between educational institutions and production, the theoretical knowledge provided does
not relate to the present
industrial practice. Very basic actual technical needs in production remains unsolved?
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9 9.459359?
Appendix 1
NUMBER OF VOCATIONAL TRAINERS PLACED IN MANUFACTURING INDUSTRY SINCE 1969

Industrial Activity	Establish- ments	Total Employees	Trainees Employed
1 Stone Quarrying	6	306	None
2 Sale Mining	7	664	4
3 Mining and Quarrying	19	5,674	28
4 FoodManufacturing	137	15,933	26
5. Beverage Industries	11	2,493	8
6. Tobacco Manufactures	3	4,468	None
7. Textiles	65	22,302	106
8 Wearing apparel	23	1,908	None
9 Leather and Products. .	5	453	2
10. Foot wear except vulcunised on rubber or plastics	3	1,463	5
11. Wood and Wood Products	49	3,206	5
12. Furniture (non-metal)...	30	855	None

13. Paperand Products 8 1,156 None
14. Printing and Publishing 38 1,761 None
15. Industrial Chemicals 11 1,464 None
16. Other Chemicals products and petroleum refineries 22 1,610 5
17. Rubber products 9 1,252 None
18. Plastic products .. 5 528 None
19. Glass, Glass products and other non- metal mineral products 16 2,162 None
20. Iron, steel and non- ferous metal 4 888 4
21. Fabricated metal products 19 2,259 7
22. Machinery except electrical 17 721 None
23. Electrical Machinery 4 761 3
24. Transport Equipment... 14 1,565 None
25. Other Industries 6 766 None
26. Government Departments __ - 903
27. E. A. Community _ _ 14
28. Engineering Building Services .. - - 186
Total 531 76,618 1,306
Source:-Survey oflndustrial Production-1974. Bureau of Statistics, DSM. (1977) pp. 1647.
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Np-n____v-_-tI-qu-n
Ppws?9%wwrpwwuowawwa
Mwananchi Engineering (MECCO)...
Kilombero Sugar Company
Tanzania Twine Company-Tanga
MWATEX Box 1344, DSM
Water Development Power
D.D.T. Dobies Box 1992
Regional Engineer
University of Dar es Salaam
Cooper Motor
East African Posts and Telecom.
D.M.T. (KAMATA)
chmi Box 5021, DSM
Regional Water Engineer
Maji Mkoa Box 164, Morogoro
National Textile Corporation
Tanganyika Dying Weaving Mill
Kilimanjaro Tcxlilc Corporation
Assocmtcd Const. .
Ministry of Education
Mamlaku yu Pamba
Manager Air Port
Sumar Varm & Associated
Design Purlcr Ship
National Estate and Design
NCRMAN & DAWBAN
COWI Consult
Tanzania Breweries
Msajili wa Majumba
Bohari (Ghala Kuu)
Tanzania Shoe Company
Tanzania Portland
National Milling Corporation
TANITA Box 9280
Berkeluy National Engineering
Water Supply Pugu Road
Kilakala Secondary School
Water Supply Dodoma
Tanzania Fertili7er Tanga
T.T.R.W. Ngomeni Tanga

Tanga Sisal Corporation Tanga
Mawasilianou4Handeni
Singer Saw M ilk -Tanga
Mawasiliano Pangani-Tanga
Karimjee Jevanjee Box 4, Tanga
T.I.C. Ltd. Box Tanga
R.D.D. Box 379, Tanga
Water Supply Mtwara
Water Supply Lindi
Ujamaa na Ushirika Box 70, Mbcya
Water Development
R.D.D. Box 5021, Tanga
Water Supply Singida
Total
Total
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59. Co-opcrative Shoe Maker M beyu
60. Kiwanda cha Ngozi Morogoro
61. Muungano Ginnery Box 68, Muscma
62. Uvinza SaltMining
63. TAPA Box 119, Kilosa
64. Ginnery Ushashi Box 1017 Bunda, Mara .
65. OVADA Parishi--Kwa Mtoro, Kondoa
66. TANESCO Mtwara
67. Nditi Moravian Church
68. M.S.M. Limited Box 42 Uvinza, Kigoma
69. Ginncry Ushashi Bunda, Mara
70. UNECCO International, Kidatu
71. Kagera Sugar
7?. Ehmu Supply and Othce Machine Repair
73. T.C.C. Limited
74. Matsushita Elec. Co. Limited
75. Aluminium Africa. Ltd.
76. Bugando Hospital, Mwanza
78. Bombo Hospital, Tanga
Total ... 96
JUMLA YA VVHTE 5i3
, _ _ _ Appendix 11
Hit UNITED REPUBLIC OF TANZANIA
THE VOCATIONAL T RAISING ACT 1974 ACT N0. 28
NATIONAL TRAINING SCHEME FOR THE TRAINING OF SKILLED WORKERS
l. Furmui Vocationa! Training.
2. Non-formai Vocational Training.
THE VOCATIONAL TRAINING ACT N0. 28 OF 1974
1N EXCERCISE ofthe powe’rs conferred by section 19(1’) ofthe Vocational Training: Act. th
e Director, after cettSLIIatim-z with
the National Vocatiqnul Traunig Cptmcil. hereby makes a scheme specified in the schedule
hereto. t’or regufuting the recruib
merit, working conditions and training of skilled workers.
SCHEDULE 7A"
Formal Vocational Training
l.mTitle:
The scheme shall he called the National Vocational Training Scheme for the training Of’ S
kilied cs’zttitnwn, hereinafter
referred to as the "Scheme" and shah come into operation on the date of publication.
Definitions:
itApprcnticcii shall mean a person Mm had undergone previous Basic technical training rel
evant to the trade or occupa-
tion and is subsqucmiy bound by a written contract to serve an employer for :1 determined
period with the view to acquiring
knowledge, including theory and practice, 01721 trade in which the employer is reciprocal
ly bound to instruct that person.
hApprenticcshipi’" shall mean any truinig that is provided on the premisses of an undetak
ing and in which the trainee is
in an employment situation based on a contract 01 apprenticeship and which has been arran
ged at an ordinary work place
and uses actual jobs of commercial value for instruction and practice purpox-c,
2 .wApplication:
The scheme shall apply to uh categories of craft apprenticeship and training.y rcfcred to
in this schedule.
3. Responsibility for the Scheme:
The Director of Vocational Training. hereinafter rcfcrrgd tqaq the "Directoril appointed
under section 3 of
the Vocational Training Act, shall be responsible for the operation 01 the scheme.
4. Training According to Needs:
(2 Trades and occupations for which training may be organised arc shmx n in appendix 1.
(_b) The number of trainees to hit enrolled shall be determined by the Director.
5.mPeriod of Training:
Period for the Training of skilled craitsmcn shah be determined by the Director and shall

comptixc of Full time basin;
training provided 0n the premisscs nf a Vocational Training; (cntrc or :1 school 517.118 .th in an unzilerhiking. providing both
related instruction and practical training. This shall be fohoxx’cd by a. mtO-tdetcmtmed period of’wurk. axpericncs in under
akmgs 1n the form of apprenticeship.
6.#Basic Training:
(a) Basic training, under the scheme, shall comprise of a period of one year fuiiutime training. The Director may.
attct’ consultation with the Council, prescribe more time as deemed iiscccssary. Training shall consist of Induction of
trainees, acquisation of have skilis and initial demiopmcnt 0t spccml skills.
3
3

(b) Training shall, each year, start on the second Monday of September consisting of four
ty working weeks split in two
terms. First term will comprise of tifteen working weeks starting from the second Monday of each September,
(c) Second term will commence on the third Monday of January each year, lasting for twent
y-five working weeks.
(d) The academic year for basic training shall consist of minimum of two hundred working days. Should, for some
unexpected reasons, the number of days attended by a trainee be less than two-hundred, hi
s period of training may be
extended at the description of the Director according to the nu: iibcr of days he has mis
sed.
7.-Qualificali0ns for Enrolment:
Candidates shall be required to have:
(a) Completed 8 minimum of primary education.
(b) Attained the age of 16 years.
(c) Been medically examined and obtained a medical certificate to the cflect that such a person is lit for the trade/
occupation concerned.
(d) Been successful in the entrance examination.
8.-Probation Period:
Every trainee. shall undergo a probationary period of three months commencing from the da
te of his enrolment at
:1 Vocational Tranttng C entree _A staff meeting in which all the teachers zmd Instructor
s who taught the trainee are present,
can dec1de to terminate 1113 training with period.
9.- Sponsorship:
Employers can rccemmed and sponsor candidates under the scheme after they have accepted b
y the Director. Sponsored
candidates shall be given preference and shall be bound by the conditions applying to app
rentices as laid down in this
schedule.
10.-Recruitment and Selection:
Candidates shall be recruited in accordance with the procedures f or selection, testing. The tests which shall comprise
English. cohtprehesion, Mathematics, tinger dexterity, problem solving, pattern analysis, form parception and eye-hand
Co-crdmation, may be revnsed from time to time by the Director.
11.-Registration of Trainees:
After enrolment, successful candidates, shall be registered by the Director.
12.wTraining Courses:
Dtiring training in 3. Vocational Training Centre, the National syllabus prepared by the relevant vocational training
committee and approved by the C ounml shall be used.
13.-wPr0fiicienc y Testing:
.(a) At the cnti of_ the basic training, cantlidatesshall undergo proticiency tests which shall include practical tests and
wntten examination in related theory. The tiCet’tihcutc of Basic Training" shall be issue
d by the Principal of the centre
in tlge fotm prescribed in NVTP/ll hereto. The perfornmnce during this period of training shall be endorsed on the
certi cate.
(b) Proficiency tests shall be conducted in J une ofevery year and shall consist of :
i. Workshop Practice
ii. Technology
iii. English
iv. Calculations .. -
v. Political Education _. ’ :E Eours
vi. Swahili .. . __l;hours
vii. Technical Drawing - ours
viii. Science
5 hours.
.. -3 hours.
. -1% hours
. -2 hours
. _2 hours
14._Placemcnt for Apprenticeship:
Successful trainees shall subsequently be placed in Industry for in-plunt training after the Princi
satisfied that the prospective untietaking has the minimum facilities rcq uired fer the t
raining ofa

of the centre and the Labour olhcer of the area shall arrang: 2111 such placement of appr
entices.
pal 0fthe Centre has been
pprentices. The Principal
15.-Contract of Apprenticeship:
A contract of apprenticeship in the form sit out under N’t TP/llhereto shall be entered i
nto b
employer. The contraet Shall be prepared in triplicate, one copy each to be retained by t
he
and one copy to be i’CidlnCd by the Director for records.
y every apprentice and his
apprentice and the employer
16.#_Wagcs and Conditions of Employment:
The aapreutice shall be uranted xi , and CM T - i v: x e . H e t .. t A - ’ .
NVTP/lzl). a 1 3 (WHO") 01 Wihlomunt us net (,IU. Hi the (bittiatt ofnpprenttceship (for
m
17r-Peri0d 0f Apprenticeship:
The period of apprenticeship shall not be less than three ye trs or such lesser period as
the Council shall cltterminn under
sub-section (2) of section 19 of the Vocational Training Act where it is proved to its sa
tiscalition that a. candidate
for aprenticeship has undergone previous technie’tl tr’ti’tin" rel i tht to th i ’ ’
. . . . 1. c A .’..,-h : t c IraC v UT -
18.-Apprenttceship Tfalnlng Programmes: 3 e m thh hp desires to be apprenticed.
’ There shall be (in apprenticeship tritining programme for each of the trades and occupa
tions listed in appendix l which
shall include m-pIdnt training and related instruction courses conducted at 3. Vocational
Tr’iinin" Centre or any other
t a
trainin establishmentupprovedb t’tc C0 n’ _. t -’ ’, .t - , , y e .
schemeg. y x U ml. Pul. details of tticse lltllllllng, ptogrammcs shall be published under
the

19.-In-plant Training:
The employer shall ensure that the in-piant training provided for the apprentice shall co mprise both skills and opertations
pertaining to the trade, in accordance with the in-plnnt training programme prescribed by the respective training committee
which shall form part of the scheme.
20._Progress Reports:
Employers shall submit to the Director individual progress reports for each apprentice in every six months according
the requtirements of the occupational standards. The report shall be made on form N.V.T.P /6. He will also keep records
of every apprentice in his employment in a form as prescribed.
21.-Supevision and control of Apprentices:-
Employers shall be responsible for the proper and emcient professional supervision of app rentices and their training
Authorised otiicers from National Vocational Training Programme and the Labour Office sha ll inspect the training of
apprentices to ensure that the conditions of thecontract are held. For this purpose the e mployer shall appoint a full time
Apprentice/identured learner master where the number of apprentices zmd identured learner s is twenty five or more and
a part-time apprentice/Identured learner master where the number ofapprentices zmd identu red learners is less than twenty
five. The inspection report shall be made on form NVTP/7. This is in accordance with sect ion 21(3) of the Vocational
Training Act.
22.-Related Instruction:
(9) Employers shall release apprentices to attend classes of related instruction at :1 re cognised school as prescribed by the
Director in the letter of placement.
(b) Related instruction shall be based on the prescribed national rehtted instruction syl labus.
(0) Details of Related Instruction are shown in Appendix III.
23.-Progress report by the Training Instructions:
At the end of every term, the I lead of the School she. i submit a report on apprentices regarding their progress in related
instruction to the empoyer with a copy to the Director. This report shall be made on form NVTP/S and a vopy shall be
filed in the apprentice file for record.
24.-Record of In-Plant Training:
The apprentice shall be issued with a Log-Book in the form presecribed for recording in-p lant training undertaken
throughout the period of his apprenticeship. The employer shall ensure that the Leg-Book is kept up-to-date by the
apprent cc and is made ava labie for nspectton as may be required.
25.--Personal Tools:
The employer shall provide the apprentice w1th personal tools for the purpose of carrying out his work, as may be
prescribed by the respective traming committee. The cost of such personal tools simil be recovered from the apprentice by
appropriate monthly instalments, the amount oi" which shall be determined m the contract of apprenticeship. Lists of
minimum personal tools mtty be ontetined from the Director.
26.-Responsibiiity of the Apprentice:
(a) If an apprentice absents himself without reasonabie cause from attending related inst ruction for a period of25 per cent
of the total number of periods per year, his contract may be terminated at once, after th e Director has received a report from
the Principal of the school.
(b) If the apprentice is convicted of a. criminal offence the employer shall inform the D irector and his contract shall be
suspended pending the outcome of legal proceedings. If the suspension period is over 25 p er cent of’ the total number of
periods per year his contract may be terminated as in (21) ab ove.
27.-Trade Testing:
During apprenticeship the apprentice shall apply to undertake trade test grade II I at th e end of first year ofapprentieeship
trade test grade II at the end of the second year and grade I trade test at in the end of final year. The tests shall comprise
both practical and written papers and shall be conducted according to the prevailhng trad e testing, regulations. The level of

proficiency by the apprentice on completion ofhis full :tpprentieeship period shall be endorsed on the certificate ofttApprenti-
ceshipii.

28.-Transfer 0f Apprentices:

No apprentice shall be transferred from one employer to another except with the approval of’ the Director
and in consultation with the employer, who shall not grant approval unless in his consultation with the transfer is absolutely
necessary for the satisfactory continuity of the apprentices training.

29r-Certitication:

The employer shall issue a certificate of Apprenticeship on the satisfactory completion of the contract of apprenticeship.
The certificate which shall be in the prescribed form NVYP/ 10 shall be contersignei by the Director.

30.-Penalty:

An employer who commits an offence under this scheme shall be liable, on conviction, to a tine not exceeding five
thousands (5,000/-) shillings.

31.-Further Provisions:

Other matters which are not included in this schedule shall b: conducted according to the pro Iision; of the Act.

SCHEDULE iiBii

Non-Formal Vocational Training

1.-Definition:

uIndentured Learnerii means a. person, other than am apprentice who is bound by a. written contract to serve an einpioyer
for a determined period with a view to acquiring knowledge of It trade in which the employer is receiprocally bound to
instruct that person.

2.-Training According to Needs:
(a) Trades and occupations for which indentured learnership can be organised are shown in appendix I. Additional
occupations shall be determined by the Director on the advice of the Council.
(1)) The number of identured learners to be trained shall be determined by the Director,
(e) An employer shall not employ more than 11W: itlentut'ed learners for every employed qualified skilled worker of the
same trade or occupation.
SIMPeriod 0f ldentured Learnership:
'I he period of identutetl lcctrnership shal! not be more tnzm tive years ofsuch lesser period as the Council shall determine.
4. - Basic Training:
There shall be no full time basic training for ldentured Learners. The whole Oftheir practical training shall be provided
on the premises of an undertaking, ustng actual Jobs Ofcommercial value for instruction and practice purpose. The Director
shall arrange for the necessary related instruction.
5.mContract 0f ldentured Lcarnership:
A contrttet of ldenturett Lcttt'ttership in the form set 0th in NVTP/S hereto shall be entered into by every idenlured
Ieut net and his employ er en the successful completion of tt Rix-month probationary period.
6.-#Qualiticat'i0n for Entry to ldentured Learttership:
I dentured learners shall DC required to have 2m
(34) Completed a minimum of primary Education.
(b) Attained the age of 15 yeatzs.
(C) Broof ofntedicul and physical titness.
m) Contract 01 itlentured leurnership.
?.WEmpluyme-nt (If ldentured Learners:
No person shall employ an identurcd learner having first obtained the written permission of the Director to do 50.
Applications for permission to employ indentured learners shall be nlLtdC on form NVTP/4.
8.- Approval to Employ Identured Learners:
Approval to employ identured learners shall specify the maximum number to be employed at any one time and shall be
bueed 0n the national manpower needs. and the available facilities. personnel and Equipment :15 inspected by authorized
officers from the programme.
9.7777.Registratiun of Contracts:
Withih 30 days'after receiving the ttpplicatipns. the Director shall inform the applicant (employer) and tfapproval is given
contrtiet torm NV FP/j shall be sent along Wllh the approval. The contracts shall be prepared in triplicate and sent to
the Director. After Signature. one copy shall be retained by the Director for record and one copy each for the Employer
and the identured learner. All such contracts shall be registered by the Director.
103- T raining Schemes:
Employers shall ensure that the identured learners are provided with the necessary practical training on the job. at the
ettpense of the empluyer and comprising skins and operations according to occupational standards as established by the
National Vocational Training Programme. The time provided for the identured learner to pass trade test grade
111 is two years. trade test grade 11 three years and trade test grade 1 four years. The contract, by the request of the
employer and approved by the Director may be terminated ifthe identuretl learner fails twice in his grhde III trade test.
1L mProgress Reports:
. Employers shall submit to the Director indit'id utti progress: reports ofeat'h identured learner every six months and accord-
H'lg t0 thetequirements 01 the ttcctipational standards. The report shall be made on form NVTP,'6. He shall also keep
t'eeurds of every idemured learner in hlS employment in a form as prescribed.
12.V#Supenisiun 0f ldentured Learners:
Em players shall be responsible for the proper and etiieient professional supervision ofi dentured learners and their training.
The conditions, as laid dtmn for apprentices, shall also apply here.
13.- Related Training:
_ (a) Employers shall release iderttured learners to attend evening classes ofrehttett instruction. at recognised school three
times a week. or any ether form of instruction the Director may determine. ' ' ,

(b) Related instruction shall be based on the prescribed national related instruction syl
labus.
(e) Details of related instruction are shown in appendix III.
l4.--Progress Report by Training Institution:
At the enti eofevery ternt: the Head ofthe school shall eubmit :1 progress report on iden
tured learners to the employer with
a c0333 10 the Director. ’1 ms report shall he made on hum NVTng ttl’ld xliall be titled
in the itlentttrcd learners; tile fnr
reeor .
15,-wRecording of Practical T raining:
The identured learner shall be ittsued With a LQU-Pook in 11 e T . h’ ’ i ’ ’ ’
’ . _ . . b .. 1t, totm TCSCUde tot t’ecort n1 -
throughout the period of hts tdet’ttured leai’ucrship. p H 1.111 pl
The employer shall ensure that the Lomnook ie kept-to d’tte b ’ th . ’ ’ ’
. o t -- Liltntur-dl; t w . . , m ’. ’
as may be reqwred.) t t. e e trner ’md 15 made .watldble for inspection
ttnt training undertaken

16.--Personal Tools:
The employer shall provide the identturediearner with personal tools for the purpose of ca rrying out his work, as may be
proscribed by the repeative traihmg committee. The cost of such personal tools shall be r ecovered from the identured
learner by appropriate monthly mstalments, the amount of which shall be determined in the contract of identured learner-
ship.
IIMResponsibiiity of the Identured Learner:
(a) If an identured learner absents himselfwithout reasonable cause from attending relate d instructions for aperiod of
25 per cent of the total number of periods per year, his contract may be terminated at on ce, after the Director has received
a report from the Principal of the schooi .
(b) If the identured learner is convicted of a criminal otTence the employer shall inform the Director and his contract
shall be suspended pendig the outcome of legal procedings. If the suspension period is ov er 25 per cent of the total
number of periods per year his contract may be terminated as in (a) above.
18r-Trade Testing:
During identured learnership the ideutured learner shall apply to undertake trade test gr ade III at the end of the second
year of identured ieamership, trade test grade II at the end of third year and grade I tr ade test in the fourth year. The tests
shall comprise practical and written papers and shall be conducted according to the preva iling trade testing regulations.
Identured learners who have not Signed identured learnership contracts shall continue to be tested until the end of 1977.
The level of proficiency attained by the identured learner on completion of his full iden tured learnership shall be endorsed
on the certificate of iiIdentured Learnershipii.
19r-Payment and Conditions of Employment:
Salary and conditions of employment for identured learners shail be as set out in the con tract of identured iearnership
and in accordance with the relevant prevailing Government regu’at iom.
20._Chance of Trade:
During the eorreney of the identured learnership pcried; no Change in the originally ailo ted trade of an identured learner
shall be made except with the ptior approval of the Director which shall NOT be granted u nless, is the opinion 0fthe
Director and in consuiatation With the employer, the change is necessitated by the identu red learneris aptitude, health,
progress in training or for other genume reasons.
21.-Transfer of Identured Learners:
N0 identured learner shall be transfered from one employer to another employer, except wi th the approval of the
Director, in consultation with the empioyers, who shall not grant approval unless in his Opinion the transfer is absolutely
neccessary for the satisfactory continutty 0f the identured learneris training.
22.- Certification :
The empioyer shaii issue a certificate of identured Learnership on the satisfactory compl etion of the contract of identured
iearnership. The certiticate which shall be 111 the prescribed form NVTP/F) shall be cont ersignetl by the Director.
23. Penalty:
An employer who commits an offence under this scheme shall be liable, on conviction, to a fine not exceeding
five thousands (5,000/-) shillings.
24.-Further Provisions :
Other matters which are not included in this schedule shall be conducted according to the provisions of the Act.
TRADES AND OCCUPATIONS FOR APPRENTICESEVIIP INDETURED
LEARNERSHIP AND TRADE TESTING
1.0._Mining Industry:
Miner.
Deep Borer (oil and Gas).
2.0-.Food Manufacturing Industry:
Skilled Worker in meat processing.
Skilled Worker in canning industry.
Dairy Skilled Worker.
Miller (hour).

Skilled Worker in Bakery.
Skilled Worker in sugar manufacturing.
Skilled Worker in processing of coffee and tea.
Skilled Worker in vegetable oi! industry.
3.0.m-Beverage Industry:
Skilled Worker in Brewery.
Skilled Worker in wine production.

