

RESOURCES NEEDED FOR EFFECTIVE TRAINING OF TECHNICAL TEACHERS FOR JOB CREATION AND NATIONAL DEVELOPMENT

BY

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Abstract

This study was conducted in Ebonyi State of Nigeria. The study adopted survey research design. Three purposes of study guided the study. The population of the study was 84. This comprised of 59 teachers and 25 technologists from Department of Technology and vocational education, Ebonyi State University and Akanu Ibiam Federal Polytechnics Unwana. There was no sampling, the whole population was studied. The instrument used for data collection was a self-developed questionnaire with four points rating scale of very highly needed, highly needed, moderately needed and not needed. The reliability of the instrument was determined by using Cronbach alpha statistics, which yield a reliability coefficient of 0.83. The data was collect by the researcher with the help of two trained research assistants. The data collected were analyzed using mean with standard deviation with the SPSS statistical package. Based on the analysis of the data collected, the following result emanated, among others. Physical infrastructural facilities, instructional resources and information and communication facilities were found to be highly needed for training of technical teachers. Based on the findings, it was recommended among others that the government of Ebonyi State in collaboration with the management of the technical institution should provide adequate ICT facilities, physical infrastructural facilities and instructional resources which will facilitate the training of the technical teachers in the area of the study.

Key Words: Training; Technical teacher; Job creation; National development

Introduction

Education can be seen as systematic training and instruction given in schools especially to individuals which leads to acquisition of skills, knowledge, abilities, competences, values, habits and norms. A good education consists in giving to the body and to the soul all the beauty and all the perfection of which they are capable. Education is a kind of training: Training is teaching or the process of developing in oneself or others, any skill and knowledge that relates to specific useful competencies (Effoli, 2012). Training is an organized activity aimed at imparting

information to improve the recipient. On the other hand, training is the process of imparting to someone the skill to perform some operations, whether mental or physical (Igwe, 2005). He further stressed that training is closely associated with instruction which involves imparting of information, knowledge and habits.

In the field of technology and vocational education, technical teachers training are essential because the technical teachers are the implementers of the curriculum of technical and vocational education in the

modern society. No nation can arrive without a sound technical and vocational education, which is referred to as a range of learning experiences that are relevant for employability, portability of competencies and qualifications and recognition of skills, decent work opportunities and lifelong learning in and related to the world of work. (Ilo, 2010). The implementation of the curriculum technical and vocational education is the sole responsibility of the technical teachers.

In the field of teacher training and professional development, the increasingly multifunctional roles and responsibilities of teachers have led to new learning approach with greater autonomy for programme decisions and outreach to the world of work. In parallel, the need for greater involvement of teachers in professional development decisions has become cleaner. Criteria for good teachers that respond to increased expectations include strong knowledge bases and range of teaching, competencies for enhanced teaching practice and qualitative learning outcome and skill development.

Teacher training and professional development should be in such a way that will lead to production of graduates who are skillful in their fields and capable of being self-reliant, self-sufficient, and create job for National Development (Aminu and Ibeneme, 2005). National development is the ability of a country or countries to improve the social welfare of the people such as providing social amenities like quality education, portable drinking water, transportation; infrastructure, medical care and security of life and properties (Nickels, 2009). National development cannot take place without the citizen having qualitative skills and competencies in the field of work. To create job and achieve national development, the teachers who develop the manpower and the

workforce in the society must be well trained. For effective training of the teachers, training resources are needed. Resources according to Martin (2000) are something that can be used to achieve an objective of any project or programme. Resources can be assets, reserves, stocks, supply or pool of funds.

In the context of these study resources are conceptualized as physical facilities and infrastructural resources, instructional resources, machines, tools and equipment resources, information and communication (ICT) facilities as well as incentive resources. Physical infrastructures are basic facilities, services and installations needed for functioning of an institution, community or the society (Bass and Vaughm, 2008). Examples of physical infrastructures in the training institutions are classrooms, laboratories, workshops, libraries, information and communication technology centre, office accommodation, administrative blocks, staff quarters. Apart from the physical infrastructures, instructional materials are necessary for the training of teachers. Igwe (2005) reported that instructional materials are materials used by the teacher in the classroom for teaching which make teaching and learning easier and more rewarding. To train teachers, the school workshop must be well equipped with machines and tools for practical classes. Adequate provision of machines and tools will help to train the teachers very well (Bass and Vaughm, 2008) additionally, adequate incentive are vital. Koontz and Weihrich (2001) reported that incentives as materials or moral factors given to a worker for encouragement to work more or better. Material incentives include, gift items, while moral incentive include; recognition and praises. In Ebonyi State, practical evidence has shown that there is shortage of technical teachers in the technical colleges. The shortage and death of technical teachers has led to inadequate training of future teachers for the generation to come.