Skilled Worker m softdrink production.
4.0.#Tobacco Manufacturing Industry:
Skilled Worker in tobacco and cigarette production.
5.0._Textile Industry:
Fibre preparer (textile).
Spinner.
Weaver.
Knitter.
Textile dyer and painter.
6.0.mManufacturc of Foot Wear:
Tanner.
Shoe and leather goods maker.
Skilled Worker in shoe industry.
7.0._-Manufacture on Wood:
Sawmill saycl.
Saw doctor.
8.0#Manufacture of Furniture and Fixtures:
Joiner.
Woodworking,r muchunisl.
Bout builder.
Upholsterer.
9.0.uManufacture of Paper Products:
Paper box maker.
3.0.0fv-Printing Industry:
Hand setter.
Printing photographer.
Pressman.
Bookbinder.
1l.0.#Chemical Industry:
Skilled Worker in Chemistry.
Skilled Worker in petroleum chemistry.
Tyre repairman.
12.0.wManufacturc oi’ Nnn-Mctallic Product:
Brick and tile maker.
13.0-Manufacture of Metal:
Furnaceman.
Moulder.
Siccl roller..
Blacksmith.
14.0.-Manufacture and Maintanance of Machinery and Metal Products:
Turner.
Grinder.
Miller (metal).
Fittcr-Mechanic.
Toolmaker.
Heat treatment worker.
Sheet metal worker.
Welder.
Iron structure machzmic.
Agricultural machinery machunic.
Draughtsman (mechanical, electrical).
15.0. --Electrical/ Electronic Industry:
Industrial electrician.
Building electrician.
Highl tension electrician.
Vehicle electrician.
Instrument mechanic.
Offlce machine 111echanic.
Watchmakcr.
Air conditioner and refrigerator mechanic.
Electronic equipment fxtler
Battery repairman and iitter.
16.0.#Manufacture of Transport Equipment and Maintanancc;
Automechanic.
Heavy vehicle mechanic.
Diesel engine mechanic,
Marine engine mechanic.
Motor cycle and bicycle mechanic.
Panel beater.

l7.0.- Building Industry:
Mason-Bricklayer.
Carpenter.
Painter and decorator.
Plumber and pipe fitter.
Construction equipment operator.
Draughtsman (civil).
IR 0. Agriculture:
Plant cultivator.
Livestock breader.
Fisherman (sweat water).
Hunter and wild life protector.
Vegetable cultivator.
Orchard cultivator.
Forester-logger.
l9.’).-Commerce:
Shop assistant.
20.0._Hotel and Tourism:
Cook.
Waiter.
21.0._Miscellaneous Trades:
Tailor.
Photographer.
APPENDI X 1/1
EVENING AND CORRESPONDENCE COURSES FOR RELATED SUBJECTS
L_Definitlon:
llRelated Subjectsil shall meat) instruction in political Education, Science, technology, calculations and other theoretical
subjects which will help the assimilation of the trade or occupation being taught.
2,-Subjects :
Until further notice ofamendmcnt, related subjects shall comprise:
-Mathen1atics
_Technology
-_English
mPolitical Education
-Technical Drawing
--Science
3._eApplication:
The courses shall be compulsory for:
(a) Apprentices who have satisfactorily completed their basic training.
(b) Identured learners.
(c) Experienced Workers wishing to take trade tests.
4.-Durati0n and Content:
(a) The courses shall be based upon the corriculum and syllabus approved by the Council and shall last for one madame
year for each grade except for identured learners and experienced workers whose courses for the grade I U test shall
last for two years.
(1)) Training shall, each year, start on the Second Monday of September consisting of lburty working weeks split in two
terms. First term will comprise of fifteen weeks.
(0) Second term will commence on the third Monday ofJanuzlry each year and will last for twenty five working week5.
5.-Attendance :
Attendance times for eyening courses shall be between 4.00_9.00 p.111. spread over 21 maximum of four evenings per
week. Employers shall be informed regarding weekly timetable for their apprentices and idenlured learners.
6.-Fce:
Tuition fccsfor evening courses shall be determined by the Director of Vocational Training and shall be payable in the
time of application. Until f urther notice of amendments, fees shall be as follows :-
(a) Grade III Evening CourseaShs. 80/-
(b) Grade II Evening Course-Shs. 120/-
(c) Grade II Evening CourseeShs. 180/-
Fees for the correspondence courses shall be determined by the Natioal Correspondence Institute.
7.-Entry Requirement:
Candadatcs shall be required to have :_
(a) A contract of apprenticeship or identure learncrshi p ()R
(b) A ngihimum of two years w_ork experience in the trade of occupati on and the reconunc

ndution of his emp
a minimum of completed primary educati on or the equivalent of adult education.
ll
loyer plus

8.-Application for Courses:
Candidates who have. noncontracts of apprenticeship or identured leamership shall apply o n form NVTP/16 to the neatst
Labour Oflice or the PrtnClpal of a National Vocational Training Centre. The application must be made at least three
months before the beginning of the first term. F orm NVTP/ 16 shall be made available at the Vocational Training Centre or
the Labour thce as the case may be.
9._Clossing Date:
All applications for evening or correspondencecoqrses should be received at the Labour th ce or the Vocational Trainin g
Centre by 3lst May ofeach year. The list of applications should include apprentices and i dentured learners.
10.-Acceptance:
The uwhopplication f orms shall be submitted to the Director by 30th J une ofeach year af ter the Labour Ollice has determined
those should attend evening or correspondence instruction as follows:---
(a) Those who leave at a distance of more than 5 miles (8km) from the place of instructio n and where no public transport
is available or more than 10 miles (16km) where regular public transport is available sha ll be eligible for correspo-
ndence instruction. All those who leave within these distances should attend everning cla sses though the
correspondence courses shall be open to everyone.
(b) The Director of Vocational Training shall pass the details of those who have been acc epted for correspondence
courses to the National Correspondence Institute.
11.wConduct of Evening Courses:
(a).Evening_courses shall be cottducted in the following towns or elesewhere as may be de termined by the Director of
V ocational Training from time to time zv-
#Mwanza, Tabora, Dodoma, Mbeya, Tanga, Musonm, Shinyanga
-Morogoro, Mtwara, Moshi, Bukoba, Singida, lringa, Lindi
#Arusha and Songea.
(b) The minimum number for a class to be started is 12 trainees and the maximum is 24.
12.#Conduct of Correspondence Courses:
(a) .After receiying details of trainees the Director .01" the National Correspondence In stitute shall plum and adminieter
the various categories of courses according to the estubltshed procedures. N
(b) At the end of every two months a. progress report on every correspondence student sha ll be made b ’ . ,
. , , , . - . 3 the coxresp o-
ndence Institute on form lNVTP/l7 one copy of which shall be submited to the Director of Vocational i ’ ’
copy to the Employer of the trainee. Training and one
(c) The Director of Vocational Training shall meet an authorship expenses necessary for t he relevant lessons.
13.-Evening Course Supervisions:
(a) The Director of Vocational Training in cosultation with the Labour Office shall appoi nt an eveni ’
. , . . , - n couse s , s
in all places where such clasees are mm. A monthly superViSion allowance to be determined by the Diregtm Shalluggnvliif
able to all such Supervnsors for the period during which courses are conducted. p(3
(b) The Supervisors shall be responsible for:-
_-The preparation of weekly timetables.
_-Assignment of Instructors and teachers F or the diti’erent classes.
Preparation and distribution of progress report to the Director and the relevant emplorcm .
-Checkmg 21nd COanOllmg the good keeping ofattendance registers and mark sheets. .
_Receiving application forms for evening and corresoondence courses and f0 ’ .
t rward the same ,
30th June ofeach year. to the Direcmr by
wBeing phisically present at the classes in order to control their smooth and emcient ope ration.
-Informing the trainees and the Instructors about the School attendance times and other r elated matters
l4._Instructors and Vocational Teachers:
(21 The Director shall select and a) oint all x .t t. x . v I w ’ . t
NVTIl/IS. ID 1 u lll’lt, Insxructors and h ocational teachers who shall apply on lorm
(b) In consultation with the National Correspondence Institute the Director shall a o

’ . . _ , mt mark r t .7 t -
ndence work who shall mark and ’submit the scripts to the Institute according to the estf glished proczrjuig tlagihCoxesspo
shall be paid at a rate to be determined by the Director of Vocational Training. ’ e mark ers
15.-Instruction Allowance:
(a) Part time Instructors and Vocational teachers shall be paid monthly at a rate determi ned bv the Government
(b) Claims for instruction allowance shall be made on form NVTP/l9 and shall b ’ . t t . Supervisor who shall submit them to the Director for proceSSing and subsequent paymerftmb mmM1 m m chmng CQUFSC
16.-Transfer:
(a) If an evening course trainee is transferred from one nl’ i l
. . _ . . t . t 40. to another he shall be t’mxw ., .2 t -
if u Slllllllzlr course IS being conducted ut 1115 new station. 1 V & 811-..,9d t0 wmmue H m his Slldms
(b) Employers shall report all such transfers to the Director and the trainee shall not b e required to p’iV additioml fees
(C) 1n the case of Correspondence students such transfers slwll ’ll’ e t r
. - n . romt tlx w ,o t
Institute. l t l 1/ l3 b9 rclIOfmd to the National Cotieepondencc
l2

FOR OFFICIAL USE
REGISTRATION
Apprenticc/Identured Learner
In accordance with the provision of section 10 of the Vocational Training Act, Ihcreby re gister this contract.
Direcmr 0f V(n’un’onal Training
c.c. The Apprentice
CO M PLET ION
T o: The Director of Vocational Training,
Ministry of Labour and Social Welfare,
Dar es Salaam.
Apprentice/Idenmre Learner
In accordance with the provisioq of section 18 of the Vocational Training Act. I hereby c ertify that contract No .....
has been completed by the apprentlce/indcnturcd learner concerned and I accordingly reque st that he be granted a certify
cate oprprenticcship/Identured Learnership.
Sz’gna/zrzre of Employer
TE R M l NAT) 0N
Apprentice;Identureed Learner
In accordance with the provision of section 15 ofthe Vocational Training Act. contract No is hereby terminated.
Date .....
Dirr-fcmr 0f Pbmlinna/ 17111111)ng
c.c. The Apprentice.
T0: ..... (New Employer)
.....
TRANSFER
In accordance with the provisions of section 11 0f the Vocational ’huining Act, it is her eby agreed that 1116 sights and.
obligations under contract No ..... shall from the date registr ation thereof he transferred:
Name of Apprenticc/ldenturcd Learner
Identify Card No
Present Employer
of addre ss
Carrying on business as .....
.....
l3
4

New Employer .....
.....
of address .....
.....
Carrying on business as .....
.....
In witness hereof the contracting parties have hereunder afiixed their signatures.
thm ..... day
of ..... l9 .....
Present Employer .....
witnessed by .....
New Employer .....
witnessed by .....
Identured Learncr/Apprenticc ..... w
itnessd by .....
I hereby approve this transfer and confirm its registration.
Director of Vocational Training
c.c. Present Employer.
c.c. Apprentice.
MONTHLY ATTENDANCE REPORT
.....
....
.....
.....
ATTENDANCE:
Maximum compulsory periods per annum .....
.....
Total absemism to date .....
..... periods
Maximum absentism allowed with cause .....
..... periods
Absentism this month .....
..... periods
Please deduct ..... daysi wages from the apprentice in accordance with
the terms of the contract.
Dale .....
..
Principal
PLACEMENT OF APPRENTICES
The Director of Vocational Training,
PO. Box 2849,
Dar es Salaam.
.....

The following apprentice(s) are hereby sent to you in accordance with your request/sponsorshipz-
Name Trade
1. .....
.....
2. .....
.....
3. .....
.....
4. .....
.....
#5. I ’
2. The apprentice(s) has/have satisfactorily completedpne ycur basic t1 aining course in the trade(s) mentioned and is/are
hereby requlred to serve your Organization for ’apei’iod stipulated in the contract of apprenticeship for the purpose of gaining
more work experience. The terms and conditions of work for the apprentice(s) shall be according to provisions of the
Xocatighal Training Act 1974, the schedule for apprenticeship and the contract of apprenticeship all of which are enclosed
erew1 .
. 3. For each apprentice, you should complete contract(s) of apprenticeship in triplicate and return all copies to the under-
SIgned Within fourteen days.
After sianature the Director Sh’lH return one copy to you for records and the othe
. . v a c if
shall be retained by the apprentice. copy
From ..... to .....
..... (time)
For .....
..... per week
For which tuition fees chargeable is 5113 ..... per term/year.
5. The Director would like to take this opportunity to wish the period ol’apprenticeship success and assuring you of our
co-operation at all times should you reqinre further assistance.
Director of Vocational Training
c.c. The Secretary Generul_NUTA.
c.c. The Executive Director_FTE.
c.c. Area Labour Officer.
lUse a separate sheet if neccsqary.
F
MINISTRY OF LABOUR AND SOCIAL WELFARE arm NVTPM
THE NATIONAL VOCATIONAL TRAINING PROGRAMME
APPLICATION FOR EMPLOYMENT OF IDENTURED LEARNERS
1. Name and address ofEmployerz
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

3. Details ofidemured learners to be/ have been employed.
Name of
Supervisxon
Education Medical
Standard
YES/NO.
.1. Do you have lilcdricily ? .....
.....
5. State the number ufqualitied employed skilled wurkcrs in each of Lhe trade listed abov e and list the major equipment
in each of the relevant workshops.
Trade or Protbgsion Number of Skincd Workers Major Equipment in Workshop
6. Apprelm’c e Supervisors; - Give dcmls of thosc who will/or ncw instruct idemured learn ers or apprentices.
_ A _ V -, w , ,, _ _,. __, 7 lw. ,w
, Education Tech. Trade Learners
Name T rade Standard Qualif. Expcr. Under him
1. .....
.....
2. .....
3. .....
.....
4. .....
.....
Date ....
.....
(Employer)

THE UNITED REPUBLIC OF TANZANIA Form NVTP/S
VOCATIONAL TRAINING ACT. No. 28 OF 1974 OF IDENTURED LEARNERSHIP
This contract should be submitted in triplicate to the Director of Vocational Training, M inistry of Labour and Social
Welfare.
FOR OFFICIAL USE TRADE TESTING REGISTER
CONTRACT 0F INDENTURED LEARNERSHIP
CONTRACT OF INDENIUREI) LEARNERSHIP MADE ON .....
..... 19 .....
BETWEEN THE EMPLOYER AND THE INDENTURED LEARNER.
PARTICULARS ARE AS FOLLOWS:--
The Employer
.....
.....
Date of Birth .....
..... Age: ..... Years.
Identity Decumem N0 .....
.....
Issued at .....
..... on 19
By: .....
.....
Business, Trade or Profession: .....
.....
.....
.....
.....
.....
.....
The employer and the Indentured Learner, parties to this Contract, have agreed as follows :--
Obligations of the Indentured Learner
1. The Indentured Learner agrees to serve the employer as an Indentured Learner in acqord ance with the tern s of this
Contract with a view of acquiring knowledge, including theqry and practice, in the trade in winch the employer is reciprocally
bound to instruct the Indentured Learner in accordance wuh the terms of this Contract.
2. The Indentured Learner undertakes:--
(a) to serve the employer faithfully, honestly and diligently and obey all lawful and rea sonable orders and require-
ments of the employer or of those duly placed in authority over him, given in pursuance o f the terms of this
Contract, and pursue diligently any studies which he may be required to pursue under this Contract;
(b) pet to commit or participate in the commission or cause the commission of any waste o f, or damage or other
mjury to, the property, goods or reputation of the employer;

(c) not to absent himself during working hours from his place of employment or other plac
e of duty without the
permission of the employer or his duly authorized agent or representative;
((1) to attend such classes or take such courses, whether of a general or special charact
er, as may from time to time be
specified by the employer or the Director of Vocational Training to be compulsory for the
Indentured Learner
or category of Indentured Learners to which the Indentured Learner belongs;
(e) to devote himself to the work connected with the trade in respect of which he receive
s instruction and make ish
utmost endeavour to acquire knowledge, including theory and practice, in the trade up to
the standard required
of him;
(f) to take such tests or examinations relating to the trade as may from time to time be
prescribed by the employer
or other competent authorities.
Obligations of the Employer
3. The employer agrees to instruct the indentured learner faithfully, honestly and dilige
ntly in the trade in which the
employer is engaged and in respect of which the indentured learner is recitprocally bound
to serve the employer as an inden-
tured learner in ilCCOrdtlnCC with the terms of this Contract.
4, The employer undertakes :-
(:1) to employ the indentured learner and pay him wages for as long as the indentured lea
rner shall observe and
faithfully perlorm the terms and conditions of this Contract;
(h) to pity the indentured learner wages calculated as followsze-
(i) for the tirst year ef indentured learnership at the rate of 40 per cent of gradeI cr
aftsmanls salary or minimum
wage which ever is the higher;
(ii) for the second yeah 0f indentured leztrnership at the rate of 50 per cent ofa. a gra
de I craftsmenis salary or
minimum wztgc which every is the higher;
(iii) for the third year of indentured legtnership at the rate of grade III craftsmanis s
alary if he has passed the
relevant trztde test in the event 01 tuilure to pass the test the wage payable will remai
n fixed at the level he
was receiving prior to the test;
(v) for the fourth year of indentured learnership at the rate of grade II craftsmen sala
ry if he has passed the
relevant trade test._ In the event of failure for the second time, at the instance of the
Council, the
Director may terminate his indentured learnership.
(c) to give instruction to the indentured learner iii the trade, in theory and practice,
by the best means available to
the employer or, ii the employer so desires or it IS more convenient so to do, cause such
instruction to be given
to the indentured learner;
(d) to provide at his own expense proper tools and productive jobs for the purpose ofinst
ruction of the indentured
learner, provided that in the cztse of provision of the normal personal tools of a crafts
man the employer shall be
entitled to recover the cest thereof of deductions from the monthly wages payable to the
indentured learners
the terms imd rate of such deductions shall be determined by mutual agreement between the
employer and the
indentured learner and shall be subject to approval by the Director of Vocational Trainin
g;
(e) to furnish to the Director of Vocational Training reports on the progress and conduct
of the indentured learner
in respect ofevery year of indentured leztrnership in such form and at such intervals as
the Director may require’
(f) 10 release the inddntured learner form his employment whenever leave of absence is ne
cessary for the ndentureti
learner for the purpose of enabling the indentured learner to perform or participate in t
he performence of duties
obligations or functions in respect of which the Director of Vocatonal Training is sat.sf
ied are in the national
interest or are for the advancement of the interests of the indentured learner;
(g) to my the wages payable to the indentured learners in respect of the period during wh
ich the indentured learner

is released item his employment on leave of absence in accordance with paragraph (f);
(h) to comply with ztllluwful instructions ztnd directives of the Director of Vocational Training which may be issued
from time to time Ior_ the purpose of promoting the training needs of the indentured learner and generally for the
l’urtherence ofthe objects and purpose of this Contract;
(i) to pay at his own expense on behalf of the indentured learner all fees or charges payable by the indentured learner
in respect of leussons, courses of study or trade tests which the Director of Vocational Training may require the
indentured learner to attend or take for his instruction, on the condition that the indentured learner attends such
lefssons or courses ofstudy regularly and obtains satisfactory reports upon completion of the lessons or courses
0 study;
(j) to grant to the indentured learner at his own expense employees benefits, Including annual paid leave paid sick
leave and. where the indentured learner is a female, maternity leave and leave travel allowance which benefits
shall not be less favourable than the like benetits enjoyed by employees generally in Tanzania in ziccordance with
the law for the time being in force reglating such employees benefits.
Other terms and conditions
5,-(u) Hours of W()I’/(.--Thc normal working hours for the indentured learner shall be those prescribed for the
employers business. trade or profession, previded that the indentured learner shall not be required to work for a. longer
period otitime then that prescribed by the law for the time being in force in Tanzania regulating working hoursfor employee
generally. During the lirst yettr of indentured learnership the indentured learner shall not be required to work overtime for
the employer. During the second and every subsequent year of indentured learnership the indentured learner may be
required to work overtime, provided that such overtime work does not interfere with the indentured learners attendance
at any lessons, trade tests, courses of study or Functions in respect of which his attendance is compulsory in accordance with
any rules, regulations, instructions, or directions binding upon the indentured learner. Whenever the indentured learne
works overtime he shztll be entitled to extra remuneration calculated in accordance with the rules and rates for the time be r
applicable to the employers business, trade or profession. mg
(b) Medical f(lci/Iitit’t-Mthre the employer makes available at his own expense medical facilities or se ’
to his employees he shall grant to. the indentured learner the like privileges on terms which are not less favourable $1313:
indentured learner than those applicable to the employers employees.

(c) Breach of terms of Contract.-If the employer is satisfied that the indentured learner has committed a serious breach
of the terms of this Contract or of any conditions of indentured learnership applicable to the indentured learner, he may
suspend the indentured learner for a period not exceeding thirty days. Where the employer suspends an indentured learner
under this paragraph he shall, within three days of the suspension, report the matter in writing to the nearest Labour Ohicer
who shall forthwith forward a copy to such report to the Director of Vocational Training. Upon receipt of the report the
Director shall cause an investigation to be carried out and upon the conclusion of the investigation, depending on the
evidence, the Director may confirm or set aside the suspension or vary the term thereof or he may make such other ruling as
he may consider to bejust having regard to all the circumstances of the case. The decision or ruling of the Director shall be
final and bindimg upon the employer and the indentured learner.

6. This Contract shall be read and construed subject to the provisions of Vocational Training Act, 1974 and of subsidiary
legislation made under that Act.

This Contract shall enter into force upon signature, shall remain in force for a period of three years from the date of
signature and may, with the consent in writing of the Director of Vocational Training, be renewed for further periods b
mutual agreement between the employer and the indentured learner. The employer and the indentured learner may with
the prior consent in writing of the Director of Vocational Training, at any time amend of vary any term or this Contract.

THUS DONE AND SIGNED by the parties hereto in triplicate at .....
..... , Tanzania

Signed by .....
Indentured Learner

In the presence of : .....
..... (Wztness)

Signature by: .....
(Employer)

In the presence of : .....
(Witness)

I APPROVE

Date ..... I9 .....
.....
Director of Vocational Truin’

Reg. No .... 19 ..... mg

Date ..... 19 .....

F

MINISTRY OF LABOUR AND SOCIAL WELFARE 0m NVTP/6

THE NATIONAL VOCATIONAL TRAINING PROGRAMME

In- Plant Training of Apprentices and Idcntured Learners Progress Report

(To be prepared in duplicate and returned within ten days)

1. Name ofApprentice/Idemured LearnerU Regl’atralion Number

.....
.....
.....
.....
.....

4. Date training started: .....
.....

5 This report covers the period from ..... to
.....

Assessment Comments

Progress .....

Conduct 3 .....

Attendance 1 .....

6. Has the apprentice/identurcd learner kept a record (log back) of his in-plant work #YE S/NO.
IfNo, explain .....
.....
.....
.....
Date .....
’hDelctc which is not applicable.
TFor Assessment, give one of the following gradings:
Very Good, Good, Satisfactory, Poor. (If hPoorh add comments)
HOW TO NIAR KING
Employer/Apprenlice Supervisor
A ..... 90,400 9’;
B ..... 70- 89 , 1
C ..... 53... 69 ,1,
I) 33- 49%
E 0- 32%
MINISTRY OF LABOUR AND SOCIAL WELFARE
Form NVTP/7
THE NATIONAL VOCATIONAL TRAINING PROGRAMME
Supervision of Apprentice and Identured Imners Insection Report
1. Name and address of employer .....
.....
.....
.....
.....
.....
.....
Name Trade Education Age Medical Supervisor’s
Standard Report Name
;’If space is not sufficient, please use scparatdsheet.
q
, i
,5.i’ffffffffj’f.’_f.’j’fj’.iiiiiiiiiiiiiiiliii’.iiiiiiiififj.n... ..... _ ..... .
....
.....
.....
.....
.....
.....
.....

3. Details of Apprentices/dentured Lcamefs Supervisors:

. T...,,. w-.." A. __,_,-,._ -, .7". _ __. .___ _.. ____.

Education 1’ chhn. 1 Trade E N0. of

Name - Trade Standard Qualification Experience Learners

under H im

3. .....

....

4. .....

..... , ...

5. .....

..... :. ..... ’ ..... I .....

6. ..... 1 .....

..... i ..... l .....

__. _____. W; _._.- __d M. L __ w __ m- _. _ - .___ ,

4. Details of Major Equipment in each shop.

.....

.....

.....

.....

5. Do the apprentices/Indenturcd Learners keep record (long-hook) of implant workaES/NO.

If No, give details .....

.....

6. Are the apprentices/Idcnturcd learners paid according to the terms of contract .....

.....

7. Does the employer provide means in his power to instruct the apprentices/ldcnmred lear

ners? .....

.....

.....

.....

9 Does the employer maintain records of training as prescribed ? .....
.....
10’ Are the apprcntices/Identurcd learners released to attend classes .....
.....
11. Does the employer pay fees for the classes as prescribed ? .....
.....
12. Are the conditions of employment in accordance with the consract terms .....
.....
13. General Comment .....
.....
(EMU? 10 y (W) ..... InSPEEt0.r .....
(if not the Labour Ojjicer)
..... D010-----m-.....
.....19.....
Labour Of/7cer

Form No. N.V.T.P./8
MINISTRY OF LABOUR AND SOCIAL WELFARE
THE NATIONAL VOCATIONAL TRAINING PROGRAMME
Related Instruction for Apprentices and Identured Learners
PROGRESS REPORT
1. Apprentice/Identured Learner. . . . . ’T .....
..... Trade .....
2. Course title .....
.....
3. Name and address of Employer .....
.....
Date training started: .....
.....
4. This report covers the period from: ..... t
o .....
5. PERFORMANCE DURING COURSE:
WnW-m
wme m.- WJ- m_-
, .-
Subjects HomeWork Test Total
1 . Technology .....
.....
2. Science .....
....
3. Practical Work .....
.....
4, Drawing .....
.....
5. English .....
.....
6. Calculations .....
.....
7. Political Education .....
.....
8. Safety and Hygiene. .....
.....
ngiwahili ..... :3; ..... mmw’mm
KEY: 90#100%:A
70_ 89 %:B
50_- 69 %:c
33- 49 %:D
0.. 32%;5
2 3

5 . GENERAL:
i Assessment Remarks
HMW-_-A_...._._,.._,.._._._.-_...._H__._____.m_._.....__M_.._._._._.__.l_._._._..._.__._._...._
._.ll._. ._.__.
1. Application ..... l .....
2. Accuracy .....
....
3. Abilitytolearn .....
.....
4 Speed .....
.....
3 Safety Habits .....
....
6. Interests .....
..... g .....
Reliability .....
.... a .....
8. Coniidence .....
... 1 .....
9. Conduct .....
.....
.IQ,.__a’lji,g171f;Vlgergpytqu....r:._.7_. .... 3:".....:...’4..7.:7.:.... .. .
._.;:A.._..M:..;.j.r .....
Key: A#Very Good.
BmGood
C-_Average
D-#Bclow Average
E_Very Poor
6. ATTENDANCE:
Possible ..... days.
Actual ..... days
7. FmAL Assassmuvr:
fr; 3 TTT
! l i
8.. RECUMMtNDAHUN: ___-’ ,_.__._.M___.. l
$T0 Reporl/recommcndcd f or termination.
9. GENERAL COMMENISZ
..... Prmczpal .....
"’Delete which is not applicable.
24

Form NVTP/9
THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF LABOUR AND SOCIAL WELFARE
Certificate of Indentured Leamcrship
Issued under the Authority of the National Vocational Training Council.
This is to certify that .....
.....
Registration Number: .....
.....
has successfully completed an Identured learnershi p comprising practical training and re
lated theory in the trade of .....
From .....
..... to .....
and obtained a grade: .....
.....
certificate at the end of the Identured learnership.
Issued on this .....
..... day of ..... 19 .....
..... (Employer)
..... (Idammez/Leamer) . . . . . .
EMPLOYER:
Name .....
Address .....
..... Dillezior .o’f Vocat an
al T ram mg . . . . .
CERTIFICATE No .....
Form NVTP/IO
THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF LABOUR AND SOCIAL WELFARE
Certificate of Apprenticeship
Issued under the Authority of The National Vocational Training Council
This is to certify that .....
.....
has successfully completed a period of basic training for one year comprising practical t
raining and related theory in the
trade of .....
..... at the Vocational Training Centre
SUBJECTS STUDIES INCLUDED: _ _ _ . .
Technology, Workshop Practice, Calculations, Technical Drawmg, Sc1cnce, English, Swahili,
Political Education.
years apprenticeship in Industry
He subsquently served a further period of .....
.....
From .....
..... to .....
and obtained a grade ..... trade test ce
rtificate at the end of the Apprenticeship.-
EMPLOYER:
Name .....
.....
(Employer)
Address .....
. .. . .khlnprenti’ce) .....
Date .....
.....
Director of Vocational Training
CERTIFICATE N0 .....
REGISTRATION No .....

Form N V I P! 11
THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF LABOUR AND SOCIAL WELFARE
Interim CertMcatc of Basic Training
Issued under the Authority of the National T raining Council
This is to certify that .....
.....
has undertaken a. course of Basic Training in .....
.....
at the Vocational Training Centre .....
.....
From .....
..... to .....
ikand hats obtained an overall assessment of .....
.... in his basic proficiency test and course work.
Subjects studies and the scores during the basic training are:-
Subject Score
1. Workshop Practice .....
2. Technology .....
3. Calculations .....
4. Science .....
5. Technical Drawing .....
6. English .....
7. Swahili .....
8. Political Education .....
__.__..._._..._4__._.._._.._.._.__.
Reg. N0- .....
.....
Principal
H.B.-This interim Certificate shall be returned to the Director When the Certificate of A
pprenticeship is issued and is
NOT equivalent to any trade test certificate.
KEY TO MARKING:
A ..... 90-100 % (Excellent)
B ..... 70-89 0/; (Very Good)
C ..... 50-69 % (Good)
D ..... 33-49 % (Fair)
E ..... 0-32 % (Poor)
26

Form NVTP/ 12
THE UNITED REPUBLIC OF TANZANIA
VOCATION TRAINING ACT No. 28 OF 1974
Contract of Apprenticeship
This contract should be submitted in triplicate to the Director of Vocational Training, M
inistry of Labour and Social
Welfare.
1
i
l FOR OFFICIAL USE i
TRADE TESTING REGISTER i
l
CONTRACT OF APPRENTICESHIP
CONTRACT OF APPRENTICESHIP MADE A ON .....
..... 19
BETWEEN THE EM PLOYER AND THE APPRENTICE WHOSE PARTICU LARS ARE AS F OLLOWS 2---
THE EMPLOYER
.....
.....
.....
.....
.....
.....
Identity Decument No .....
.....
Issued at .....
..... on 19
.....
.....
Basic Training Qualifying Certificate No .....
.....
Term of Agreement from .....
... to .....
Issued at .....
..... on ..... l9 .....
The employer and the apprentice, parties to this Contract. have agreed as follows ;_..
27
Tukuu ml Chum
(1410 C..’d ufunzo 11:1 Hujurihi.. ya ’qundi
Dar es Salaam

OBLIGATIONS OF THE APPREN’IICE

l . The apprentice agrees to serve the employer as an apprentice in accordance with the terms 9f this Contract with a view of acquiring knowledge, including theory and practice, in the trade in which the employer is reCIprocally bound to mstruct the apprentice in accordance with the terms of this Contract.

2. The apprentice undertakes z-v-

(a) to serve the employer faithfully, honestly and diligently and obey all lawful and reasonable orders and requirements of the employer or of those duly placed in authority over him, given In pursuance of the terms of this Contract.

(b) and pursue diligently any studies which he may be required to pursue under this Contract;

(e) not to commit or participate in the commission or cause the commission of any waste of, or damage or other injury to, the property, goods or reputation of the employer;

(d) not to reveal any of the employerts secrets or confidential information;

(e) not to absent himself during working hours from his place of employment or other place of duty without the permission of the employer or his duly authorized agent or representative;

(f) to attend such classes or take such courses, whether of a general or special character, as may from time to time be specitied by the employer or the Director of V ocational Training to be compulsory for the apprentice or category of apprentices to which the apprentice belongs;

(g) to devote himself to the work connected with the trade in respect of: which he receives instruction and make his utmost endeavour to acquire knowledge, including theory and practice. in the trade up to the standard required ofhim;

to take such tests or examinations relating to the trade as may from time to time be prescribed by the employer or other competent authorities.

OBLIGATIONS OF THE EMPLOYER

3. The employer agrees to i nstruct the apprentice faithfully, honestly and diligently in the trade in which the employer is engaged and in respect of which the apprentice is reciprocally bound to serve the employer as an apprentice in accordance with the terms of this Contract.

4. The employer undertakes 2--

(a) to employ the zipprentice and pay him wages for as long as the apprentice shall observe and faithfully perform the terms and conditions ofthis Contract;

(b) to pay apprentice wages calculted as follows:-

(i) during the first year of apprenticeship, at the rate of Shs. 430/- (shillings four hundred and thirty only) per month or such greater umount as shall be determined by the Minister;

(ii) during the second yearyof apprenticeship, in cases where the apprentice has passed the relevant trade test, at the rate of Grade HI, and in cases where the apprentice fails the relevant trade test, at the rate of the wages payable to him immediately prior to the test;

(iii) during the third and every subsequent year of apprenticeship, in cases where the apprentice has passed the relevant trade test, at the rate of the salary payable to a craftsman on Grade II, and in cases where the apprentice

fails the relevant trade test, at the rate of the wages payable to him immediately prior to the test;
to give instruction to the apprentice in the trade, in theory and practice, by the best means available to the employer
or, if the employer so desnes or it 13 more convenient so to do, cause such instruction to be given to the apprentice;
to provide at his own expense proper tools and productive jobs for the purpose of instruction of the apprentice
provided that in the case of provision of the normal personal tools of a craftsman the employer shall be entitled
to recover the cost thereof by deductions from the monthly wages payable to the apprentice and shall be subject to
approval by the Director of Vocational Training ;
to furnishi to the Director of Vocational Training reports on the progress and conduct of the apprentice in respect
of every year of apprenticeship in such form and at such intervals as the Director may require;
to release the apprentice from his employment whenever leave of absence is necessary for the apprentice for the
purpose of enabling the apprentice to perform or participate in the performance of duties, obligations or functions
in respect of: which the Director of Vocational Training is satisfied are in the national interest or are for the advance-
ment of the interests of the apprentice;
to pay the wages payable to the apprentice in respect of the period during which the apprentice is released from his
employment on leave of absence in accordance with paragraph (f);
to comply with all lawful instructions and directives of the Director of Vocational Training which may be issued
from time to time for the purpose of promoting the training needs of the apprentice and generally for the furtherence
of the objects and purposes of this Contract;
to pay at his own expense on behalf of the apprentice all fees or charges payable by the apprentice in respect of
leassons, courses of study or trade tests which the Director of Vocational Training may require the apprentice to
attend or take for his instruction, or the condition that regularly and obtains satisfactorv reports upon completion
of the lessons or course of study; ’
t0 tmnt to the ztpprentice at his own expense employees benefits, including annual paid leave paid sick leave and
where the apprentice is 8. femulc, maternity leave and maternity sick leave, and compassionate leiwe and leave travel
allowance, which benehls shall not be less favourable than the like accordance with the law for the time being in
force regulating such empleyeesi benetits.
28

OTHER TERMS OF CONDITIONS

5. (a) H_ours of Workem’fhe normaJ ’working hours for the apprentice shall be those prescribed for the employerk busmess, trade qr professwn. provtded thett the apprentice shall not be required to work for a longer period of time then that prescribed by the law for the time being in force in Tanzania regulating working hours for employees generally. Duttng the first year of apprenticeship the apprentice shall not be required to work overtime f or the empleyer. Buying the second and every subsequent year of apprenticeship the apprentice may be required to work overtime, prov1ded that such overtime work does not interfere with the apprentices attendance at any less 0113. trade tests, ceursee of stutiy or futictions in respect of which his attendance is compulsory in accordance with any rules, regulathns, instructions or directions binding upon the apprentice. Whenever the apprentice works overtime he shall be entitled to extra remuneration calculated in accordance with the rules and rates for the time being appli: cable to the employeris business, trade or profession.

(b) Medical facilities.HWhere the employer makestwailable at his own expense medical facilities or services to his employees he shah grant to the apprentice the like privileges on terms which are not less favourable to the apprem ice than thence applicable to the employcris employees.

(c) Breach of terms of Contractalf the employer is satisfied that the apprentice has committed a serious breach of the terms of this Contract or of any conditions of apprenticeship applicable to the apprentice, he may suspend the apprentice for a period not exceeding thirty days. Where the employer suspends an apprentice under this paragraph he shall, within three days of the suspension, report the matter in writing to the neares t Labour Otiicrr who shall forthwith forward a copy of such report to the Director of Vocational Training. Upon receipt of the report the Director shall cause an investigation to be carried out and upon the conclusion of the investigation, depending on the evidence, the Director may contirm or set aside the suspension or vary the term thereof or he may nuke such other ruling as he may consider to bejust having regard to all the circumstances of the case. The decision or ruling of the Director shall be final and binding upon the employer and the apprentice.

6. This Contract shall be read and construed subject to the provisions of the Vocationztl Training Act, 1974 and of tubsidiary legislation made under that Act.

This Contract shall enter into force upon signature, shall remain in force for a period of three years from the date of -:ignature and may. with the consent in writing of the Director of Vocational Training, be renewed for further periods by mutual agreement between the employer and the apprentice. The employer and the apprentice, may with the prior consent in writing of the Director of Vocational Training. at any time amend or vary any term of this Contract

THUS DONE AND SIGNED by the parties hereto in triplicate at .... ,’I’anz.auia.

Signed by .....
(Apprentice)

In the presence of ..... The Principal of the Vocational Training Centre hereby ..... certifies that the apprentice named herein has satisfactorily
(Witness) completed one year 01’ basic training in the trade named in
the Contract.

Signed hy. .....
(PRINCIPAL)

Date ..... 79 ..... , ...

DIRECTOR OF VOCATIONAL TRAIAN’ING

Reg. No .....

Date ..... IQ .....

t-nrm ?WTP,’M

VVIZARA YA KAZI NA USTAWI WA JAMII
IDARA YA MAFUNZO NA MAJARIBIO YA LFL’NDI
Fomu ya Maomhi ya Masomo ya .lioni
SOMA MAAGILO YAFUATAYO: _
t i) Masomo kuanzia daraja L1 III; haiafu daraja ht H, 119 mwnsho damja 13 t.
(2) Mwombaji Wa daraja la III, imatakiwa awe antefanya kazi hiya ya kifundi kwa much), us iopwigua n’tiaka miwiti na bade
anaendelea kufanya kazi hiyo.
(3) Mwombaji wa daraja la U, anatakiwa awe amefauiu mtihani wa majarihio daraja)3. III, kwa utiundi huo anaotaka
kusomzt.
(4) Mwombaji we dumja la 1, anatakiwa am: amethulu mtihani th majarihio claraja la H kwa uf’undi huo anaetaka
kusomea.

(5) Mwombaji awe anaelewa Kusoma na. Kuandika.
JAZA SEHEMU ZIFUATAZO IPASAVYO:
(l) J ina .....
..... Umri .....
(2) Kiwanda (Unapofanya kazi) .....
.....
(3) Anwani .....
..... Simu .....
(4) U fundi unaohitztji kusomea .....
..... Daraja la .....
(5) Umefanya. kazi hiyo kwa muda gani ? .....
.....
(b) Umefnka darasa la ngapi ? .....
.....
(7) Shulc za Ufundi umbazo umcpitia toka mwaka hadi mwuka:
(m) .....
.....
(8) Taja kama umcwahi kufanya mitihani ya kifundi mbali ya Mitihani ya Majaribio na shaha da ulizopata.
(9) Kama uchuhi kufanya mitihani ya majaribio ya Ufundi (Trade Test) :w
(i) Ulifanya katika ufundi wa .....
..... Daraja la .....
(ii) Namba ya cheti kama ulifaulu .....
.....
(10) Lugha ambazo unawcm kuzungumza nu kuandika .....
.....
THIBITISHO LA MWOMBAJIZ
Nathibitisha kwa ujuzi wangu wote kwamba yote niliyoandika ni ya kweli kabisa.
(Sallilu’ ya M wombaji) (T arehe)
SEHEMU YA MWAJIRI
(1) Je mwombaji anafanya kazi unayotaka kusomeu kama ndiyo, umekuwa nayc muda gani .....
.....
(2) Jcc utamlipia ada ya masomo hayo kama atakubaliwu, au atajilipia? .....
.....
(3) Utapeuda kupata taarifa ya maendcleo yakc ya masomo? .....
.....
..... Tarehe
WW
KWA MAIUMMI YA OFISI ’ru
Kutokana n21 maclezo yuliyotolewu m1 mwombaji: unakubaliwa/hukubuliwi katika mufunzo ya u fundi wa
kwu sababu ya .....
.....
..... T h .....
Sahihi ya Afisa are e .....
Kiasi cha ada alicholipa .....
.....
Namba Stakabadhi ..... _ .....
..... n a tarehe aliyolipia .....

ADA
(a) Daraja 1a III: Sh. 80/- kwaImwaka.
(b) Daraja la II Sh. 120/- kwa mwaka.
(c) Daraja 1a I Sh. 180/- kwa mwaka.
MAFUNZO YATATOLEWA KATIKA UFUNDI UFUATAO
1. Uashi (Masonry). 10. Useremala (Carpentry).
2- Bomba (Plumbmg). . 11. Makenika wa magari (M.V.Mechanic)
3- Kushona nguo (Tailoring). 12. Umeme(Electrica1Instalation).
4. Uhunzi(Blacksm1th). _ 13. Kupaka rangi na maandishi-(Painting & Sign
5. Kushona Viatu (shoemakmg). writing).
6. Kuunga vyuma (Welding). 14. Kutengeneza mashine za ofisi (Office Machine
7. Udereva (Motor driver). ’ machanic).
8. Barafu (Refregeration). 15. Kutengeneza mitambo (Fitter Mechanic).
9. Kuchonga vyuma (Fittcr/Turner). 16. Umeme wa magari (Auto electrician).
17. Uchoraji (Civil draughtsman).
18. Printing and book-binding.
Form NVTP/l 8
MINISTRY OF LABOUR AND SOCIAL WELFARE
THE NATIONAL VOCATIONAL TRAINING PROGRAMME
Part-Time Instructors/Vocalional Teacher
Application Form
JOB TITLE .....
.....
EMPLOYEPCS NAME AND ADDRESS: .....
.....
LANGUAGE :
Kiswahili 1
English 1
Other... 1 ..... 1 .....
.....
Otheri. 1..... ..... , ... : ..... 7 .. ....
.....
EDUCATION :
INSTITUTION Years Standard
Attended Achieved
Primary
Technical .....
.....
College/UMV. ..... 1. .....
.....
1
Secondary ... ... 1 .....
1
1
1
Other ..... , ... , ... , ... _ 1 ..... , ... _. ...
... , ...

4. Jon TRAINING:
Course Attended
.....
- Wt
Type of Training
Duration
Name and Place of Training Institution
.....
.....
.....
EMPLOYEES COMhlENTS
A707" E :wThis form should be stampcd and treated as STAFF CONFIDENTIAL after completing this part.
6.
quoting dates where possible:
State whether the OtEcer has been employed on duties higher than his substantive appointment, if so, give details
.....
.....
.....
.....
7
My reasons are ;__
I consider/do not consich the candidate is capable of conducting evening courses and I do /do not recommencW him
for this kind ofasggnment.
.....
.....
.....
.....
.r.....nu.....:.....,....u..... .....,.....r.....-.
Delete whichever is in applicable.
Signed
32
Pm mm:
.....
.....
.....
..-..... .....

MINISTRY OF LABOUR AND SOCIAL WELFARE
NATIONAL VOCATIONAL TRAINING PROGRAMME
Innstruction Allowance Claim Form
Name and address of Instructor
u.....-...nun"....a..xns.....u.
.....
Time of
N.B.--This form must be duly filled otherwise it shall be returned.
1965-41966
l966-1967
19674#l968
19684-1969
1969’w1970
1970-41971
1971-41972
1972._1973
1973-1974
1974441975
1975441976
1976-1977
1977441978
.....
.....
No. of 1 Instructors
Hours -
Signature of Courses Supervisor .....
I certify that this claim is correct and authorize payment.
Signature
.....
7v-
Sppervisor
S1gnature
.....
.....
.....
Amount Tax
I 1
Checked by:
Payment: Voucher No. 0R Cheque
No.
Date
ALLOCATION OF FUNDS DURING THE FINANCIAL
MATUMIZI YA IDARA 1969-1979/80
Mwaka
1969/70
1970/71
1971/72
1972/73
1973/74
1974/75
1975/76
1976/77
1977/78
1978/79
1979/80
3 111111;:
33
Kiasi cha Fedha
Sh.
193,000
154,100
1,841,590
1,858,400
2,524,900
2,678,800
3,334,940
3,775,000
4,173,375
6,930,600
8,793,000
36,157,905

Shs.	Cts.
89,000	00
30,700	00
39,700	00
46,300	00
95,800	00
154,100	00
565,650	00
1,858,400	00
2,215,200	00
2,678,900	00
3,334,940	00
3,775,000	00
4,152,375	00

THE IMPLEMENTATION OF VOCATIONAL TRAINING

By A. Athumani

ABSTRACT:
In striving to Industrialize, proper implementation of Vocational training is a major fac tor. The execution of this voca-
tional training is a major factor. The execution of this vocational training is being gui ded by the Vocational Training Act,
of 1974 and in this paper the previous vocational, training through the former trade scho ols ts ottt-lined. The implementation
of apprenticeship training is than explained and an analysis is made of the empoyment of vocational trainees. The
training of instructors, Supervisors and Training Ohicer: is next described, foillowed by an appraisal if the responsibilities
of the training Oliiccrs in 1nd ustry. Finaly, an attempt is made to highlight theneed fo r training Budgets in Industry.

1.--TRADE SCHOOI.S-INTRODUCTORY NOTE

The first attempt by the Colonial Government to assume responsibility for vocational trai ning can be traced back to 19303
when trade training was first lauched by establishing trade sections within a few Governm ent Secondary Schools. Training
was otTcred to boys leaving standard VI who stayed five years in a combination of trade a nd academic schooling. But the
programme eventually tappered off and was finally given up when it was decided to make th e secondary school purely
academic Institutions. When completely separated from ordinary schooling, technical train ing was considered to be more
economical and efficient.

Vocational training was, in the next stage, resumed when structures and facilities at Ifu nda were taken over by the
Overseas food Corporation to serve as a trade school for the training of craftsmen to be employed in the Groundnuts
Scheme. When the Overseas Food Corporation collapsed, the school was closed and craft tra inng facilities of the Ministry
of Labour at Mgulani were moved to 1funda. 1f unda is quite a remote place and it at leas t some thirty miles from the
neareSt centre of Industrial work. Yet the Colonial office reported in 1950 that it was t idesirablc that the permanent training
centre should not be sited in the coastal belt where during the hot season the intensive system of training imposes a great
strain on both the I nstructors and trainees (1). Obviously owing to its cooler climate, Ifunda was ideal for the colonia 1
European Instructors!

The next development of Vocational Schools came out of the 10-year plan(2) of the Ministr y of Education of the
fifties, which provided for the building of three and possibly four trade schools ,one of them at Ifunda and one at Moshi
These schools were to provide for the training of skilled artisans in various trades afte r their completion of standard VIII.

Yet out of 275 students entollcd in 1951. only 70 had completed standard V111. It was cla imed that it was not possile
to obtain a suliicient number oftrainees with that educational standard, the evidence bei ng the 11dif3liculty eperinced by the
Government departments in recruiting persons of an adequate school standard to fit them f or technical or vocational
training."(3) The plan(4) further anticnpated that by the end of 1956, 600 students would be enrolled at ll’unda and by 1959
another 600 at Moshi. But the total number of trainees undertaking training during 1957 w as 555 reportedly because
Moshi Trade School had iiadmitted the first intake of 89 pupils in April, 1957.115).

(1) Colonial Office, Tanganyika Report 1949, London H.M.S.O. (1950) P. 128.
(2) Legislative Council ofTanganyika, Tm ymrfor African Education: Dar es Salaam (1950).
(3) Lord Hailey. Native Azlmini.s-tralz’on in Ilre British African Territories Part 1, Lo ndon, H.M.S.O. (1950) P, 216.
(4) Legislative Council of Tanganyika. Ibid.
(5) Colonial Olhee, Tanganyika Report_1957, London. H.M.S.O (1950) P. 77,

In December, 1959 a series of strikes broke out at both schools reportedely because the s tudents had 11objected to cleaningi
their tools and didying the training areas. The pupils demanded that they should be given Labourers for this purposeii.(6)

Many other factors apparently contributed to the strike, the result of which was for 283 boys being dismissed from Moshi

and 280 boys from Ifunda. The move practically closed both schools, making it necessary t
o start all over again with a new
cla 55 in January, 1960. The total output of these Trade Schools is shown in appendix I.
In May 1962, the Ford Foundation supplied a Mr. George Tobias (at the request of the Gove
rnment) to indentify the
size and shape of our skilled manpower resources and requirements and to assist in devisi
ng programmes that would meet
the indentified needs. The survey was taken under terms of reference which included the s
ubmission of any early interim
report on the use to be made of the lfunda and Moshi Trade Schools. Tobias completed his
work in August 1962 and his
report,(t) recommended, amongst other things, that Moshi and 1f unda Trade Schools should
respectively be converted into
a Technical Institute and a technical Secondary School. It also advised the Government to
seek expert assistance from the
1.L.O. in installing appropriate apprenticeship programmes. The recommendations were acce
pted in principle except
that both Moshi and ll’unda Trade Schools were to become Secondary technical Schools foll
owing courses leading
Form 1V qualilications. The actual conversion took place in 1965 on the Ifunda Trade Scho
ol and in 1967 for the Moshi
Tradechool.
In co-operation with the Ministry of Labour, 21 Standing Manpower Advisory committee esta
blished in 1963 started
to draft a comprehensive National Industrial Training including a trade testing programme
. The main responsibility for
training skilled manual workers was to fall on the employers. Expert assistance was sough
t from the I_L.0, and the new
apprenticeship scheme officially took 01f the ground in June, 1968.

2.-IMPLEMENTATION 01: THE APPRENI’ICESHIP SCHEME

Apprenticeship is the earliest form of Vocational training and it formed an important par
t of the educational programmes
of the early Egyptians, Greeks and Romans. It experienced a drastic development with the
rise of the English Craft Guilds
which were primarily concerned with the quality and quantity of goods produced by craftsm
en. Regulations covering
apprenticeships as practiced in England in the thieenth century, forbade one master from
enticing away anotheris apprentice
required that the names of apprentices be recorded in the guildhall, provided for written
agreements between apprentices
and master and prescribed the minimum period for apprenticeship. Further regulations requ
ired that only qualified master
craftsmen could take on apprentices and that no apprentice would be allowed to practice h
is trade until he was approved
by the Master and Guild members. In addition, no master was allowed to take on more that
three apprentices unless he
employed a journey-man to assist in the instructing of the apprentices, whilst apprentice
s were required to pay an entry and
completion fees. 34

(6) Colonial OHice, Tanganyika Report41960, London, H.M.S.O. (1961) P. 130.
(7) Tobias G. High Level Manpower requirements and Resources in Tanganyika-I962-67: Dar e s Salaam. Government Printer (1963)
The contract of apprenticeship bound the apprentice to live with his master for the presc ribed time, serve him deligcntly,
obey his reasonable commands, refrain from immoral practices, remain unmarried and not ab sent himself from duty
without permission. The master, on the other hand, agreed to instruct the apprentice in t he trade and citizenship and
to provide him with room, board and clothing. Inspectors were appointed by the guild to i nspect malpractices. Upon
satisfactory completion of the seven year apprenticeship and following the recommendation s of the master and guilds
officers, the apprentice qualified as a journeyman. But he usually continued to live in t he masters home and received
a fixed payment for his work. After several years experience, the journeyman was elligibl e for a mastership, a title he
could receive by performing a. given piece of work known as a master piece. The master cr aftsman cold then establish
his own shop and train apprentices.
Over the last seven hundred years since the introduction of the Guilds, the length, conte nt and methodology 0f apprentice-
ships has changed in many countries. Yet the basic principles of apprenticeship training has largely remained unatfected a
away of training craftsmen. In West Germany, for example, a youth to-dzty takes up his tt buret’" (8)(trade) by entering int.
a contract with an employer after having obtained the a pproval of his parents. He is the n subjected, by Law, to compulsory
daysrelease from work for a period of three years. Similarly in France ttApprenticeship i s based on a contract between
an employer and an apprentice. The employers are allowed to take apprentices only if they have adequate facilities for
on-the-job trainingii.(9) It is perhaps in the soviet union where there is no apprentices hip in the British sense but instead
craftsmen traing is implemented through 93. standardised curriculum, 3. highly concentrat ed and intensive basic trainihg
period which covers a maximum of three yeztrsfitltl)
The implementation of apprenticeship traing under the National Vocatinal Training Divisio n is not drastically different
f rom other counries. A youth who has completed a miniumu of primary education and has at tained the age of 15 can
enter into a contract with an employer after the parentsor guardian has given approval. P rior to this contract, the employer
must first apply and obtain written permission, from the Directer of Vocational Training. to employ the said apprentice(s).
Approval to employ apprentices is granted on the basis of the available. feetlttes for o n-the Job training and the qualifications
and experience of apprentice supervisors. The period of apprenueeship 15 net more than fi ve years and employers are
responsible for efficient proessional supervison of a prentices for which a full time a p rentice master must be appointed if
the number of apprentices exceeds twenty five or a part-time master where the number is l ess. In addition, the employer
has to ensure that the apprentice is provided with the necessary practical training compr ising of the skills and operations as
stipulated in the apprenticeship training rogramme repared by the appropriate Vocational training committee. This
should then lead to the apprentice being able to ass trade test grade 111 at the end of t wo years of apprenticeshi. There
after, trade test grade II and I should be 1assed in the course of the remaining two year s. Fourthermore, employers are
required to release apprentices from work to attend evening Classes of related instructio n and submit, to the Director,
progress report on each apprentice in’every SIX months. The aprentice, en the other hand? IS issued with a log book for the
purpose of recording on-the-job training uhdertaken throughout the feriod of his apprenti ceshit. The book is contersigned
by the em"loyer and inspected by authorised officers from the Dmsron. Presently, a prenti ceshit training is an area in
which the Division concentrates its main elliort. As a result of History, the bulk of our craftsmen to-tlay are trained trhough

this method inspite of the implementation of full time vocational training. Thc Division is currently engaged in an intensive
survey to find out the exact number of youths engaged in this scheme. It is recognised th at though the use of apprenticeshi
may be decreasing in some parts of the World, it is still a sigmticant way of training cr aftsmen and will be in use in this
country for a long time to come.

(8) Collins, B. A. et. all. Vocational Training in West German, London, Anglo-Germany Fou ndation (1976).
(9) Industrialand Commercial Training. Northampton. Wallens Pulislting, (Mar h 1977) Vol. 9-1). 121.
(10) Perry, P. J. C., Vocational Edum/ion and Training in the Soviet UIII’UII: BACIE (196 3) P. 18).

3._EMPLOYMENT or VOCATIONAL TRAINING

Parallel to the apprenticeship scheme, is the programme of full time Vocational Training. Youths who have completed
a. minimum of rimary education attained the age of 16 year czm attend a one liull-time ba sic training at a Nation
Vocational Training Centre. Towards the end of this basic training, the learners undergo ptofzciency tests which include
practical and related theory. Successful trainess are subsquently pieced in Industry for in-plant training and 21 three year
contract is entered into by the trainee and his employer. Trainess also attend evening cl asses during in-plant training and
subsquently sit for trade test grade 111 at the end of the first year in-plztnt training. Thereafter, trade tests grade 11 and 1 are
undertaken in the course of the remaining two years. This type 011111.111ng started in 19 69 and to-date the following trainess
have been trained:_.

YEARLY INTAKE

Trade	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77
1. M.V. Mechanics	22	40	30	19	60	15	64	90
2. Fitting & Turning	t	38	39	13	30	33	31	100
3. Welding	-	_	--	-e	17	18	20	30
4. Plumbing	_-	_2	--	_	40	40	35	80
5. Carpentry & Joinery	8	18	lfu	15	27	39	36	100
6. Bricklaying	.22	l4	IS	15	19	42	30	90
7. Electrical Installation	#	40	30	32	33	34	34	100
8. Tailoring	-	_2	m	w	12	17	20	20
9. Shoe-makihg	_.	_._	_2	__	9	17	20	20
10. Painting	a	-	E	_	ll	16	20	80
11. Fitter Mechanics	M	--	_	-	#	_	41	110
12. thce Machine Mechanics	#	__	-	_	-	.2	21	30
13. Printing-Book binding...	__	W	-	__	_	#-	-	30
14. Foundary-Blacksmith	-	H	-	H	-	-	12	80
15. Civil Drafting	_	-	2.	__	#	-	23	20
39	150	1	19	99	258	320	407	1,030

___..’A ,___: __._ 7v - _ . a

N.B.-Durin g 1976/77 two new Centres have become operational in Tanga and Mwanza and this is reflected in the in-taks
figures. These who joined training in this session are still continuing with their course s and therefor the true total number
ofthose who are in Industry is 1.300 as follows:--
Trade 1969/76
1. M.V. Mechanics 300
2. Fitting and Turning 188
3. Welding 55
4. Plumbing 166
5. Carpentry and Joinery 158
6. Bricklaying 135
7. Electricallnstallation 203
8. Tailoring... 49
9. Shoe-Making 46
10. Painting 47
ll. Ollice Mechine Maehanics 21
I2. Blacksmith 12
13. Civil Draghting 23
Total 1,394
Drop Outs 88
NET TOTAL 1,306
In his paper the Director of Vocational Training has shown the number of Industrial estab lishments engaged in manufaa
turing in the ditTerent Industrial activity. It will be observed that 70 per cent of the 1,300 graduates from Vocational training
centre over the last seven years have been absorbed into Government Workshops and that al though the manufacturingi.
Industry has a total of 75,997 employees, it has taken on only some 16 per cent, mostly i n the Textile Industry. Kar
Schadcrtl 1) argues in his book that the syllabi for the former 1f unda andMoshi trade sc hools were prepared along the lines
of British practices and customs and that many Industrial firms at thcnmedid not prefer t he trade school graduates because
they were not trained along the lines which would meet their re wirements. This is detina tely not the of case now
Syllabuses are prepared after an analysis of the tasks involved has been made; selection of trainess is on the basis of atitude
testing: the vocational training centre is part of the Industrial system whereby Industry excercisesformal through training
committees and the number of trainees trained each year is according to the national skil led manpower requirements.
The claim that N.V.T.D. concentrates on traditional crafts is baseless. A number of moder n crafts are being taughs
depending upon the established need. As an example, Fitter Mechanics are being trained in general Fitting and Mechinery
maintenance work and subsquently these can receive specialised instruction during inplant period in the following diseiplies :-
(a) Textile Machinery.
(b) Tool Machine.
(e) Agricultural Machinery.
((1) Earth Moving and Construction equipment.
(e) Ginnery Machinery.
(f) Sugar Production Machinery etc.
The cnly logical explanation then is that management in our manufacturing Industries stil l hold oid beliefs and attitudes
They prefer to train their skilled workers needed in their respective Industries through on-thepjob training methods. They
believe that this technique is more economical, eflicient and quicker. Yet a wealth of ev idence is now evailable to prove to
the contrary. The instruction given through this method is very inadequate. The worker is taught haphazardly to fulfi
certain function according to rigid schemes and is at a complete loss should something ou t of the ordinary take place. It is
believed that this attitude will timely be corrected if our manufacturing Industries are to come out of the frequent shortages
of properly trained skilled workers.
TRAINING OF INSTRUCTORS,SUPERVISORS AND TRAINING OFFICERS
in Education for self Reliance (12) the President urges educators to adoptmethods designe d to develop enquiring and
critical minds and not those which would produce passiVe persons who simply carry out ins

tructions. For us then Instructor
must come out of the habit of relying upon their notes in order to lecture and especially reading these notes. While the
students take them down. Indeed, in some cases the instructor may find himself unable to continue with the training
session should a few pages of these iisacredii notes get misplaced! The vocational Instructor training course occupies a full-
academic year and aims at equiping the prospective candidates with the skills and techniques that will enable them give
successful instruction along the lines of the desired methods. Parallel to this course is the six weeks Instructional techni-
ques course which is mainly for part-time instructors who instruct m the evening classes and ln-plam training Instructor
within undertaking. The course aims at providing basic training in the techniques of planning and presentinginstructions
to individuals and groups. As a fellow up we found that very of ten instructors appear to be choosing the easy way of
emphasing note taking inspite of them having been trained to cultivate students’ independent work ability. Correction of this
attitude has been eiiectively achieved by organising and conducting short seminars at regular intervals when the Instructors
themselves take part irt discussions in an effort to restore the 11 problem-Solvingi, teaching method as Paul Freire (l 3) calls it.
The supervisory training course is of three weeks duration and trains supervisory personnel in the organisation
supervision of work groups and in the planning and co-ordination of human resources to meet group objectives. The
training of training officers has formed an important part in the activities of this Division for some time now. In then we
aim at producing agents who would spear-head the drive towards proper training in Industry.

’ Workers’in Industry should be given that training which its necessary for doing their j obs better. In connection with
this. Industrial courses are usually based upon job-descriptions. But these descriptions basically ansxxer the question what
is to be done. _ indeed in ctesignttig courses based on his concept, one is required to i nclude only that knowledge necessary
in order to fac1htate the assmtilation of the desired skills. The teaching of any further knowledge which does not stem from
the requirements of the Job-description is considered to be wasteful. In some extreme cas es. the Training Ofticer may be
required to determine the benefits, in monetary terms, of a given training programme and if the costs are higher than the
benefits the whole programme is questionable. But this is absurd because the real task of the trainer in Industry is helping
the workers achieve their full potentialwprofessionally and educationally. A helping rela tionship which recognises that
the average worker can be developed to his fullest capabilities. But this recognition may have an inherent conthct with the
objectives of the organisation as A9ris (14) had pointed out and the trainer ought to be aware. To make life worse the
Training Officer himself somehow occupies a contradictory post. ,
Much as he would like to facilitate proper tmining programmes he does not have the power to do it. Senior Manage-
ment in these organisations, who can make, important decisions, have had ditilerent orien tation and the chances of
the training omcer influencing them in the process oftlecision Making is remote. Whilst p articipative leadership has been
recognised for some time now, the new values have yet be internalized. This state of atli airs consequently creates frustra;
tion and a sense of failure on the part of the Training Otticer and as a result he witltd rans from the real issues leaving thing
to take care for themselves. He, at time, becomes aggressive. hostile and attacking those who he perceives rcspohsihles
for his position. He feels guilty for not carrying out his job as well as he feels he sho uld be able to do. The Traininz
Officer has thus become a "Marginal MauiTlS) and since nmrginality brings about p5) cholo gieal conflict. he copies with the
situation by applying defensive mechanism. In order to make training in Industry more eff ect ive, the Training Ofl’icer n ould
have to occupy a more central position and the leadership oriented towards a new kind of behavior otherwise the traincrl;
efforts wold seem like a drop in the ocean. The following lnstructom, Supervisors and tra ining othcers have been trained
since the inspection of this programme.

Act ivity	Dut’at ion in Weeks	I971	M	l973	1973	i57ziw	1975	1976	Total
1. Vocational Instructor training	40	--	M	_-	15	35	E	--	56
2. Instructor Method Course	8	2i	l7	ll	l8	l8	,	_-	85
3. On-the-job Instructor training	3	w	_-..	IR	58	H	.	-	76
4. Supervisory Training	.3	-7	-	5	-	33	93	l86	l9 330
5. Training Officer Course	l:	-54.	m	ll	57	w	78		
Total	ll	17	4,3	235	2l9	54	(1H)		

t ,.___.t.,-_i ,, -V._i ,,A,,_,_’.-VH ._ a ._A...._.Pt . ..... -3: "x:
(15) The concept of the "marginal man" originated in the writing an Ametiean socialogist R.E. Part who ani used the term in HR.
Eventually the concept was extended to analyse other positions that showed apparent gomra tlietions. On the basis of this development,
a training othccr job is ViCWCd as marginal because it is built xxith two antagonistic ro les of helping workers to achieve their full potential
while at the same time helping to further the objectix es of his organisation. The two ob ieetit es may not always be the same.
Training Budget:
It is one of the manpower theories that responsiblity for trade training should he carrie d out primarily by theemployer.
Supporters of this philosoly often argue that only the employer can train his new worker specitically tor the machines.
the type of work and the work conditions of his own plant It is further argued that any p re-employment training else-
where is bound to be more expensive and less productive and that only by training workers within his plant does the

employer develop repport with the workers. It is reckoned that schools should restrict th emselves to the teaching ofgeneral,
technical and cultural subjects thereby avoiding specitic occupational instt ttctiott whi ch is too expensive for them to undertake
and not, at any rate, within their competence.
How-ever good this arguetnent might seem to be, it does not work out in practice. Firstly it requires a mass of trained
and competent craftsmen who would not only:carry out their own production responsibilitie s but would also be available
to carry out training of the new comers. Secondly expert craftsmen are not always the bes t instructors, bad methods and
techniques would inevitably be perpetuated. It is therefore, the responsibility of the Go vernment to work closely with the
employers and assume a portion of the task of pre-employment skilled worker training so t hat the young people can more
quickly acquire the specific skills and techniques once they enter employment. Recognitio n of this responsibility, on the
part of the Government, has meant the introduction of the one year basic Vocational train ing course. This course enables
the trainees to acquire the correct foundation of the skills needed and to appreciate imp ortant allied matters such as safety.
It also helps them to develop the right outlook towards their trade, his place in lndustr y and the country as a whole.
Despite the trend towards basic full tithe instruction. training on the actualjob remains the most important section oli any
craft training programme. it is here that the trinee gains experience of actual job ditii culties, learns to work as a member of
a team or production unit, meets the stress and strains of the industrial world and gener ally ponies intoicontact with the
reality of working life. It is thus a character forming period as well. It needs to be pl anned Just as caretolly as any other
section of training programme. Movement should be planned from one section to another in order to give the trainee as
wide experience as possible and if the organisation is comparatively too small for this t o be done, it should eonsutler gtotiping
with other similar organisations for this purpose. The proper supervision of trainees dur ing this section ol’ training is
essential, They are often left without information or proper instructions, Management sho uld nominate clearly the persons
who are to be restonsible, on the shop floor, for this training. Trainees need to be plac ed With crafts men who are not only
competent to instruct them but also have an interest in young people and their problems. Formen and others ought to
be given additional renumeration for these special responsibilities.
But training stipulated alow, which is the resesponsibility ofthe employer. has great fin ancial implications on the part 01 ’t he
organisation. Yet anagement can spend long hoursin planning and preparin7 the varnts prol rammes ot the organisation
which they consider to be of importance. spend as much time as they feel is necessary to tieyelop the best programmes
possible but fail to consider financial planning for the training function. They feel tha t training budget is un important.
But budgeting. as a Management tool (legigned us a method of control to meet planned obje ctives, should also apply to
training. Management needs to ask what proportion otthe organisationis budget goes on tra ining? How does this compare
for example, with such items as welfare facilities and soon.

Appendix I
OUTPUT OF IFUNDA AND MOSHI TRADE SCHOOL GRADUATES 1953_1967
Source.-4Tobias, G. Highlevel Manpower Requirements-1962_1967 pp. 50-51. Also see 1966_19 67 Annual report of Trade Testing Centre.
W____
Trade 1953 1954 1955 1956 19957 1958 1959 1960 1960 1962 1963 1964 1965 1966 1967 Total
W__
1. Tractor Mechanics 5 5 - 35 _ - -_ ._ # _ _ _ __ __ _ 45
2. MN. Mechanics 4 3 -- 29 4 _ _ _ 36 39 115
3. M.V./Fitter Turner 3 5 12 2 15 8 15 2 2 33 32 35 34 20 66 284
4. M.V.Welder . 3 4 8 - 26 18 21 7 2 33 32 33 30 13 20 283 00
5. M.V./Blacksmith . 2 4 4 - 14 10 10 1 2 29 26 29 28 _ - 159 m
6. M.V./Tinsmith __ - 3 4- 16 8 9 1 - 14 13 12 14 _ __ 90
7. M.V.Auto-Electrician _- - - - 6 10 10 2 5 36 34 36 35 15 _ 189
8. Carpenter and Joiner 15 23 24 28 32 29 53 5 4 58 42 56 54 19 19 461
9. Mason-Bricklayer 3 7 5 6 14 15 47 5 2 44 46 38 42 12 19 305
10. Painter Signwriter 2 1 l - 6 6 26 # 1 40 32 36 38 4 _ 139
11. PlumberPipefltter... 8 3 1 5 6 12 31 6 4 33 38 40 32 17 __ 236
12. Electrician .. 7 8 10 6 9 10 16 8 1 39 28 40 38 17 40 277
13. Tailor 1 - 2 2 _ _ __ _ - _ - 4- -_ _ _ 5
14. Shoc-maker - - 1 _ _ - - # - _ - - _ _ _ 1
Total ... 53 63 71 148 126 238 37 23 359 323 355 345 149 203 2,634
g a__. h.g-a I;._ d- _::I_. B...- _._: _;._;_. I
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,,,. _.V_#.,.Avir4ii W

Obviously the size of the organisation and the nature of its products and technology will influence the size of the training budget. Yet we need to plan, annually, the cost of :_

(a) Rectruitment and selection of training stalT.
(b) Establish training needs.
(c) Designing courses.
((1) Implementing courses.
(6) Assessment of training.
(f) General training overheads.

It is through making a proper training budget can Industry leave up to its rcsponsibilltles for skilled worker training.

The budget should favourably compare with what other sections have been alocatcd. Thls would also correct the false attitude of looking upon training as an additional activity, to be considered only when them Is a suplus of funds.

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’ "TRAINING AND THE TRANSFORMATION OF THE MANUFACTURING
INDUSTRY IN TANZANIA3,
By: P.v. Mitschke-Collandc FOE, UDSM.
CONTENT
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1. INTRODUCTION

The econqmy of Tanzania is charasterised by a large sector of simple producting under sub sistence conditions. Agricul-
turalproductlon which 1s the major contributer t0 the GNP is based on little idivision of labouf and hardly any lmecha-
nisation’ - thus the productmty labour is low;
llDevelopment is growth plus change; change in turn is social. cultural as well as econom ic ..... (1Y1 Economic develop-
mentin an ander development economy (UE) 13 mainly transition from lsimple production wit h self-employmenf to tmo-
dem industrial production based on ware labourl.
In this process ttechnology, seems to be one major means to increase tproductivity of lab ouri’ itTechnical progress has
never been the chief determinant of industrial growth but it has often been a condition o f it ..... ttZ).
As there is hardly any lqcal manufacture of capital goods the development of technical fo rces of production within the
UE will require transfer 01 technology (TOT) which involves both import of loans and capi tal goods. Thus, economic
dependence does continue. -
The ttechniquesl as such may be yet matter of choice. There is no doubt that economic dev eIOpment requires full
utilization of all the achievements of science and technology. Hence, choice of tcapital-intensive technology may be
approprite as long as the surplus value produced is retained in the UE where it is urgent ly required for indigenous capital
accumulation.
But we also know that capital-intensive technology does not create significant increase o f employment-qthus n0 purcha-
sing power. It is therefore of major importance to choose also tlabour-intensive technolo gy in order to intergrate more
wage-labour into the cash economy. Small industries in conti’ast to large scale industria l will provide industrial experience
to many workers and foster their skills for innovation and technological progress.
Such a strategy of development allows for walking on two legs in the first period of indu strialisation given the necessary
government protection. Labour-and capital-intensive technologies are combined in large an d small industries.
Any technology chosen and imported is appropriate, as long as it does not perpetuate depe ndence on trade, capital and in
technical know-how and if it contribute to local accumulation and development of indigeno us productive forces. But;
in this respect the distinction betweeni nvestment into industries for manufacture of tca pital goods or tconsumer good,
becomes vital. It seems that only the expansion of local engineering industries can help to break the chain of economic
dynamic process of interaction between the two for self-generation.
Indigenous engineering in particular is based on the development of social productive for ces by education. Knowledge
and skills determine the productivity of labour ; manpower education thus seems to be the key-link to economic development
After all T ..... the appraisal of human resource development is perhaps a more logic al strating point for the analysis of
stages and potentials of growth than, for example national income, energy consumption er capital or capital Investment
per head, ... because it is the necessary condition for all kinds of growthesocial, p olitical, cultural and economicfi3)
Education and training have to be carefully based on the analysis of the coccupational re quirementsl (OR) of production.
In an indUStflaliSing country however, the OR change with sscientihc and technical progre ss division of labour and mecha-
nisation of manufacture alter quality and quantity of skills, import of new industrial ac tivities will add more OR. Thus,
educational insititutions, currecula, methods and standards will have to be continiously developed and adjusted.
All the Considerations discussed so far indicate the need for an tindependent socialist s tate which has the pelitical power
0f centtallsed planning and control of the economy in terms of marketing, production, tri cmg, trade, income distribution as
well as investment for production and education.
The Tanzania government facilitated with all these powers has opted for an lindustrial St

rategyl’OS) based on the
establishment of an own industrial sector for manufacture of basn: consumer goods as well as for capital equlpment. But
What are the conditions for the implementation of such a strategy ?
There will be a htransitional periodl with the following crucial compromise: Agricultural exporl-oriented production
with the following crucial com promise: Agricultural export-oriented production has to be expanded in ertier to support
the establishment of basic metal and engineering i ndustries which in turn will later help to improve proc_iuctmty of labour m
agriculture. The expansion of both does require a clear toperatienal.long-range pOllCY, regardihg chmse and allocation of
technology and the respectixe transfer to be performed by all the institutions mvolved 1n the selentiac and technical deve-
lopment of indigenous productive forces.
Thus, all government activities have to refer to given as well as to fututе industrial requirements-derived from the indu-
strial strategy; only such an approach will result to the appropriate material base of manpo wer planning and educat1on-w
for industrial development.

2. STRUCTURE AND DEVELOPNIENT OF INDUSTRIAL PRODUCTION IN TANZANIA

2.1 Strategy ot’Industrialisation:

A step towards Socialism and Self-reliancei is the provision for basic social needs such as food, clothnig housmg, health
and education. The Tanzanian Second Five-Year Plan in particular emphasises the developme nt of capital gootis, skills
and capabilities which foster seli-reliance in so for as they are it ..... essential for leng-tetm growth, taking mto acco-
unt the ossibilities of the East African Common Market and exportfl4). The followmg ObjCC theS are set: 5).
gExpansion of the range of products for local manufacture imported so far, consumer as well as capital goods;
_-I ncrease of manufactured element (value added) in exports;
MShift of trade dependence away from overseas towards internal and African markets; . .
g-Develokment of managerial and technical expertise in operation of industries and the introduction of modem techno-
logy.
This paper is Only supposed to follow up the first and the. last objective.
i ’ i ’ ’ ’ ’ t A ’ tabli-
For the ur ose of ex ansmn of the range of metal and engmeetmg pioducts a spec1al Metal Taslg Force was as.
shed in 1975? a. variety 3f products were indentified from preyious import figures and selected according to availability of
production capacity, company expansion plans and ministerial strategies.

Within the manufacturing sector metal indttstr iesi .are considered yital for production of consumer as well as capital
goods. Metal products such as sufuries, furniture bicycles meet socnal needs directly; on the other hand there may be
capital goods like machinery and equipment which indirectly help to multiply manufature of basic wage goods,
The expansion of metal and engineering industries also counsides with the discovery of coal and iron-ore deposits in
Tanzania, In view of the Third Five-Year Plan both elements, expanSton. of metal products and ulitization of local
resources for domestic requirements merge subsequently together in the followmg chain of industrial activities:
11. Mining of coal and _ore,
b. Basic metal industries for intermediate goods,
c. Manufacture of metal and engineering Products,
d. Re pair and services.
So far only the stages d. and lowly development c. and b. exist in Tanzania. All material inputs for b. c. and d. have to
be imported in particular raw materials, tools and machines. The 1integrated industiral strategyl considers therefore:
fadecrcase of foreign exchange requirements by expansion of the capacity of manufacturing and establishment of new
local engineering industries for consumer as well as capital goods which use iron and steel in terms of intermediate
inputs.
_-This again will require basic metal industries for intermediate goods which use coal and iron-ore as their major inputs
_This in turn has a direct implication on the mining oflocal coal and iron-ore.
What is the economic basic of manpower dCV elopment for the industrialization in Tanzania .
2.2#Distributi0n of Wage Labour by Sectors of Production:
It seems important first of all to get an overview of production and employment in Tanzania. In 1974 we find a total
labour force working on the basis of wages and salaries of only 471,530 people. Table 6 (secifies their distribution by
economic sectors, indicating the sector of industries With only 158,000 employees, (6)
Table 7 shows the manufacturing industries only, breathing down the industrial activities by number of enterpries and
distribution ofemploymen. in 1974 there were 499 enterprises,
Less than 10 % of the labour force x we allocated to metal and engineering industries which still involve mainly repair
and assembly work - rather than design and manufacture of capital goods. The related OR are mainy Mechanical and
Electrical Engineering.
More than 90 91, of the labour force are employed by enterprises manufacturing non-metal intermediate or consumer
goods. The production is of processing or assembly type involving Chemical or Process Engineering, Me chanical and
Electrical Engineering.
Table7
NUMBER OF ESTABLISHMENTS AND EMPLOYMENT BY INDUSTRIAL ACTIVITIES

ISIC	Industrial Activity	No. of Establ.		No. of Employee	
		1968	1974	1968	1974
2	MINING				
2901	Stone quarrying,sandpits	na	6	na	314
2903	Saltmining	na	7	na	669
2909	Othermining	na	3	na	2352
2	ALL MINING	16		3335	
3	MANUFACTURING				
312	Food manufacturing	132	137	14,380	16,007
313	Beverage industries	12	11	1104	2,495
314	Tabacco manufacturers	3	3	1,061	4,468
321	textiles	57	65	11,844	22,316
323	Leather and Products	10	5	207	
322	Wearing apparel and	31	23	2,112	1,935
324	FootweartExc.rubber)	3		1,463	
331	Wood and products	59	49	2,991	3,261
332	Furniture (non-metal)	37	30	1,081	895
341	Paperand products	na	8	na	1,156
342	Printing and publishing	na	38	na	1,808
351/	Industrialchemical	11		1,466	

352/3 Other chemicaland Petroleum 35 2,105 1,625
355 RUbbCfPrOdUCLS 6 9 130 1,255
356 Otherplastic products na 5 na 528
362/369 Glass and products and non-mctaimineral products 16 16 1,638 2,169
371/2 Iron,steelandnon-ferrous 4 938 888
381 Fabric.metalproducts 20 19 2,269
382 Machineryexc.clectrical 17 741
383 Electricalmachinery 19 4 657 765
384 Transport equipment 13 14 553 1,580
390 Otherindustries 1? 6 736 769
3 ALL MANUFACTURING 494 499 42,779 70,315
410 ALL ELECTRICITY na 22 na 2,701
2-4 ALL INDUSTRY na 537 na 76,351
1
l
l
1
Sources: Survey of Industrial Production 1968/1974

2.3 Impact of Technology and Scale on Occupational Requirements:
The’described macro-economic structure gives a. relatively static outline of the problem of industrial development in
Tanzania. We therefore have to stress that for the actual industrial development as well as for the purpose of this analysis
the distinction and interaction between the two major industrial departments, which are c onsumer and capital goods i ndum
tries have to be consxdered. 7i
Under the assumption that there will be further expansions we want to analysis in each of these departments the impact of
the respective tchowe anti transfer of technology on the development and change of occupa tional skills. Similar pheno-
mena in advanced industrial countries are usually discussed in the context of tteehnical progressi
2.3.1e-eTechnology in the Consumer Goods Department:
According to the fact that the capital goodsdepartment in Tanzania is of such insignifica nt size hardly tt ..... any kin d
of technical progress takes place on a large scale ..... industrial techniques now in use are either traditional ones or else
they are imported from industrialized countriesfiS)
Consumer goods enterprises have usually to satisfy tmass demand. In capitalist industrial socesties they face continuous
rapid change of their occupational strcuture; according to the competive conditions of pr oduction they have to increase
productivity of labour in terms of new equipment and processes provided by the capital go ods department. The tendency
within the various branches of consuper goods activities is thus an increase of productiv ity and scale of production, concen-
trating in a decreasing number of enterprises.
This concentration process accompanied by advancing production techniques leads to more t echnical division of labour,
thus to diversification and specialization of tasks in production. The accelerated mechan ization, automation and chemical-
lization of production, the innumerable a pplications of electronics and computer science , the universal development of
electrilication and other achievements of science and technology are bringing about radic al changes in the nature of work
For the majority of occupational skills this specialization is synonymos to tsimplificati oni; these is a strong tendency towards
tsemi-and unskilled 0R1
The occupational changes in under developed economies are of more static character. Quite a few Tanzanian enterprises
in the consumer goods department have a product mix of small variety, produce on a large scale and are equipped with
western - thus relatively capital-intensive technology. The techniques once chose and tra nsfered will remain for quite some
tme_determined by the physical life of equipment rather than by change of product fashion . Thus the level of technology
is determined by the point in history when it was chosen and by the technological standar d of the country where it was
imported from.
Therefore, any industrial growth which has taken place in Tanzania was controlled from ou tside, has failed to stimulate
indigenous technical progress and tends to perpetuate this situation. We can find some ex planations for this phenomenon
if we analyze such enterprises co-operating with multinationals; parastatals usually have ttechnical management agrecmcmy
which limit any indigenous product innovation or modification. The same applies to substi tution of importh material
in puts as well pas capital equipment used in production; the multinational shareholders have of ten the monopoly on
technical decisions, preference is given to importation of capital equipment rather than to locally manufactured machinery.
Thus for engineer such enterprises there are no creative or innovative functions; the pla nt engineer is specialized on
fault finding and organization of maintenance work. Technicians have hardly any technical functions; their occupational
requirements relate more to supervisory tasks. On the shop floor we find workers operatin g special-purpose equipment or
doing manual assembly work#both are as repetitive, thus not tskill-intensivei in nature.
Although the transition of the economy does intergrate former self-employed peasants into

the modern industrial modes
of production based on wage labour relations, the achievements for the individual worker in terms of educational require-
ments are doubtful. The scale and technology chosen for the enterprises tend to perpetuate the ttnon-availability of
technical skills?
Transfer of capital-intensive techniques does also not provide a solution for the crucial themployment problenf in the
underdeveloped economy; considering the increaseing birth rate transfer of technology tends to import cerptain symptoms
typical for capitalist economies, i.e ttun-employment as a result of increased productmty of labourti (9).
Thus, What are the consequences regarding the development of capital goods industries in Tanzania?
2.3.2._Technology in the Capital Goods Department:
ttCertainly, the existence of technical progress with in a country i s both a cause and a consequence of a dynamic i ndustrial
sector. It can forge links between the consumer goods and the capital goods industry . . . . to absorb more technology
the industrial structure must change, thereby becoming both means and goal of the transfer.
In Britain during the industrial revolution the type of technical progress was unique: it was almost entirely produced
within the country and was often the outcome of problem were directly encountered with existing industrial techniques.
Countries whose industrialization began later more able to import technical progress; improvements in industrial techniques
were partly acquired from elsewhere by imparting or copying capital equipmenthlO).
The establishment of metal-working and enginepring industries would. . . . play a key role in economic development
because they act as catalysts in both the material and social aSpects of development. Materia/ly they contribute about a third
of gross capital formation, in the form of metal products, machinery and transportequipment. Together with construction
they are the largest element in the new productipe capacities that are tequircd for the growth of national output.,’(ll)
The social impact of engineering projects in particular is their capacity for continuous growth in productivity, based
on acquisition of additional skills, technological innovation, adaptation and new design. Thus, science and technology
are decisive part for new and increased manpower requirements at all levels. More sophisticated products and pro-
ductions decisive part for new and increased manpower requirements at all levels. More sophisticated produete and
production techniques will increase the complexity of manufacture in engineepring enterprises.

But, in industrial countries also the technology employed within the capital goods _department is matter of technical
progress. Various multinationals suppliyng capital goods on the world market can speCIalise and standardise manufacture
for their large scale output; hence, were also tind automation in the product goods department. This phenomenon leads in
advanced societies to certain paveragr conditions of occupational requirementsl - in consumer as well as in capital goods
departments, The experience in the new industrialised countries shows that the whole employment pattern is changing
from a system of lvocationall related to defferent productsl to a system of a few lfunctions related to the automatic
production processl. According to the industrialisation in the Soviet Union we find in Table 14 pattern and distribution
of occupational requirements a function of the degree of automation. The general tendency thus is the change from
advocationalil to wards an loccupational structure of industrial work.
However, back to the question of a capital goods department in Tahzania this problem) of. automation will definitely
not apply-limited by demand and scale! Enterpeises for capital equipmenthn Tanzania vylll be hardly of large but
rather of small or medium scale. Thus what technique have to be chosen for engineering industries?
Within the engineering sector itself lmachine toolsi are of outstandingimportance becauce nearly all products of the
sector are manufactured either by machine tools or by machinery that has been produced with machine tools. In contrast to
most machinery in the consumer goods dcpartment-which is lspecial- purpose equipmenti - machine tools are usually
(multi-purpose equipment). The machine tool is designed for a particular engineering process (e.g. Turning, milling, etc.)
but dilTerent products can be machined according to given specifications (engineeting drawings). The operator must be able
to handle this machine. read technical drawings, undertake complex calculations and machine, adjustments and use most
sensitive instruments ofmeasurement and control. Technicians have to be most qualified experts in all matters oftcchnology
and production in order to instruct to the workers properly. They also communicate product specitications and
production plans-which are designed by the engineers - to the workers.
The expansion of engineering industries in Tanzania will increase the variety of products rather that their quantity, Ex-
pansion thus does not change technology it increase production in terms of more multi-purpose equipment and more highly
qualified people.
Hence, only the build-up of metal and engineering enterprises of small or medium scale will really contribute to the
development of technical and social productive forces in terms of formally trained and experienced engineers, technicians,
instructors and craftsmen in various trades.
This questioh of skill requirements has now to be related to the problem ofgrowth ofemployment in Tanzanians metal
and engineering industries.

TABLE 14: EMPLOYMENT PATERN ACCORDING TO THE DEGREE
0F AUTOMATION AND SPECIALISATION OF EQUIPMENT
(Percentages)
Occupation
Others
Fitter Electri-
Auto- Opcmtot Tool _ .
rcpaxt cxan
mated setter
and
speciali-
8051
0111111)-
mam
Factory and shop
Single-item and small-scale
production
8Kali’3r" factory, slide calliper
shop
Minsk automated line factory,
machine shop 2.0 65.3 -. 3.5 1.5 29.7
12A.M. Kirov" machinc-tool
factory, machine shop 2.8 63.6 1.3 4.7 1.9 28.
"Ordzhonikidze" machine-tool 5
factory, machine shop No. 2 3.2 68.2 1.7 5.4 1.8 22.9
0.0 84.0 - 4.8 0.6 10.6
Large-sclae production
Minsk machine tool factory,
machine shop No. 1 14.9
Gorky milling machine factory,
machine shop No. 1... 17.1 50.5 2.8 4.5 1.8 40.4
8Krasny Ekscavatof factory,
machine shop 28.4 51.2 3.2 5.3 2.2 38.1
8Krasny Proletary" factory,
machine shop No. 1 44.4 48.3 7.9 6.5 2.1 35.2
"Dynamo" metalworking factory
shop 44.6 71.5 8.4 3.0 9.3 7.8
572 - 3.6 1.6 37.6
Mas: production
"Frezef factory drill shop 60.0 62.4 12.7 11.0 2.3 11.6
Krasnodar combine harvester
factory, machine shop 70.4 48.6 8.2 5.8 2.3 35.1
National bearing factory No. 2,
ball-bearing shop 70.9 45.4 9.3 4.1 2.1 39.1
National bearing factory No. 2,
roller bearing shop 71.2 52.2 11.2 4.6 2.6 29.4
Moscow small c.c. automobile
factory, engine shop... 72.8 52.7 11.3 11.8 4.5 19.7
Gorky automobile factory,
engine shop No. l
Gorky automobile factory,
chassis shop No. 1 75.0 50.4 15.0 6.9 2:6 25.1
8Likhachov" automobile factory
engine shop No. 1 90.0 52.2 11.5 13.8 6.6 15.9
Ulyanovsk small c.c. automobile
factory, piston shop 100.0 19.0 41.0 15.0 9.1
National bearing factory No. 1, J1
automated shop 100.0 7.6 51.0 24.0 7.0 10
M
73.0 51.0 14.3 11.1 3.8 19.8
FIGURE 3 SIZE OF OCCUPATIONAL GROUPS IN THE MOSCOW BEARING
FACTORY. No. 1, 1958
(Percq-tagu)
100
A: Tool Setters. B: Fitter repairman. C:
E: Other workers.
On the left: Semi-automated production.
(these _two categories may be supposed to
producuon and to complex automated Producti
Electricians. D. Machine Operate rs

On the night: Automated production
Correspongl respectively to automated
on as dcscnbcd earlier.

2.4 Expansion and Growth of Metal and Engineering Industries:-
By means of Table 9 we can analyse growth of employment in Tanzanians metal and engineeri ng industries in the various
industrial activities during the period 1966-1974.
Table 9
GROWTH OF EMPLOYMENT lNBASIC METAL AND ENGINEERING INDUSTRIES 1968/74
__,___ .__._. _. .q._.__._...._.._._._._.._._._.
_ _ ISICglndustrialSecghs H 1966 1968 1969 1970 1971 1972 1973 1974
__..._4..._._..___.___.....__._._..
371 Basic Metal Ind.
372 incl. Roolling 1,329 1,350 1,266 _ _ _
381 Fabr. Metal Prod. _. # # 1,987 1,929 1,978 2,259
928
382 Non-el. Machinery _- - -9 - 511 513 680 721
463 640 563 871
539
_._....._.._4_. .-
H 500 569 610 888
_ 337 509 748 761
383 Elec. Machinery, apparatus, appliances -
802 771 975 1,301 1,456 1,565
384 Transport equipment 447
Total Engineering and Basic Metal 2,239 21,07 2,715 2,908 4,310 4,821 5,472 6,194
Total Engineering Only _2 _ _. # 3,810 4,252 4862 5,306
Total all manufacturing Industrial 32,972 42,387 43,396 48,314 53,516 62,188 63,355 699,7 4
Engineering and basic metal as % of manufacture 6.7 5.0 6.3 6.0 8.0 7.8 8.7 8.9
Note: Firms with ten or more employees only. Only paid workers i.e operations, admin, per sonnel, surpevisory, technical
and clerical, except proprietors and unpaid family workers.
Sources: Survey oflndustrial Production 1966, 1968, 1969, 1970, 1971, 1972, 1973, 1974.
We can pbscrve a high rate at which employment in engineering has expanded since 1966. Th e employment share of
engineermg 111 relauon to total manufacture has risen from 6.74 in 1966 to 8.9 - in 1974. Over the same period while
employment 1n the manufacturing sector has doubled, employment in engineering has trebled .
’ This fast rate of demand for labour manifested itself even before government policy ind icated that metal industry is to be
gwen high pr1or1ty. W1th the formal adoption of the basic industry strategy the growth ra te will increase even fastere.
Th1s fast growth makes manpower planning for the engineering sector crucial!
The industrialisation policy has also to consider the problem of ownershipi According to Table 10 it is evident that the
major part of the capital goods industries, namely basic metal and engineering enterprise s are privately owned185-48 out of
56 enterprises in 1972). This percentage does however not reflect that most ofthese compa nies are of small or medium size
as far as employment is concerned. Still, there is a major concentration of relevant skil ls and knew-how as well as flexibility
for innovation and investment which expains why private capital will have a vital role in technical depelopment and
engineering training. 11a
The goyernment controls only a few metal and engineering industries directly; most of the m however are of medium and
large s1ze 1n terms Ofemployment-thus, a challenge for the government to introduce a sigi nifacint policy of manpower
development at enterpnses level.
In the eurrent annual plan some of the envisaged development projects in the metal and en gineering sector include
the expanelon 0f UFI, the building of a new farm implements factory in Mbeya, the expansi on of Aluminium Africa (steel
b111eteast1ng, cold reversing and hot rolling mills), expanaion of National Engineering (new section for iron casting),
xpans1on of the Steel Rolling Mill in Tanga (steel wire) and 1h completion ofthc National Bicycle Factory.
All these new industrial activities and the respective enginmring nrocosse; and technique s have to be considered as the
ba81c of product10n, trammg and research-the mtergral elements of industrial development.
3. GENERAL EDUCATION AND TECHNICAL TRAINING FOR ENGINEERING REQUIREMENTS
Human resoutce development in bread terms is the procesx of building up the knowledge, th

e skills, the working abilities
creat1v1ty and att1t11dcs of the pqpulahon of a country. Education benefits economic grow th of the whole society as well a
the soc1aldevelopmentofthe1nd1vidual.
1? pte-indqstnal SOCieliCS lift; work and education are integral elements within family a nd clan. Industrialisation leads
to d1scr1m1ha’t10h betweert fam1ly and work; d1v1510n of luluour requires more specialisa tion of education and training,
the respons1b1ht1cs for wh1ch are allocated to family, state and employer respectively.
_In the history 9f early capitalist prpfessional training V193; closely attached to produ ction, controlled by employer and
_gu1ld.s. Advance 1n product1oh techniques howeVer, requires more general education for w orkers and special education
1n sc1ence and technology for h1gh level manpower.
In.industralis.ing societieshthe state tends to provide more 111111 more compulsory gener al education in public schools and
techmcal edueatlon at techmcal eolleges and universities. Whereas general and technical e ducation are getting diverced
from pfodtiction enter pr1ses, this does not apply to the training of the majority of wor kers who are mainly trained
on-the-Job 1115th the factory.
These tendenc1es 9f dividing and formalising education and production make ttprofessional educationn a complicated
matter; useful prefessmnal engineermg educat1on has thus to be an integration of:_
geneal and techmcal educat1on on the one hand with
_practical training and experience in the held.

Although Tanzania; has set up q most impgessive system of general education since indepen
dence our hypethesis has to-
refer to the short-cqrhmgs of techmcal educauon and practical training at the three level
s of the engineering cadres which
are engineers, techmcmns and workers:
mTherejs much emphasis given to education of_ engineers and technicians although it tends
to be very academic;
on-the-Job experxence 18 not yet-generally aprecmted us a necessary part of the Curnculum
. Misallocation of high
level manpower seems to be a serious loss for industrial production.
_Workers training, formal as well es informal is severaly neglected; lack of systematic e
ngineering training of workers
tends to hold back development of mdustrial production.
Our major questien ih this paper will thus be, how does workers training match present an
d future professional
requirements of engmeermg mdustrles, what to be changed ’2
For assessment and planning of the system of manpower education we therefore need apropri
ate criteria. Planning and
training of techmcal manpower have to refer continuously to :w
1. present requirements of the economy to be spcihed by individual enterprised as well as
;
2. future requirements which can be derived from the industrial strategy of the governmen
t and company projections for
the evaluation of both objectlvcs we apply the following four criteria :#
a. Divessij?cation of OR according to industrial activities and levels of the technicai c
adres:
b. Number of manpower per industrial activity and level;
c. Standard ofqualwcation of manpower according to kind of technology and scale;
(1. Flexibility of manpower according to changing skill requirements.
Whereas a. and b. are indicators Ofmanpower planning and allocations, d0 c. and d. mainly
refer to institutional forms and
methods of education of training.
3.ll.-Present System of Technical Manpower Development:
311.-Diversification of education and training:
The present system of general education in Tanzania provided in 1975 an output of 133,300
students at the Level
of Standard 7. (see Table 19). 858 per cent ofthcm (114,433) were directly joining agricu
ltural or industrial production
without any further training.
Only 6.6 per cent Stands rd 7 students continue in Secondary Education about 8,000 in gen
eral secondary schools and 695
in Technical Secondary Schools.

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- h. r.-’;bqam’
’Hl ’xrl’lud’. ’
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7.7 per cent of the primary sghool leavers joinformal tchm’cal training conducted in 32 d ifferent instigutjons.
There are governmental traming centres but also various trade schools or industrial schoo ls admm15t_er_ed by churches
_ nr nrivate enmrnrises. All those institutions which are cn-nneratimz with the National Vocational Trammg Programme
Figure A
PRESENT STRUCTURE OF TECHNICAL EDUCATION AND TRAINING 1977
I
Industry A
A
Swui-skil.
Industry: Informal
Training
L) clow ST 7
Industry
i NVTDzAdvance l
l Cou. 1
A
A Industry 3
A x
A
TT 3; 3; 1
Skilled
In-plant Training
3 years
i Industry: Formal
1
A
NVTC: Basic Training
A 1 year
Primary School
7 years
Legend: STzaStandard; F0:1:orm; TT-Trade Test.
Technical Sec. School
Univers
Lectu re Ind ustry
A Ph. D. A
M. Sc. A
A_:
l
l University
A A
w ;
1 A
Technical A
Teacher 1 Industry A Industry
A
inT ’77777 A
3
Dipl.Eng. 1
Techn. College DSM University DSM
Dlpl. Cour. 3 years FOE 4 years
I A 7 7 7A? 77/t H A A
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industry
A Industry Mllqnnw i
2 years wl
_A A
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l
K Nat. Serv. 1 Nat. Serv. A
! lyear 1 year
A MA
F. T. C.
A Techn. College DSM

A FTC Cour. 3 years i
V "TH ’& QA
1
Industry A
_,A,A,__.
F0 6
Other Secondary
SChOOIS 6 years
4 years A A
A-A
A

7.7 per cent of the primary sehool leavers joinformal tclmz’cal training conducted in 32 different institutions.
There are governmental training oentt’es but also various trade schools or industrial schools administered by churches
or private enterprises. All those institutions which are cooperating with the National Vocational Training Programme
(NVTP) meander the responSibihty of the Ministry of Labour and Social Welfare. The NVT Division undertakes activities
such as curriculum development, recruitment, basic training, evening classes and trade testing.
The major struetural problem which we intend to analyse is the diversification of trade offered in the various training
centres in companson to the present_industrial requirements. Curricula and facilities available in the training centres
seem to give emphams to "traditional skills?
Traditional skills are not necessarily related to the indigenous history of Tanzania but rather the early capitalist history
of the colomsmg powers who have initiated the establishment of the given formal training system. In consequence, skills
such as carpentry, masonry and tailoring may suit small industry activities. But those three trades occupy already half of
the overall capacny of ap prentices training available in Tanzania.
Only very few tragic in Tanzania seem to relate to tlmodern industrial workll in general and to ttmetal and engineering
requirementsi m particular. By means of Table 19 we have tried to specify all institutions involved in formal training
We have selected only those trades which have any bearing for metal work and engineering; the result, only 20 per cent
(2,152 out of about 11,000) of the total number of training places are of this nature.
Table 19 also shows that only three institutions,
HTechnical Secondary Schools,
_-NVTC and the
_-Company Training School.
do significantly contrihute to engipeering training with more than 65 per cent of their capacity. Thus, inspite of the fact that the
present training diversnication does not yet satify the present industrial requirements, we shold consider those institutions as
the basis fog the expansion and contration of formal basic training in metal engineering trade which are mainly required by
the modem industrial sector.
The other institutions should specialise in agricultural skills, traditional technical skills and crafts training for small
scale enterprises.
3.1.2. Pyramid of Engineering Cadre in Training and Employment".
So far we have only discussed the intake capacity of formal basic training in very general terms. The figure of 2,153
apprentices does not reheat clearly the diiTerent educational levels approached and quality standards achieved according
to the given facilities. This input figure does therefore not allow any projection regarding the annual supply of ttskilled
workers".
Only after consideration of the National Trade Testing system we can quantify output by trade and level. The artisans
have to pass three Trade Tests (lIl-al) before they can be seen as ttskilled workers.
We have evaluated the test results of the NVTD in the period from 1968 to 1974. We selected only such trades related
to metal work and engineering and accumulated the numbers of workers who have successfully passed in the given period.
Even under the assumption that during the transitional period not only Grade 1 but also Grade II are sufficient qualifications
we have to conclude that less than 1,200 workers have received suitable qualifications for the particular requirements of
metal and engineering industries during the given period 12. This figure represents less than 1.5 per cent of all employees in
the manufacturing sector in 1974.
But, this number does not necessarily rehect the craftsmen stactually working" in the manufacturing industries because
they may join also other sectors like service and building construction.
Even more important, many formally trained Workers are going into ttself-employinent and open smell private workshops;
these workers are thus lost particulai-l y for engineering enterprises and central worksh

ops of parastatal industries.
In the present educational system skilled workers can not easily join technicians trainin
g at the DSM Technical College;
thus there is little chance to adiance into the techinical or engineers strata. But there
 are etill ways how well
qualified and experienced craftsmen ttget lostli for the shop floor they either are promo
ted to superwsory or administrative
posts, or they join the lladvance coursesli at the NVT D which qualify for
-on-the-job instructor
wolf the job instructor
--forcman
wsupervisor
_tralning ohioer.
All these specified "lossesli have to be considered in the capacity planning of formal tr
aining. Solution for tly is problem
can not be wblockage of vertical up-gradingll at workers level; on the contrary: in order
 to emphas1se11practical work-
experienoetl for technicians and engineers it would be advisable to Hopen the educational
 system verticallyll which requires
an even larger capacity of formal training for skilled workers.
We want to express our observations in a pyramid of technical education and industrial em
ployment comparing engineers,
technicians, skilled workers and semi- and unskilled workers ;,,.

OUTPUT OF PRIMARY EDUCATION AND TRAINING CAPACITY FOR WORKERS IN METAL TRADES IN TANZANIA , 1975

Table 19 1

Trades Training Capacity (N0. of apprent./trade/inst.)

Motor Vehicle Mechanics

MW

- - __ _ 91 - - - 40 90 90 75 386

Electrical Installation .. _- - - - 29 - - - 40 17 100 110 296

Fitter/Turner . - - - _ 24 - - - # 19 100 80 223

Fitter Mechanics . _ - -9 _ 15 - _- -- - - 110 _- 125

Welder - _ 40 - 15 - _ - - 4 80 1 10 249

Plumber . _ _- 130 _ _ -- - # 200 39 80 75 524

Office Mechanics _ - -# - 9- - - - - - - 30 - 30

Foundry Blacksmith - - - 9 - # _- # - - 80 _ 80

Refrigation Mechanics _- - - -- - - - - - 10 - - 10

Instr. Mech. - - _- - - _- - - -- 10 -- # 10

Sheet Met. W. __ _- - _ - - - - - 12 # - 12

Tin Smith - - 150 _ _ _ # 29 20 8 - _ 207

Total Metal per Instit. na 1121 320 na 174 na 0 29 300 209 670 450 2,152

Metal out of total Capacity na na 27 11a 90 11a 0 11 25 29 65 65 20

Total Capacity per Institution nu 500 1,200 ml 194 1,400 9,903 272 1,220 721 1,030 695 11 ,000 91

Institution of Vocation Training Others Prisons National Com C om p. Pur. Tr. Post. SIDO TAPA Missions NVTD Technic. Total

Service Works Trade Cent. Primary Secondary Capacity

School School per

Trade

#’ 7"" - r ’ 1 1

PRODUCTION , VOCATIONAL TRAINING 1 1 SECONDARY SCHOOLS

1, 114,433 85.8 0/; 1 10,250 7.7% 1 1 8,717 6.5% i

1_ v,_ _ _ 7 , 1 7 .7,7,7,,,, ,#v#7_ 1 l -1

PRIMARY SCHOOL (ST 7) 1

133,300 100 0/3 1

Sources: 7

1. Ministry of National Education, 1975

2. NVTD, 1977.

Table 21 PYRAMID OF ENGINEERING CADRE
--o_--vt-v-o-n_4-v_-4._a-_._.___..__.
Cumulated Education Cumulated Education Employment Ratio
Strata Output Tanzania 1974 Output Tanzania I977 _._._.__.__._._22___H
No. Ratio No. Ratio Rcc. by Actual
1L0 GDR
Engineer 150 1 600 1 _T#__##E
Technician 750 5 1,200 2 5 2
Skilled Worker 2,000 13 3,000 5 25 9
Semi- and Unskilled (Manufacturer) 67,000 447 69,000 117 -- 8
Total Employers Manufacturer 70,000 # 74,000 # : _ :
Sorces: Min. of Nat. Ed; DTC, NVTD; ILO, Review 113, l. 380.
This table does obviously not consider all the possible misallocations and losses but it can be used in order to show
how promotion ofskilled workers and strong emphais on highr education will influence the manpower ratio in actual cnrloy-
ment. At present engineers and technicians are facing an overehwelming majority of sem- and unskilled workers; there
are only few workers trained in the relevant skills, who will be in no position to contribute in any significant way to the
development of engineering industries. Even if there is a sumcient number ofengineers, there will be no industrial develop-
ment if training of skilled craftsmen is not expanded on a massive scale
3.1.3. Summary of Problems in Present Manpower Planning, Education and ln-Plant Training:
We want to select some of the problems which mainly concern the implementation of Manpower planning and the
organisation of education and training. This will be done in the l’orm of statements.
21. Problems of Manpower Planning:
-There is little co-ordination between economic dcvclomncnt and planning For technical education. Individual
enterprises seem not to be aware ofan itoperutional Strategy 0fintlustriulisatioh". There is little content and exchange
of information between industries and ministries particularly regarding education and training of workers.
Industries either do not provide sufficient information on nlanpowcr requirements or they have no qualified stall
for evaluation and specilieation of requirements in rcsposne to the questionmiires. Particularly medium and small
enterprises are not a posttion for proper manpower forecaxting because their prospects in the process of industriali-
sation are not very clear to them.
_Hence, manopwer planning in terms ofdivcrsilicaiion by trade and level are mainly based on political decisions. The
omcers involved are not sutlicient by number and not conversant with the various occupational areas. Neither
present nor future requtrements seem to be fully evaluated.
--There is no clear division of labour between the dichrenL ministries; too many are involved ill the various levels of
edueation, overlapping responsibilities lend to a competitive situation and duplication of cll’orts, both does not allow
an integrated approach towards general and technical manpower development.
b. Problems of Formal Education and Training:
--Theelack of anoperational ’strategy of industrialisation results to major problems for all those institutions which are
not integrated into the pttblic system ofmanpower development to predict t’urture technical skill requiicments by trade
and number. This applies particularly to these industrial processes which are not yet uvuilublv- in Tanzania.
mlnstitutions of technical education and training fail to provide adequately qualified manpower because there is
at cndecy of divoscing educational institution and industrial production. ()litcn curricula are entirely adopted
from advanced industrial countries, thus the knowledge provided does not relate to pm-imlustriul needs; very basic
technical problem in production remain unsolved.
_Most institutions of technical education and training are not related to each other and lllil to eo-operute or over
co-ordinatc their curricula. Such co-ordinution is vital in order to prepare workers, technicians, engineers and
managers tor successful future co-operution. As long us these institutions are not properly integrated, education

and training will support the reproduction of hierarchical work relations in a non-t’unctionul way.
-The.national system of general education and trainingy mainly emphasises the training of bigh-level manpower; thus,
National Vocational Training Program needs more political support in order to secure a certain minimum standard
of engineering training to the largest possible number of workers_which industries at present are not able or Willing
to provtde.
_The educational system is not yet itttpeiiil enough for vertical advance; the emphasis on formal education and English
language in the selection procedures by the NVTI) does prevent many technically experienced workers lrom the
information sector to enter formal training.
-The chances for workers in rural areas are allected by poor conditions in evening classes, there are obstacles like lack
of StufT, thus luck of certain trades, space, teaching materials, and transport problems. More company stutl should
be integration.
_Over emphasis of theoretical training and written Trude Tests (luring the vocational trainingiein connection with the
problems in rural arcas_lcads to high failure rates of such workers who can only refer to their practical experience in
the informal sector.
c. Problems of In-Plant Training:
-Most enterprises consider the non-existcnce of technical skills and Choose those techniques which must maintain this;
situation. The give large enterprises do not require significant skill development because the majority of workers
either operate special purpose machines or do highly divided respetitive part work-ncither of which reqture formal
technical Training.
_Transfcr of technology usually means only iiimpol’t ol l’iztrdwureli but rarely utransfer of technicttl know-howfl
Thus, there is no history of implant-training on a systematic off-the-job basis in the modern indulstrial sector. In-
Plant training it exists, is only conducted iton-thc-jobii and relates there for only to the given techniques.

-Enterprises with a technology for which they can not find experienced operators usually do cendttct systematic in-
plant training. But only few companies have special training workshops and the necessary off-the-Job mstructors-athese
enterprises are co-operating with the NVTP.
-Most enterprises prefer ltpoacmingli ofmanpower in order to save time and training effor ts. .Ttaining ohicers, off-the
job instructors and even on-the-job instructors are scarce. The result 18 a shortage of s kills for both. present and
future development of the own company as well as of the whole economy.
--Training ohioers are usually no tttechnical peopleil thus preference is given to gehera l and_ adult educetion rather than
to technical training. The experties of engineering padre, is not properly utlllsed for m -plant training. AISO, we
rarely find tlunder-studiesii allocated to experts working In the enterpnses.
-Whereas engineers and technicians easily can be sent abroad for further theoretical or p ractical studies, again the
workers seem to be excluded from such programmes. This can not only be a language problem because even local
exchange programmes with other enterprises do not exist for workers. Thue, many industria l areas with various
important occupational fields are not utilized for the benefit of engineering training.
_Even the simplest form of training, ttjob-rotationit within the own enterprise is hardly known-thus not practiced.
This system would be also most useful for junio engineers and technicians after graduatio n. . This type of on-the-job
training contiously practiced would increase the potential expertise ol the group of semt -sktlled workers for further
up-grading in case of expansion of the enterprise! This principle, _after allwould also i mprove Job motivation of
all those workers who are subjected to highly specialised and respetitive working conditi ons.

3-2. Manpower plpning for Metal and Eninearing Industries.

Given the above catalogue of problems we want to analyse only a few of them. We follow th e theme, that en gmeering
training of workers has to be thoroughly revised in terms of 1-
-widening the diversification of metal and engineering trades,
-increasing the number of skilled workers per trade.
--improving the quality of training accordimy to the given requirements as well as
#fostering the flexibility of workers secording to changing requirements.

3.2.1. Diversification According to the Industrial Strategy:

The major question is, how do we determine the trades required in the near future ?
Refering to the Tanzanian strategy of industrialisation we eaSle can identify the sectors of the economy concerned which
are metalore mining, basic metal, manufacturing of metal products and repair and servrces .
By use of the International Standard Industrial C lassihcation (ISIC) of economic activit ies we select all these related
to the above named sectors (see Table 5, section b.)
By use of the International Standard Classihation of Occupations (l SCO) we can specify all such OCCUDHUODS which are
required in the giVen industrial activities (see Table 5, section c.)
This schedule od sectors, industries and occupations thus reflects the ’model diversifica tion according to the Tanzanians
industrial strategy. It can be used as a frame of reference for the evaluation of future requirements.
Manpower planning and deversihcation for Engineers is a less eomplcated matter, because t he curricula fox higher
technical education are supposed to be of more general nature covering a Wide area of ote ntial occupational requirement
Major objectives for the education of engineers are thus tlexibiity according to changing projects and selforeliance in solving
engineering problems. We therefore find only few general departments of engineering at un iversity or college level.
Specialisation is not so much pert of education it is more related to the preject require ments in production.
At technician and workers level, however, more specilic skills are required, the diversif ication of occupational skills is
wider, and te practical guidence in each 01’ it is considered as part of the systematic t raining.
For the diversification of requirements at workers level we also start with Table 5. But

we need further diffemtiation
of occupations which may be evailable in a standardised form within the specific industri al fields. it will be also useful
to analyse this question historically and make reference to one of the now industrialised countries. An empirical example
of the diversilication of metal trades in USA by 1940 is given in Table 13.
In matrix we find 11 selected metal industries and allocated to each the respective occup ational skills and their percentage
distribution. Of course, we have to be aware that such a pattern is subject to change acc ording to scientitic and technical
progress. But still, for the purpose Ofcomparison it is most useful, particularly to iden tify skills missing in Tanzania and
their quantity ratios. (Compare Table 13 and Table 19.)
Very vital skills such as Miner, F urnance O perator, Foundry worker, Moulder, Miller, Gr inder, Heat Treatment Worker
and last not least Tool Maker, are not yet trained in Tanzania. We therefore have to eval uate the existing material basis
for the respective engineering training and the ways of increasmg the supply sufhciently trained workers.
3.2.2._-General Education, Substitute for Formal Engineering Training
The growth of employment in metal and engineering industries indicates clearly the increa sing demand of qualified
workers. But, the expansion rate of the capacity of formal training is highly insufficien t. The question is therefore, wether
lack of formal training can be substituted by extended and improved primary education ?
Reference’shull be made to the experience of industrialisation in the Soviet Union. Table 21 shows how the educationl
requ1rcments m a Russian metal-working enterprise have changed as afunction of technical progress in the period 1950wl 960,
Given_ the ahalysis of the general impact of technological advance and the shortcomings o f formal Training in Tanzania
the question arises, what are the implications for the system of general education?
Tanzanian enterprises which had to start operating with workers with no education or prim ary education below Standard
are now slowly ihcreasing the recruitment of workers with at least Standard 7 level. In t his respect the policy for itUniversal
Primary Educationil (UPE.) will be of great significance. Since 1968 the enrolment of Sta ndard 7 has gone up from
57,381 to l38.99

REQUIREMENTS FOR STRATEGY OF BASIC METAL AND ENGINEERING INDUSTRIES
Table 5
181C 230 0Metai1I-bre-M1nin-1gr W
37 Basic Metal "I11duslries
a.
b. 181C 73710 Iruhafxnd $1661
3720 Non-ferrous Metal
2301 Iron-ore Mining
2302 Non-ferrous Mcta11urgists;
2100 Coal Mining
2200 Natural Gas
c. ISCO 026 Metal1urgist
027 Mining Engineers
037 Mettallurgists Technicians
038 MiningTechnician
711 Miners, qurrymen
712 Mineral and Stonctrcaters
024 Mechanical Engineers
025 Chemical Engineers
026 Meltallurgists
02.8 Industrial Engineers
035 Mechanical Engineering Technicians
036 Chemical Engineering Technician
037 Metailurgists Technicians
713 We1l Drillers, Lorcrs 721 Mota1lurgisls Smehing
722 MetaHurgists Rolling
723 Metallurgists Mcllers
724 Metallurgists Casters
725 Metalmrgists Mouldcrs
726 Mettallurgists Annea1ers
727 Metanurgists Drawers
728 MetaHurgists Platcrs
38 Manufacturing 011Fabrication Metal
381 Manufacture of Fabricated. metal
951 Repair Services
Products, Machinery and Equipment
(ENGGJ
951 Repair Services
products
382 Manufacture of Machinery (except
electrical)
383 Manufacture of electrical machinery.
apparatus
384 Manufacture Of transport equimcnt
385 Manufacture of measuring and
contro1 equipmcm
023 Electricl Engineers
024 Mechanicai Engineers
025 Chemical Engineers
026 Mclallurgists
(128 Industrial Engineem
032 Draughtsmen
034 Electrical Technicians
035 Mechanical Engineering Technicians
036 Chemical Engineering Technicians
037 Metallurgists Technicians
831 Blacksmith, Forg. Presg
832 Too1makers
833 Machine T001 Sector
834 Machine T001 Operator
835 T001Sharpencr
841 Machinery Fitters
842 Instrument Makers
843 Motor Vehicles Machanics
844 Aircraft Machanics
851 Electrical Fitters
852 Electronics Fitter
855 E1ectric Wircmen
856 Telef. Instanation
857 Electric Lineman
871 Numbers

872 Welders
873 Sheetmem Workers.
874 Structure Metallurgists Workers
ith-Jnternalional Standard Industrial Classi1icatioh . 15C; (7411110;11at1011211 Standard (1.18810catmn kwf1bccupations.
Source.-Int6rnational Recommendations on Labour Statistics, 1L0, Geneva 1976.
iNDUSTRIES OCCUPATIONS
INDUSTRIES ACTIVITIES INDUSTRIES SECTORS

TABLE 13.44PERCENTAGE DISTRIBUTION OF THE SKILLS OF WORKERS IN SELECTED METAL TRADES, UNITED STATES, 1940

Occupation/Industries	Tincans and other tinware	Miscel- laneous iron and Metal Product	Miscel- laneous non ferrons supplies	Electrlcal mchinery and equipment	Agricultural machinery and mechinary repairing	Store machinery and imports equipment	Miscel- laneous mcchinery and auto- mobile equipment	Aircraft and auto- mechinary	Ship and boat buildings	Railroad and trans- portation equipment	Agricultural implements and tractors	Miscel- laneous and auto- mobile and trans- portation	11115031- laneou
Blacksmiths, forgemen and hammermen	a 1-10	-	_2	2-06	.2	_	-_	_	_	1.52			
Boilermakers	__	__	.2	--	__	--	_.	_	__	1.79	__		
Cabinet and pattern makers	-	1-03	_	-	1-15	_	1-9	1-47	-	5-33	1-46		
Carpenters	_	_	_	-	_	_	_	_	_	3.79	2-87	3,	
Electricians	1.18	--	2-	2-85	44	_	a	1-69	1-80	3-94	1163		
Foremen	4-73	4-07	3-84	4-54	4-94	5-01	3-86	3-29	4-36	1-3	4-39		
Machinists, millwrights and toolmakers...	12,86	11-48	5-77	11-00	2074	14-29	36-11	19-03	1	2-71	12-89	11-70	
Mechanics and repairmen...	5-47	2-73	2-35	4-46	6-17	12-38	6-04	20-84	6-57	1-67	5-35		
Moulders metal	_	8-07	4	68	_	4-23	2.	1-85	_	_.	__	1’69	
Plumbers and gas and steam fitters	-_	__	_	_	_	__	__	._	_	3.41	_		
Rollers and roll hands metal	_	a	1-40	__	-	_	._	_	_	_			
Sheet metal workers	2-88	-	22-47	_	1-20	_	__	6-24	_	4407	1.07		
Stationary e ngineers cranemen and hoistmen	_	-	_	#	1’6	_	1’13	_	_	3.34	2.44		
Structural and ornamental metal workers	-	1.61	_	-	_	--	-	_	__	3.34	2.14		
Apprentices	2-07	_	1-33	_	-	H	1.26	1-30	.2	1.73	1.01		
Chauffeurs, truckdrivers and deliverymen	_	1-17	1-18	_	.2	H	106	_	1-65	_.	__		
Painter, Construction and maintenance	_	1-18	_	1-11	176	1’19	1’06	1’25	2.79	._	1.41		
Welders and fra me cutters	_	3-02	1-42	176	2-53	_	2-77	2-48	3-91	6-88	3-60		
Operatives and kindred workers	47-30	38-49	33-95	361	33-67	56-91	20-60	34-67	47-66	20-59	29-41		
Labours	17-00	19-38	15-99	10-29	14-86	4-08	8-55	4-03	11-92	14-29	20-6		
W													

Sources.#Derived from United States Department of Commerce, Bureau of the Census: Sixteenth Census of the United States, 1940: Population Occupational Characteristics Washington Government
Printing Owa 1943, pp 218-233
Percentages of less than 1 are not listed.

TABLE 21: PERCENTAGE BREAKDOWN OF WORKERS RECRUITED BY
THE "URALMASH" FACTORY BY STANDARD OF GENERAL EDUCATION
1050 1951 1952 1953 1954 1935 1956 1957 1958 19.59
Number of ycars’
schooling.
_,_4,._..._._. . . Q.-. N . . _ . _. -......_. ._pv- a...
0 16-6 14-4 17-1 14-0
1 27-4 32-2 22-0 30-1
-7 43-8 39-2 42-7 43-7
2 2-2 14-2 13-2 22-1
1 - 4 years
5-6 years
7-9 years
10 years
Source.- (64, 115121.
1Not including workers with a craft training specialized secondary educmlon.
FIGURE (’ CHANGES IN THE LEVEL 013 GENERAL EDUCATION OF THE
WORKFORCE AT THE "URA1.MASII" FACFORY, 1950-60
(Pcrcq - Iugrs)
-
.
c
1
-
IOIIDGI’
Q
Illitcralc workers, Workers with one to three ycurs’ sphoolin . Workgn with four
10 six ycas’ schooling. Workers with gevcn years schtmlln . orkcrp wnh clght to
nine years’ schooling. Wurkcn, havmu completed Huxm ary Hchoolma.
ss
1

There is another tendency: on the one hand there are not enough formally trained craftsmen and technicians employed
in industirieS-nbut on the other hand there are a great number of secondary school leavers tip to Form 6 who have no clear
destination in the education system. Several enterprises make use of them, they substitute the shortage of skilled workers
particularly by recuritin Form 4 students from Technical Secondary Schools. Since the start of technical secondary
education in 1969 there are now four schools, lfunda, Moshi, Tanga and Mtwara with an annual output capacity of 650
students at F mm 4 Level only half of which is considered as intake for the DSM Technical College. These schools have
produced so far about 4,000 students.
Some Tanzanian companies do clearly state that they reject poorly treined workers and technicians from the formal
training 5) stem and prefer recruitment of students With secondary edttcation wlhoe-ae the companies say: ’tcan be eastly
trained inside the factor)". Again such statements do not apply to engineering industries !
Thus. gii’en the tendency to import technologies which do nt’t require formal teahnical training. the government, CCM and
N UTA hate the responsibility to secure at least eat unded and improved primary education. This applies to the 85 per cent
unskilled and semiaklled workers in agriculture and industries. Most suitable for this croup seem to be the ’itechnical
streems" in primary schools there were 275 of !hem by 1975 wi!h 9,903 students enroled. A iipolytechnical approachil in
connection to "problem-orinted learning" in primary and secondary education should be a sufficient basis of knowledge
or all those vtho haXC to "face reztiitiext" in production immedateiy after school.
For both groups. semi-sltilled us well as skilled workers such alrevised general education is required. But even the best
school st stem can not subst itute practical engineering training which IS a must tor workers, technmans and engineers.
3.3. Planning for Practical Engineering Training:
Increased and imprmed general education may he an intermediate measure for a developing economy to cope with the
tepaid growth of such industries which are of processing and assembly typelon a large scale. Establishment of capital
goods industries requires an increaxing number of skilled manpower m the various trades and levels.
3.3.1. Grading of Educational Levels:
Vte propose to consider the last year ot the primary schools with polytechnical bias as a first element within an hinter-
grated technical training system of Tanzania".
This means in practice that the curricula in primary education have tirst otall to be related to agriculture and industries;
but they have also to he interconnected to the "formal vocational training programme". Thus, a Standard 7 pass should be
considered as a Grade 5 on the vocational training scale.
The major advantages of such a decision ttoud be that the 85 per cent of the workers who join production without
training can be graded Within the enterprise according to their technical background.
But exen more important; those workers who intend to join the formal vaocational training later will have a clearly
dehned intake stautdui d.
Respectitely, the intake requireiiiet’tts tor the basic year of formal training should be Grade 5. But, at present also the
basic year has no formal recognition ; thus. completion of formal basic training should be considered Grade 4 0f the NVTP.
However for such workers who hate worked for an appropriate period in engineering activities may sit directly for the
(trade 4 teSt it their uork experience is equixalent to the basic training.
All the SUbaCQllElli Grades ’3 "l which are related to the formal in-plttnt training should he maintained as they are. but
not necessarily based on the same form of training (see 3.3.4.).
Also other inSttIuttOD: in the technical education system like the DSM Technical College and the Facutly of Engineering.
LTDSM should be intergrated in a wty which allows penetration of a Grade 1 Craftsman into the DTC and of a technician
with an FTC. into the UDSM.

Such an integrated grading system has the following advantage for industria lisation:
wit secures that till workers with minimum Grade 5 qualification have ti chance to advanc e ’ceord’tng to their perfor-
ll’tLUlCC;
subuequeml) aim technicians and engineers will hate ti sutlieiem background in practical engineering training and
work experience zts’ tar as they are upgraded from workers? level.
wtittt-ther more can the salary grading inside the enterprises clearly be based on the de gree oftrainingmparticttarly at the
letel of semi-skilled workers.
Alter clarification of the trumework for an integrated system of technical training and e ducation we have to evaiue
the neeesaary curt ieulum content lor the different levels in principle.

3.3.2. Curriculum Development:

Central reqtiiment of engineers. technician and Craftsmen and is the solution of engineer ing problems by 505%th alld
technical means. The maior principle for "professional engineering education" has to be t herefore merger of theory and
practice in terms of proxiding theoretical exercises and practical projects. The teachng of theory seems to be not
a problem. but what tthotll the practical part ofthe curriculum?
The curricu lttm dex elopment is done according to the following guiding question:
V3 hat trade ix to be trained. how do we determine the theoretical and practical requirem ents. what forms or practical
ttanmg do vte choose and where do we undertake the training?
()ne ofthe- problems in Tanzania seems to be that there are not munyexperts qualitied to inxtestigate skill requirements in
production and stibseqtiently to demgn the necessary training programme. We want to conce ntrate therefore on
the procedures involved in curriculum programming.
In advuneed industrial eotmtries like British such procedures take place on a standardise d basis for which the Engineering
Industry Training Board (EITB) uses the toltoti ing planning approach: 13) see F igure E) .

Sources.--l. Engineering Industry Training Board Research Report No. 2 p. 16.
2. Sandham, R., p. 16.
Figure F also indicates how to set up imodular trainin ’ t i ’ - ’ .
. . . g units in terms of a setsnfied set f - ,
have to be conducted in a training workshop. 0 pl actical exccmses Wthh
This example is supposed to clarify the analytical efforts involved in order to establ’ i i ’
’ . ish a art 14 i
the question has to be anwsered what forms of practical training must be used? p 1cu ar m odule But still
Given the specified syllabus we then have to decide on the methods of practical training. The two major elements are:
a. Otf-the-job training which is usually conducted in the trainin worksho s of the NVT ’ ’ ’ i
the industrialenter rise-ifexistent; g p C or m the tmmlhg workshops or
b. On-the-job training whish is learning by doing in troduction.
According to each tra_de we have to dec1de how to combine these two forms of training, ho w to allocate the time and
how to sequence the exerCises ? J
For this urpose it is useful to compare the advantages of both forms of training: (4)
a. Off-the-job b. On-the-job
-Easier control and guidance of trainees. # Real life situation
MAvmcls pOSSlble damage to expenswe machines, products H Familiarity with actual products , machines & processes#
or trainee
MECOpomiC for large numberiof trainees - Econmic for small number of trainees
a-No interruption of production _ . -- Sa ves cent of special training area or equipment
wLess danget of picking up bad working habits and no __ Some production contriburion in l ater stage of training.
danger of disturbing workers. -
P-Trainees learn with equals . . _ Quicker acceptance of trainees as group member.
mTramee not discouraged by adverse comparison With __ Training keeps more closely in touc h with production-
experienced workers performance needs
"Few instructors required # Industion information backed up immediately by practi-
cal experience
MLess scrap produced . ’ _ 7% Materials suplies to trainee easily organised
mEnvironment more suitableto transrntssmn of know- # Fewer problems in transfer from trai nee to experienced
ledge, use of training aid easner organised. worker.
In industrially advanced eountries we find that these forms are uSually combined in a seq uence of three district stages: (5)
a. A period of orientation, trying out and training, lasting for about one year (basic tr aining) and designed to detztrmine
future streaming to provide bread and bastc knowledge given in training workshops.
b. A period of formative training, given for_ the most part in production departments or in a school, and organized in
the form of relatively large numbers of asSignments to several matchining and Fittingjobs .
c. A period of specialization during which the trainee learns to cart) out production job s according to adult work
standards,
But, obviously such a well organised programme is a mater of the ztveilability of trainin g facilities. In Tanzania the
capacity of the NVTC with their oftlthejob training workshops is limited, Within the indu strial enterprises we hnd hardly any
separate training workshops.
Thus, given the limited off the-job facilities in industrial and educational institutions the major form of training available
in Tanzania seems to be on-thejob training in production enterprises.
At present only very few trades are standardised for systematic training. Various trades are not even considered by any
of the given inatitutions inspite of the fact that they may be already practiced in produ ction enterprises. In such a case It
may be not advasible to centralise training at 2t place where we have neither the process nor the experienced instructor
Thus it will be more suitable to conduct the training only on-the-job assuming that at le ast some expertise will be available
Such conditions call again for a modular approachli where one unit does not necessarily o ccupy one whole year. This
means all Tanzanian enterprises are requested to offer such modular training units which

are suited most to their industria.
activity, their technology and training facilities. Training units may be of three months duretion, trained full-time, utili-
zing all the given facilities of the company: Theicombniation end sequence of’trammg units will be determined by the
occupational requirements. After completion of tour units-p0551bly studied in different enterprises-add up ir their assess-
ment to the grades of the NVTP.
The advantage of this modular approach is that each unit is a closed element suited to the enterprise, chosen by the
workers as apart of his formal training up to Gratie ,t - or even afterwards as a rnatter of continuous up grading according to
the changing requirements of industrial production. Such an a proach is not limited to workers training only! Itapplies
to all levels of the engineering cadre.
The most serious situation applies to such trades which at present do neither excist in the training institutions nor in any of
the industrial enteririses-in terms of availability of the respective processend the connected equipment. An example is the
trade of a itool maker, which is vital for any indigenous technical and industrial development. This case should actually
cad to the decision to set up the necessary production enterprise of this nature at the appropriate scale, where the equipment
will be available for tool and die making as well as for the construction of mechmes. Under government protection suchan
enterprises has to give equal emphasis to production and to engineering training. The different TAZARA workshop appear
to be most suitable for such a. manpower strategy.
There example indicate that in most trade it is not yet a question of limplimenting training but rather aproblem of
ldesigning and planning engineering training programmes !
Given all these obstacles, the question remains to be answered: . ltengineering training is supposed to be expanded on ?
massive scale. for dilTerent trades and at all levels for workers, techmuans and Engineering, where can it possibly be conducteda

4. CENTRAL WORKSHOPS, NUCLEI FOR MANUFACTURE OF CAPITAL GOODS AND ENGINEER.
ING TRAINING
The iiiipleitterttzttiOII of the industrial strategy has first of all to consider the various metal and engineering industrial in the
country. In addition to the nmnufucturmg sector we have to include enterprises like Railways, TAZARA, Harbours Post
9
and Telecommunication, Ministry of Works, etc.
Buteveh more important are the engineering departments and the central workshops (CWS) which exist within most
enterprises in all the industrial activities.
From the comparison of technology and scale between engineering industries and CWS in Tanzania we discover variou 9
Sllnllill’lllCS In terms ot engineering processes equtpment and thus particularly the common pattern of occupational skill
requirements.
This leads us to our major hypothesis:
We have to consider these CWS us a starting point t" or engineering training and indigenous manufacture of capital goods
in Tanzania!
There are various factors which help to support this. Most of the engineering sections are continuously confronted w’th
engineering problems directly encounteredc with existing industrial techniquies; most of the CWS havea basic variet Iof
engineering processes tmd the respective equipment related to metalworking and engineering. It can be observed that tales
obstacles of limited foreign exchange and the respective import restrictions actually challenge indigenous solutions, inside the
enterprises. Many large companies, restructed in the importation of spare parts and equipment do expand their CWS an:
c htt nge the policy of their engineering department:
W hereus in previous years nmchines were poorly maintained, broken parts were exchanged and equipment replaced we
can now see it ditlerent approach; nmintenance servnces are improved, broken parts are repaired, worn out machines,are
overhauled and simple equipment is constructed locally.
e The; expunsioh policy of CWS has already a certain impact on small engineering enterprises which provide services to
llldLlSll’lLll companies; some of them had to change over to other activities because the increasing concentration of engineerin
activities in the CWS inside the large enterprises make their services obsolet. g
Given these tehdencies there should be a general expansion policy for all CWS, in metal working as well as in non-metal
enterprises according to the lollowing issues:
#lf .CWS are poorly equipped at least engineering processes should be provided which help to cover the immediat
requirements 01 the enterprise; but it may be also necessary to Change the requirements by performing more repairwork
tmd munutucture ot parts and eqmpment lilSldU the CWS which will help to more fully utilize the given facilities
_A small design otliee should be attached in order utilize the CWS and the close access to production for the benefit f
applied research; such a design department may first deal with improvement and modifications of materials r d to
processes untl equipment related to the own industrial tield. The design department should be connected toll? O U(l’s,
control laboratories and drawing otlice. e qua 1W
.--CWS are the ideal institution for co-ordinution ofsystematic inplant training which may be conducted in a special tr i ’
workshop, in the CWS us such untl on-the-job in the production department. The given facilities of a CWS arilcinigg
respective projects undertaken are most suitable for the training of all levels ofenginee ring cadre engineers techn’ ’ e
and workers. Thus the CWS have to maintain close relations with the respective educational instittttions. , teians
_iAll functions speeitied so far justify the need for highly qualified and experienced engineering stah" who ha t b
allocated to the CWS, lttbotutories, design and drawing othces. Priority must be given to recruitment in these 8V: t’0 e
As all these cadre are promoters of industrialization a certain degree of overstaffing should be planned in Eilonts-

improve the capacity of inovution Lind to increase the pool of experienced staffrequired for the expansion of engcitrleging
industries in the near future.
#We summarise the functions of the CWS:
4, servicing, the production department
trepuir of parts and equipment
-1- man Ltftteture of parts
tapplied resettch
Arteehnicul moditieutions
lnew technical develt tpments
el-eengineering truinihg at all levels
J; eo-operution with institutions of research and education, as well as with other industries.
Given this CthLtlogttC ol’ CWS functions, the question will arise:
Do we consider this programme compulsory for all CWS in each enterprise? Obviously all CWS have to deal with the
b’tsic functions such as servicing repair and tr’tining;ull the other functions m’ , ’ t
. ’ - -
. e y y .w. _ . t . _ tty be added if it IS usttfied fron
relevance of the enterprise Wllhln llS industrial ilClthty. J I the Slze and
Most likely there will be only a few CWS within e’teh industrial ’1ctivit i ’ - ’ ’
. . t . c y suitable for iesearch desngn and techn cal
development; this would rellect a certain tteoncentration of CWS functiom b branchl, , i
’ Ii
. . - e. .
industries). y (g URAFIKI Within textile
Another principle may be heoneentrtttion of CWS functions by areal, reflecti ’ w ’
. . . . . n co-o ra
dttTerenttndustrtztl ’dCllVlllcs. g pe tion bet een enterprises Of

5. CONCLUSIONS

It is still our majer cohcerh, wethet the proposed intergrated system of engineering trai ning will help to implement the
our criteria: Quantity, diversuy, qualification and flexibility of engineerin g manpower ?
The number of fqrmally trained workers so far depends too much on the capacity of the giv en training centres. Thus, it
is of importance to introduee a vocational training Grade 5 - equivalent to Standard 7 of a tpolytechnical primary school,
and Grade 4 after completion of basic engineering training. This modihcation will open th e formal system also for the
majority of workers who belong to the category of informally or semi-skilledi
Ih order to expand the given capacity of basic training all suitable enterprises have to be committed to contribute in any
pOSSlble form of m-plant training to industrial development. On a basis of a modular syst em this will not be a costly burdon
for the companies.
Alsq, the .diversity of chupatiqhal skills will be covering a wider spectrum if based on modular units, bacause even
enterprises w1thlim1ted training faCliltleS-but With Vital engineering processes-can be u tilized for engineering training.
.Again, the standard of such mpdular courses-thus the qualification of the individual-wil l benefit from the fact that each
umt lS allocated where it can be trained most competent.
After all, the whole technical education system will intergrate all levels from primary e ducation up to the university-and
remains the same time hexible. Flexibility of the educational system is synonymous t0 Ile xibility 0f the manpower
concerned, because knowledge can be up-graded whenever necessary.
Eachlmlfiilular unit can be modified and improved easily whenever technological progress calls for adjustment of occupa-
tiona s i s.
This paper clearly reveales that the transformation of the economy in Tanzania based on a strategy of metal and enginee r-
ing industries will involve a lot of capital investment in production enterprises#as well as in manpower education. It
seems therefore necessary to find the most effective and the same time the most economica l arrangements for engineering
training and research.
During the transitional period the central workshops of the major enterprises within each industrial acvitity could be
expanded and start manufacture of equipment which can used in the own production sections .
Additional posts should be created in tldisign olhcesi, for product and equipment modilic zttion and development.
The educatlonal instituttions agam could asmst in questions of research and technical dev elopments by means of
laboratory facilities and manpower expertise.
Such an approach allows for a hrst phase of indigenous industrial development. Design dep artments, drawing emces,
central workshops and systematic in-plant training programmes attached to industrial prod uction seem to be the most
appropriate counterparts for general and technical education. This seems at present the o nly operational strategy to
co-ordinate all institutions concerned#tlitls to intergrate production, education and res earch for development.

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EDUCATION 1 RESEARCH

NATIONAL CO-ORDINATION OF VOCATIONAL TRAINING

INTRODUCTION

By E. N. Ngowi

Training appears to be a curiously neglected area of management responsibility. It is of course much easier to tell some-
body to do something, than to instruct him how to do it. And when a manager himself sutTe rs from the mistakes of an
untrained subordinate, it is again more simple to lay the blame than to find the cause. A ll this is quite understandable but
the neglect of training in industry exists on a remarkably wide scale. In Tanzania, it sh all be observed that positionsheld
by many training otiicers in industries are not properly defined making the co-ordination of training activities very difficult
perform. This being the case, inplant training of trainees from Vocational training centr es is hampered in one way or
another.

It is my intention to present this paper on National Co-ordination of Vocational Training in three section namely;-

(1) Internal co-ordination; the training Oflicer and Management.
(2) National co-ordination; by National Vocation Training Division.
(3) The link with the Ministry of Manpower Development.

l.-INTERNAL CO-ORDINATION: TRAINING OFFICER AND MANAGEMENT

To date. a good number of graduates from Vocational training centres are absorbed into th e manufacturing construc-
tion and maintenance industries. As these graduates join the industry not so much asiqual itied craftsmen but as aiaprentices
co-operation between the training institutions and industry is of utmost importance. Two thirds of the whole period 012
training a qualified craftsmen is devoted to Invplant training, where the industry is req uired by law, as stipulated in the
Vocational Training Act. No. 28 of 1974, and other Training schemes derived there from, t o play a bigger role.

Before the Vocational trainees conclude their training, the N.V.T.D. carries an actual su rvey of employees needs in
a particular period. This is done because employers requirements vary from one year to an other and between seasons.

For example, for this year. the survey for employers requirements of craftsmen is as show n below. This demand is
expected to increase towards the end of November, 1977.

When the above apprentices are sent into industry, in comformity with the vocational trai ning act, the employer is
obliged to:-

_teach and instruct or cause to be taught and instructed in the trade.
#Provide at his own expense proper tools and productive jobs for the purpose of instructi on of the apprentice provided,
in the case of normal personel tools of craftsman, he shall be entitled to recover the co st by appropriate instalments
per months.
mSubmit periodic reports to the Director of Vocational Training.
_-Release the apprentice to the attend compulsory classes and pay fees as may be determin ed from time to time.
_A point part time supervisors where the number of apprentices in his f irm is less than 25 and a full time supervisor
where the number exceeds 25.
#Keep records of training, payment and work done by apprentices.

From time to time NVTD personnel move industrial to inspect and advice on In-plant traini ng programmes. NVTD
does not solely train craftsmen to be injected into the industries it also conducts eveni ng up-grading cources for workers who
are already in the industries. Where up-grading is of possible in a vocational training c entre due to lack of facilities and
expertise, e.g. in specialized fields as the textile industry, the up-grading courses are conducted in the industries in question.
some up-grading courses are of short duration and situated in remote places. In such case s, a team of expert from NVTD
moves to the area and conduct on-the-job training.

This concept of training can be jeopardized if the firms training policy is not properly refimed and no one to whom the
reSponsibility which can be delegated to someone else by a manager accountable for the pe rformance of his subordinates is in
fact rather limited. It is limited chiefly to responsibility for carrying out training an

d for determining training methods
However both those require a good deal of the time and specialised knowledge. These requi rements need to be borne in
mind when the delegation of training is being considered.
A manager can delegate training to a subordinate already concerned with another function. For example, a production
manager could delegate responsibility for training to his work-study manager. But owing t o the requirement of time and
knowledge, it is doubtful whether any specialist manager could devort enough of his atten tion to training, except in firms
where training is given low priority. Thus a more effective solution is likely to be the establishment of a new position of
production training officer, immediately surbordinate to the production manager.
.Another way of delegating ttaining responsibilities is to view certain training position s as temporary appointments.
This would mean in the production dinSion that a person in line management or i’productio n servicesll position may be
transferred to a training job for a year or two.
Where the need for company wide training has been established there is of course a case f or a specialised training
department. The danger here is that training may become too specialized, too isolated, an d too much an empire in its own
right. This danger can be reduced if the training departments task is constantly viewed a s the provision of services to the
requirement of operational management. It can be further decreased if a distinction is ma de between the specialist and the
operational responsibilities of training officers. Such a distinction would mean that a t raining ofiicers would be attached to
the production division and be operationally responsible to the production manager for th e provision of training services.
What are the responsibilities of a training ollieers l?

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EMPLOYING FIRM g % m :3 E g1
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tion 4 # 4- -.. 4 .- 2 -g .4 _ _
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6. Qualny_Garage _. ,a 1 8 4 __ 5 m 2 4 __ 7 ,___ f 7(
7. Tanzania Shoe Compan " i ’)
Limted a. M -4 - - m w __ 1 M 1 M __ 2
8. Kilombero Sugar C0. _
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9, Aluminium Africa Limited __ __ 15 4 x M 1 M _; _ g 1 H _ 37
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tion 20 _- _- 7 4 #- e 2 -h -._ 6 _. __ _.. 31,
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pany b- l , - 1 _- _ _ 2 M l M .N a q
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17. M.T. Depot # __ u ,_ 2 _- 10 _ 10 H H a M -_ 73
18. Kibo Paper Industry H M 6 4 3 _- H - M 1 6 k - m h- :5
19 Tanzania Furniture Limted _ W H -- 2 m w M H. 10 w __ __ .d 37
20. Ubungo Garments H - - M N 18 - M u M ._ , _ N H 1;
21. Wito Kiwanda cha Viatu H w w _ a w _ H w - __ __ M. 3 :3
22. Muhimbili Corporation... 4 w - , -- l 2 - l l - 1 - _ 1 _. 11
23. Regional Water Engineer
(Arusha) l H -- ---- J3 .,__ _- _- 1 _.. 2 M. 5
24. National Bicycle Company
Limited ... ... --- 1 h e Z - l l - 9 - 4 6 1 w h 31
Total 41 4 36 1:: 43 2! 22 a 52 :3 47 5 5 3 323
Rrw_ ,. . .7 , _ - ,7." ., ... "v-7: 3... 7,7 "47,.
_,,_..-_ I: .. _. . 7.. I
The responsibilities ofa training officers in the three channels ofmtining will usually i
nclude the following :w-
(a) Direct Training:
w-Stimulating managers to see the need for training, particularly by carrying out researc
h into the problems which training
can help to solve.
aAssisting managers to request to formulate trainin g specifications.
ATraining managers and their subordinate on request on methods of instruction.
#Providing on request any other technical assistance in training.
(b) Delegated training within the firm:
Assisting managers on request.
_-to formulate training specitications.
Hto analyse the knowledge and skills required.
_-to set training standards.
--to decide where, when, and for how long training will he carried out.
_to formulate workable and agreed procedures for following up trainees af ter the trainin
g period is completed.
--deciding methods of instruction.
HTraining instructional staff.
wAdministering training courses.
wAssessing the value of training methods.
(c) Delegated training outside the firm :
aKnowing the range and courses available .
MAdvising managers on what courses are appropriate to their needs.
--Making the administrative arrangements 1" or sending people on courses.

This outline can provide only a general guide to anybOdy concerned with differentiating training, responsibilities into
their line management and specialist component. But perhaps it may serve to illustrate the point that when a manager
delegates training to a training othcer. he delegates only aproportion of his responSibility for the training function as a whole.
The actual division of tasks will vary from one situation to another, of course. But the principle that one can delegate only
a portion of responSibility probably applies to almost any function in any kind of organization. Delegation is not a matter
olWWa hing oneis handsii of the whole matter.
The training officer if he is to do his job properly. must fmd out txhut degree _of authority and responsibility has been
delegatedto him. Almost always. he will discover that his role is a_ssentmlly t0 prowde scmces to his managements specifica-
tions. If this was recognized more often, many unnecessary conihcts between managers and training departments would be
avo ided.
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2. NATIONAL CO-ORDlNATION BY NATIONAL VOCATIONAL TRAINING DIVISION:
Vocational Training in Tanzania, as laid down in the Vocational Training Act No. 28 of 19 74 is controlled and co-ordi-
1121th by the Vocational Training Division, under the Ministry of Labour and Social Welfa re Vocational Training today
is accomplished in two ways; through formal and non fromul Training. The formal type of t raining begins in training
centres and concluded with a longer period of in-plan training.
Recruitment of these trainees is from varying sources; some are sponsored by the industry wthe numberof which has
increased considerably over the post two years. This has been brought about by the employ ers awareness in the need for
trained craftsmen. Below is a table showing this yeass, request for sponsorship in the ne xt course, which is due to begin in
January 1978, at Dar es Salaam. Others come from J.K.T., J.W.T.Z., Prisons Department, Po lice force, while some enter
privately.
Request for sponsorship.
Firm Quantity
1. Tanganyika Tegry Plastics Limited l
2. Aluminium Africa Limited (Steel cost) 1
3. TANESCO 2
4. Ubungo Farm Implements Limited 13
5. Tanzania Distilleries Limited 5
6. Tanganyika Packers Limited. 6
7. Tanganyika Extract Company Limite 2
8. Fibreb Board Africa Limited 5
9. Tanzania Brush Products Limited. 1
10. District Development Director (Kondoa) l
I 1. Tanganyika Industrial Corporation Limited. 1
12. Regional Development Director. l
13. Otisa Maendeleo Kilimo (W) Kondoa I
14. Dar Furniture and Joinery 1
15. Tanzania Crown Corks Limited 3
16. District Engineer (Mpwapwu) 6
l7. Tanganyika Wattle Company Limitc 5
18. Tanzania Timber Export Company Limited l
19. District Water Engineer (Kondoa) 5
20. Tanzania Police Force 50
21. R.D.D.(Dodoma) 37
22. Agriculture Research Institute 7
Total 155
Though recruited from various sources, they must all meet the following requirements.
_a minimum of 16 years ofage.
#3 minimum of class VII in education.
#must have passed the relavent aptitude test.
-Physieally and medically fit.
The N. V. T. D. in collaboration with industries prepare the curriculum which is updated periodically as the need arise
Trude Committees have been set up, so as to develop and review the curriculum from time t o time, Before any syllabus is
approved for use, it is normally circulated through interested parties for comments. What ever gunuine suggestions obtained
from the parties, the suggestions atre looked upon and entered or delatted from the sylla bus. These approved syllabuses are
the ones used throughout the company in vocational Training centres.
The Division apart from controlling the curriculum is working out a formula for getting a ll of the Vocational Training
centres to meet minimum standards set as regards; buildings equipment. tools, teaching ai ds and qualifications of teaching
stall. .A good curriculum can be rendered useless if the abox e mentioned items are not t aken into consideration.
either in the same premises or in a vocational training centre during the evening. Any em ployer wishing to conduct such
form 0ftra1ning must seek permission from the Director. who in turn will inspect the prem ises to establish whether the
the employer has enough facilities to cause someone to be instructed in the intended trad e/occupation. Upon approval.
the employer can only train inthe trade/and quantity specified. Anyintention to change oc cupation and increase in
quantity will have be communicated to the same and permission sought. Another inspection

in the case may be necessary
before authority is given. The trainees in this case will be registered by the Directorat e and at the end ease with the other
category. A good number of firms have shown their willingness to follow this form oftrain ingas a means of developing
workers who were originally employed without any skills. Even those who would like to fol low this form of training
will have to meet the minimum requirements mentioned above.

3. THE LINK WITH THE MINISTRY OF MANPOWER DEVELOPMENT

The need to be selF-sutlieient in trained craftsmen has been mentioned several times in d evelopment plztns and in speeches.
The government through the eo-ordieution of NVTD is seriously working on accomplishing th e set goal. The Ministry
of Manpower Development does the forecast for the need of craftsmen in various sectors. F rom these forecast, the Voca-
tional Trammg Division eo-ordinates with other institutions, and industries in training t he required craftsmen.
At times) there have been oeeassion when tilures given by the Ministry of manpower develo pment do not tally with
actual requirements. _ TlllS eoulfl partilly be atributed to the fact that the Ministry h as more interests in high level man-
lowcr Development Without looking into the lower caps and partially to the long period of projection.
. h) which case, NVTD has to devote some time in identifying the actual industrial needs- and this is where your co-opera-
tloh Is urgently needed. This points out the importance of proper manpower forecasting bo th for the country and to the
indiwduul firms. POSSibly the most important implication for company policy makers is the need for companies to appraise
their future development not merely with reference to markets. processes and financial re sources, but also interms Of the
human resources that will be required.

In many firms it has been recognized that there are many inherent difficulties in attempting to estimate future manpower needs. Particularly this is the case where one is trying to determine the and number of jobs which might exist five or ten years to come. No doubt many films try to translate production forecast into the estimate of the number of production workers required during the Iiscal year. Considerable research is required if the manpower forecasts will roughly approximate the actual manpower needs of the firm one to ten yea rs after. It should be expected that short range projections of up to one year should be more accurate than long term estimates.

It must be stressed that manpower planning will be effective only to the degree that such vxork is an integral part of the entire corporate planning process. If to management is un-willing or unable to see this point, then the forecast degenerates into a mass of meanighless date. On the other hand if to management recognized the gains to be made by effective manpower forecasting, important results can be attained.

On the plant level, knowledgeof improved prosesscs or increased sales estimates can be translated into a need for specific number of new employees in specnflc number of new Job in specific categories. The problem is more complicated when one seeks to translate DFOJCCUOHS for company growth into need for specific numbers of professional personnel with specific job skills. Worthwhile long range planning requires considerable understanding of developments taking place in other industries as well.

"MANPOWER PLANNING FOR THE PROVISION OF TRAINING IN lNDUSTRYi,
By A. ATHUMAM
"Mttnpowct planning mgy be delined us a strategy for the acquisition, utilisation, improvement and retention of an
enterprises human resources I
"The planning process aims to bring supply and demand into balance at the levels most consistent with the needs of the
orgtttttsatton and With assessments of the economic and social environment within which the organisation is expected to
cXtSt.. (1) It eattempts. in summing up, to seek information upon which an organisation can determine the nature and
etlecttveness of its present and future manpower resources. Whilst manpower planning is not a panaoes it makes useful
contribution towards the anticipation otishort t'ulls. ,
Many urganiszttions have been slow in realising the need for planning n'tunpower as a resource and have instead devodet
ti great deal otitttttention 10 the planning ol'cztpitztl investment and nutcriuls. But costs of labour aceount for a big proportion
tn the total expenditure of many organisations and this being so, it is important to ensure that the manpower resources
is available as uttd when needed. In many cases. contpctativettces of a given organisation depends on how its future
tttetnpower resource is predicted and controlled and especially so when considering that the general supply of skilled labour
is becoming scare. Production programmes could be disrupted and plants could be underutilised owing to lack of personnel
in keyhoperations. It is therefore it mutter oticontnmn sense that organisations should anticipate their labour requirements
years in advance so as to have the time necessary for the preparation of such personnel. Indeed lack of plannin may
Iesull in twer employment Lind poor manpower utilisation: , g
The technique basically involves four stages including tlte evaluation ofcxisting manpower resources an estimation of th
proportion 01 present manpower likely to remain with the organisation by the date of forecast an ttssessment of lab 6
i'equitettttti'tts it the organisations objectives am: to be met and the measures necessary to ensure that the manpower reto Olaf
2s maulable as and when required. One of the measures which will ensure the availability of Manpower is traininOt s'httrte
txttt be shown to relate to the planning process as follows: _ o, W tCh
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t 1 Planning to bridge 5
the gap between i '
known manpower , ._:__--
resources and those : #1
Evuluationullexisting s it 2 C'lt 14 - . H , .
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Manpower RCSOUILeb q . l of ethting Manpower l Manpowe: Requirements i
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CAREER PLANNING I MCRHTMEM
, (v 7W ESTABLISHING
1'1 TRAINING OBJECTS
NW0
4W1 PREPARE COURSE CONTENT
W/ ((W_Ww-u IMPLEMENT PROGRAMME
EVALUATlION AN D FEEDBACK
The advantages of trttttttpnwer planning for providing.y training within an organisation are many. But the important
principle is that training progtutttutes must be related to the anticipated job requirements at the end of the training course.
For this reason we need to know not only the future numbers but also the future skills. What needs to be taught, can not
be determined until a study 0fthc job is ittude. This in turn is not possible unless we identify the job itselfand this identifica-
tion is the result of manpower forecasting. An analysis of the job for training would then primarily establish its duties,
activities and responsibilities in addition to evaluating the skills and knowledge the job occupant would require in order to

perform the job satisfactorily having considered recruitment standards. a statement of tr
aining requirements can then be
made which will in turn enable the content of training to be determined. In this way, man
power planning has given this
organisation an opportunity to discover. us curly as possible, the critical points in its
 labour force and training based on the
information will stand a better chance of producing personnel likely to be required by th
e organisation.
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Secondly, manpower planning will enable the organisation to develop an appropriate traini ng strategy. It will be
possible to dertmine. in good timing, how the predicted skills are to be acquired. For ex ample, when the training period in
a long one as in the case of training apptentices, not only will it be possible to determ ine the organisations method for the
training of such apprentices are being trained are the ones which will be needed in the f uture.
In other words, the training methodology adopted will take into consideration the possibi lity of skills being absolete
as a result of technological developments.
Thirdly, Manpower planning has an added advantage of facilitating training course evaluat ion and the subsquent
improvement. Supposing the provision of training is the action necessary to ensure that m anpower needed is available
when required, it will be necessary to provide feedback. Feedback that will not only vali date that the skills and knowledge
drovided are elfective on the job but also that money spend for such training is worthwhi le. We need to know what factors,
if any, have contributed to ineffective job performance after training has been completed . Such factors could, for example,
include inappropriate training methodology for recruitment procedures or the trainer hims elf is incomptent or even the
manpower planning process was not proper._ To evaluate whether training has been worthwhi le, we would need to
compare the products of training against the predicted needs and establish a relationship between the kind of manpower
produced and the overal organizational objectives. In short, we need explanations for the success or failure of our
endevours and information resulting from Manpower Planning will assist in the preparation of these explanations.
Finaly, though probably the most important, is the case for developing countries. In such countries, development often
means the expansion or construction of new plant. Manpower planning would enable the orga nization to know the ty pes of
new jobs that would result from such expansion. Descriptions indicating the skill require ments of these jobs, ways of
cquiring these skills and the time required for acquiring them can thus be prepared. Rele vant training programme can be
organized and imalemented so that when the expensive buildings and machines have been ins talled, delays and loses
due to unforeseen shortages of skills are minimized. This is one of our biggest problems, scarcity of trained manpowee
But better still, expensive expatriate personnel can be avoided when local staff is train ed in time. Money thus saved can br.
re-invested for general development.
In conclusion one ought to point out that manpower planning should not be regarded as an exercise with a in-point
accuracy but rather as a deliberate attempt of looking forward so as to reduce areas of u ncertainly. Providing
training on the basis of a manpower plan will certainly reduce the uncertainties of futur e training results. It will be
comparatively easy for the training to decide, fairly quickly, how best to cope with chan ges. This should be a joint ellort,
in a co-ordinated way, between to Management and the training thcer.
Rsvmsxcss: (1) Department of Employment, C ompmzy Manpower Planning: London, H.M.S.O. (19 74) P. 2.
(2) D. l. Bartholomew, Manpower Planning: Penguin (1976) P. 20.
e -- P. C . Moreu, Guidance Scleclion and Training: London, Rontledge and Kegan Paul (197 2).
hf:

MAAZIMIO
Utangulizi:
Mkutano wa viongozi wa Mushirika nu Viwanda vya Umma na vya. watu binafsi uliofanyika kat ika ukumbi wa Chuo
cha Usimzunizi wa Fedha kuanzia tarche 20.10.1977 hadi 21.10.1977 unayakubali na kuyapoke a maazimio ya mkutano
wa pili wa mafunzo ya Ufundi uliofanyika mwczi Machi 1977. Pamoja na kuyakubali maazimio hayo, kikao kimetambua
kwamba yapo malatizo yunayokwamisha maendeleo ya taifa kutokana na ukosefu wa mipango ya kudumu ya mafunzo ya
climu ya ufundi katika fani mbali mbali.
Kwu hiyo kikao hiki kinaazimiu kwamba :_
(1) Kwa kuwa viongozi wengi viwandani hawajujua umuhimu wa kutoa mafunzo katika viwanda v yao na kwa
sububu Inyo wzmusnlu kulunua pcsa katiku mipungo ya mufunzo kiln kiwzmda kiwe na mpango k abambe wa kuwatumia
mufundl wuhonuo kuuku kuwuclimishu wumnyukaxi wcnmo kiwunduni humo (on-Lhc-job training). Pia :_
(a) Kila kiwundu kiwc nu Idara yu mafunzo nu 1121321 kililic mkazo mafunzo ya ufundi sadi fu ili kuongeza uzalishaji
mull.
(b) Kila kiwandu kijiwckce malcngo ya idadi ya wufanyakazi watakaowafundisha kila mwaka n a Idara ya Mafunzo
ya Ufundi (NVTD) ijulishwc kuhusu mpango huo.
(c) Viwundu vikubwu. viwc nu shulc 2110 7.21 kutoa mufunzo ya Ufundi. Pamoja na mafunzo h ayo, shule hizo zijishu-
ghulishc nu utumi wu malighuh, tekmoloya, leuli vinavyohitajika na masoko ya vyombo vinav yotengenezwa
kutika viwzmda hivyo.
(d) Zaidi yu hayo, viwandu vycnyc uwczo mdogo vishirikianc katika kuanzisha mipango ya ma funzo.
(2) Kiln Kiwundu, kiwc cha Ummu uu cha wutu binafsi kipcleke mahitaji yake ya mafundi sad ifu kila mwaka katika
ldum ya Mufunzo nu Majuribio ya Ufundi.
(3) Chuo cha Mafunzo ya Ufundi, Chungbmbc, kipanuliwe ilikiweze kutoa mafundikatika fani zote zinazohitajika
1m viwandu nchini.
(4) Idara ya Mafunzo nu Majaribio ya Ufundi iwg 11a schemu ya utangazaji ambaye itashughu likia suala la kueneza
haburi kwa wanunchi, kupitiq qumbo vya. utanguzujl, kuhusu mafunzo ya ufundi nchini na kw amba ianzishe gazcti
nmalum (journal) 1a elimu ya utundl.
(5) Idara ya Mafunzo 11a Mujaribio ya Ufundi iwe mjukumu la kuwashawishi maf undi j uu ya uandikaji wa vitabu vya
ufundi.
(6) Idara ya Mafunzo na Mujaribio ya Ufundi iwe kiungo kati ya viwanda na vyombo vingine vya ufundi katika
scrikali.
(7) Mihutusari ya mafunzo kutika s_hulc za msingi na Sekondari irekebishwe ili kuwezesha masomo ya ufundi kufu-
ndishwa kama masomo mcngme ya kuwaxdu.
(8) Kodi ya mafunzo (training levy) inayotolewa na viwanda itumike kwa shughuli ya kuende leza. mafunzo ya wafa
nyakazi Viwandani.
(9) Wizara ya Maendeleo ya Waturpishi washiriki zaidi katika vikao ambavyo vinawahusu. Kw a njia hiyo Wizara
itawcza kupata takwimu halisi za mahitaji ya Mafundi wa fani mbali mbali.
(10) Mashinc zinazoagizwa nchini kwa shughuli za mipango ya Macndeleo zisikubaliwe mpaka mkataba uwe na
kifungu kmachoscma kwamba mtaulam ataletwa pamoja na mashime hizo ambaye pia atakuwa na j ukumu 1a kuwafunza
mwananchi mbinu zote za uendeshajl na utengenezajx wa nmshine hizo.
(1 1) Mameneja wa viwanda. yvawe wenye ujuzi angulao wa tgkinologia ya fani moja au zaid i katika viwanda vilivyo-
chaguliwu kuviongoza. Mameneja wa aina hiyo watakuwa na uJuzi wa kuelcwa mahitaji ya aina ya mafunzo ya kifundi
katika fani mbali mbali za kiwanda hicho.
(12) Idara ya Mufunzo nu Majaribio ya Ufundi, Chuo cha Ufundi cha Dar es Salaam pamoja na Chuo Kikuu (Kitivo
cha Uhandisi) vishirikiane kalika kuundaa utaratibu wa kudumu ambao utawezesha mafundi sa difu kujiunga na kozi za

ufundi Mchundo na hatimayc uhandisi.
(13) Karatasi iliyotolewa mkutanoni na mjumbe kutoka Chuo Kikuu (Kitivo cha Uhandisi) ich ambuliwe na Idara
ya Mafunzo na Majaribio yu Ufundi ikishirikiana na Wizara ya Maendeleo ya Watumishi ili k upata msimamo wa pamoja
kuhusu utekelczaji wu mipango ya elimu ya Ufundi nchini kwa ujumla.
Utekelezaji:
Pamoja nu Mauzimio huya, upo umuhimu wa kutoa ushauri juu ya utekelezaji na kwa hiyo kika o kimeamua kwamba
katika utekelezaji wa maazimio haya n1 budi kuzingatia mambo muhimu yafuatayo :#
(1) Kila shirika, kiwandu na Wizara zinazohusika ziandac mahitaji yake ya mafunzo ya ufun di wa fani mbali mbali
kufuatana nu mahitaji yake. Mipango hiyo iwe ni pamoja na-
(a) Idadi ya Mafundi wa kila fani.
(b) Gharama 2a mafunzo.
(2) Mipango hiyo yotc ipclekwc katika Idara ya Mafunzo na Majaribio ya Ufundi ili kikao c ha viongozi wa Idara
waichunguze.
(3) Baada ya mipango hiyo kuchunguzwa Idara iitishc kikao cha aina hii tena ili kufanya u chambuzi wa uwezekano
wa utckclezaji.
(4) NVTD iwc na mpango wa kudumu wa kuwakutanisha mameneja wa viwanda vyenye kazi zinazof anana ili
kutafuta uwezekano wa kuanzisha Mafunzo ya Ufundi ya pamoja.

Local Press and News Papers Daily Monitoring
and Report on the Meeting
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DAILY NEWS, WEDNESDAY OCTOBER, 12TH 1979

MANAGEMENT PERSONNEL TO NIEET IN DAR ES SALAAM

A two-day tneeting qf nail mettagement persortnel from parastatal organizations and indus tries will be hosted by the
National Vocational Training Drvrsron of the Ministry of Labour and Social Welfare on Oct ober, 20 and 21 at the Institute
of F inance Management m Dar es Salaam.

The Director of the National Vocational Training Division, Ndugu M. H. Manyanga, said the meeting would discuss
the development of vocational trades and occupational skills.

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National Vocational Trammg Drvrsiom of the Ministry of Labour and Social Welfare on Octob er, 20 and 21 at the Institute
of Finance Management in Dar es Salaam.

The Director of the National Vocational Training Division, Ndugu M. H. Manyanga, said the meeting would discuss
the development of vocational trade and occupational skills.

He said the meeting was a followup to a meeting of headmasters of technical secondary sch ools in the country held in
March this year to discuss the progress of technical training.

MANAGERS MEET TODAY

Senior management personnel from all industries, parastatal organizations, Government min istries and private companies
will hold a two-day meeting at Changlombe National Vocational Training Centre, starting t oday. ’

This is a follow-up to the second annual conference on National Vocational Training held at the Institute of Finance
Management in March this year.

The participants will be informed about the role of the National Vocational Training Divi sion in developing vocational
skills and training, as stipulated in the Vocational Training Act. of 1974. They Will als o be asked to develop a national
approach of setting up and implementing training policies.

The Minister for Industries, Ndugu Cleopa Msuya, is expected to open the meeting.

tlDaily News, Thursday October 20th, 1977.n

ARTISANS END IN WORKSHOPS

By StatT Reporter

DAILY NEWS, FRIDAY, ZIST. OCTOBER, 1977

THE number of artisans graduating from the Vocational Training Centre over the last seven years has reached 1 300
but only 16 per cent of these are absorbed in the manufacturing industry, it was learned in Dar es Salaam yestertiyys

In a paper on the implementation of vocational training, presented at the Vocational-Occu pational meeting which
Opened at the Institute of Finance Management yesterday, Ndugu A. Athuman, an official wi th the National Vochtioxml
Training Centre says most of those absorbed went into the textile industry although the c entre trained artisans in various
trades. Ndugu Athuman said 70 per cent of those trained over the years have mostly ended up in government workshops. l

He discounted arguments among some employers that the National Vocational Training Centre concentrated on
traditional crafts. A number of modern crafts were being taught after their requirements had been assessed, he added.

For example, he pointed out that litter mechanics were being trained in general fitting a nd machinery maintenance work
and later were trained in textile machinery, tool machine, agricultural machinery, earth moving and construction equipment:
ginnery and sugar production machinery,

He argued that this gave them ample Scope to deal skillfully With any Of these machines.

On the-job training now being undertaken by a number of factories, he said was haphazard and geared to serve only
certain f unctions under rigid schemes.

On the training in industry, the paper calls for the government and industries to co-oper ate in training teclmiuttl
manpower. The government should provide basic training and industries should give artlsan s Tactical training, he said.

The paper recommends that every industry set aside a training budget which should become part of industries’ financial
tlunning. The paper warns against ad hoc financing dictated by availability of surplus fu

nds.
The Director of the National Vocational Training Centre, Ndugu M. H. Manyanga in his pape r called for co-operation
between industrialists and the centre in implementing the Vocational Training Act of 1974 .
He said that the national trainig scheme to be published by the Ministry of Labour and So cial Welfare will spell out the
conditions and starts to be followed in the training ofartiszms.
This will ensure that all artisans covered in the scheme are given training in accordance with the prescribed standards.
The meeting attended by 60 senior management olhcers is to be closed today by the Ministe r for Manpower Development.
Ndugu Abel Mwanga.
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KUNA TATIZO LA MILUNDIKANO YA WATUMISHI
UHURU_SATURDAY, OCTOBER, 22 1977
2111155353351 Eiylgvligl?nglg%53hilJ; mali kna utoaji wa huduma nchini Tanzania zinakabil iwa na milundikano ya watumishi
_ ._ _ 1 1 wa anye azi ambazo haziambatani na elimu na kazi walizozisomea kutokana na mi an o
Imbovu ya uajm wa watumishi. p g
. ’fHaylg Yilistiglwajana na Afisa mmoja kutoha Wizara ya Kazi na Ustuwi wa Jamii, Ndugu Z. A. Kago alipokuwa akitoa
art at ya e an a semma ya mafunzo ya ufundi mayofanyika kwenye Chuo cha Usimamizi wa Fedh a mjini Dar es Salaam.
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matanikto ya uzahshaji mall na utoap wa huduma sali pla inaonya juu ya kupuuzwa katika uo ngozi na mipango thabiti
katlka sehemu za kazx.
f Alisa huyo alteleza l(atika taar’tfzt hiyo kwamba _sehemu .nyingi 1.21 kazi hivi sasa z inttsisitiza sana uwekaji wa rasimali za
etiha katlka httradl mmgi ya kutega uchumt na btdhaa bila ya kuujali uendelezaji wzt utum ishi na uongozi pamoja na
mtpango thabiti.
CONFERENCE APPEALS FOR STAFF TRAINING
By Staff Reporter
DAILY NEWS OCTOBER TUESDAY 25m. 1977
A THIRTEEN-POINT resolution covering training and advancement of technical workers was th e final outcome of a
two-day coference held m Dar es Salaam last week.
The meeting resolved that every industrial firm should give their workers on-the-job trai ning, using the more experienced,
workers as tutors.
It therefore proposed that :-_
. Every Hrm should have a department to train the workers and raise productivity.
. Every firm should set a target of the number of workers it is going to train in a given period and inform the Natioml
Vocational Training Divisions. &
. All big firms start their own training schools which should also research into raw mate rial needs of their industries
technology, spare parts and how they are to be acquired and also the markets for their pr oducts. i
. Small hrms undertake 10th training programmes.
It was also proposecl that every hrm, whether a parastaul 0r :1 private company. ghoUld s end its annual technical manapowcr
requirements to the Training Divmon.
The participants recommended that the Changiom be Industries Training Centre be expanded to cater for various industrial
countries needed by industrial lirms m the country.
They suggested that technical subjects should be introduced in the curricula of all prima ry and secondary schools’
It was also proposed that training levy paid by industrial firms be used to train workers in the industries.
It was suggested that the machinery imported into the country should not be accepted unti l the agreement also stipulated
the sending along of an expert who would tram the workers to run and maintain the machine ry.
The participants proposed that the National Vocational Training Division, the Dar es Sala am Technical College and
the Faculty of Engineering of the Umversxty of Dar es Salaam should prepare a programme t o enable craftsmen to pursue
technical courses leading to an engineering course at the University.
The two-day meeting at the lFM wag attended by senior management otiicers from Government institutions, parastatals
and private firms.
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