This invariably has contributed to poor skill development in the students. Poor skill acquisition has led to mass unemployment among the graduates of technical colleges, because these graduates cannot be self-reliant rather depends on white collar job which is nowhere to be seen these days.

It is on the basis of this that this work is designed to determine the resources needed for effective training of technical teachers for job creation and national development.

Statement of the Problem

The technical teachers are trained manpower who implements the curriculum of technical colleges. In Ebonyi State of Nigeria, there are four technical colleges (EBS, SEB, 2016). Experience has shown that the teacher-student ratio in these colleges is 1:50 which negates the 1.35 recommendations of the National Board for technical Education (NBTE, 2010). There is alarming shortage of technical teachers to implement the technical college curriculum. The shortage of the technical teachers has led to poor implementation of the curriculum and poor acquisition of skills by the students. This situation has encouraged production of half-baked graduates who graduate from the technical colleges with little or no employable skills. This has led to hyper-unemployment in the society. As a result of unemployment, many young graduates have engaged themselves into many anti-social behaviours in order to survive. Such anti-social-behaviour like prostitution among the females, arm robbery, kidnapping, drug and human trafficking and hired assassination. All these have made the society very unconducive for human habitation. It is on the basis of this that this work is designed to determine the resources needed for training of technical teachers who will train the students for job skills.

Purpose of the Study

The main purpose of this study was to determine the resources needed for effective training of technical teachers for job creation and national development. Specifically, the study sought to determine

1. Adequate provision of physical facilities and infrastructural resources.
2. Provision of instructional resources.
3. Provision of ICT facility resources.
4. Provision of incentives resources.

Research Questions

The following research questions guided the study.

1. What are the physical facilities and infrastructural resources for the training of technical teachers for job creation?
2. What are the instructional resources needed for the training of technical teachers for job creation?
3. What is the ICT facility resources needed for the training of technical teachers for job creation?

Methodology

This study was carried out in Ebonyi state of Nigeria in the South Eastern Nigeria. The study adopted survey research design. The population of the study was 84. This comprised of 59 lecturers and 25 technologists from the higher institutions training technical teachers in the area of the study. There was no sampling, the whole population was studied. The instrument used for data collection was a self-developed questionnaire. The questionnaire had two parts, part one contained the biodata of the respondents while part two was divided into sections A, B, C, which elicited information on physical facilities and infrastructural resources, instructional resources, and ICT facilities resources respectively. The instrument had four points response scale of very highly, highly needed, moderately

needed and not needed with their nominal values of 4, 3, 2 and 1 respectively. The instrument was validated by 3 experts. One expert in measurement and evaluation from Enugu State University of Science and Technology (ESUT) and two experts in technology and vocational education from Ebonyi State University. The reliability of the

instrument was determined by administering 20 copies of the instrument to 20 lecturers and 15 technologists. The data collected were analyzed using Cronbach Alpha to determine the reliability coefficient which was 0.83. The data collected were analyzed using, mean with standard deviation and SPSS statistical package.

Results

Research Question 1: What are the physical facilities and infrastructural resources needed for training of technical teachers?

Table 1: Mean responses of the respondents on the physical facilities and /highlight infrastructural resources needed for training of technical teachers

S/N	Physical facilities and infrastructural resources	$\bar{X}$	SD	Remarks
1	Adequate classrooms	3.18	0.89	HN
2	Well equipped library	3.17	0.79	HN
3	Well equipped workshop	3.50	0.61	VHN
4	Well equipped computer room	3.37	0.67	HN
5	Laboratories with adequate chemicals	3.53	0.54	VHN
6	Teacher's offices	2.92	0.96	MN
7	Administrative building	2.79	1.01	HN
8	Demonstration plots for agricultural practicals	2.68	1.06	HN
9	Health centre	3.30	0.76	HN
	Grand mean			3.55

Table 1 revealed that items 3, and 5 had their mean scores up to 3.50 and above indicating that the items were very highly needed while items 1, 2, 4, 6, 7, 8 and 9 had their mean scores ranging from 2.68-3.37, indicating that

the items were highly need for training of technical teachers. The standard deviations ranged from 0.54-1.06, showing that the opinions of the respondents were not far from one another.

Research Question 2: What are the instructional resources needed for training of technical teachers?

Table 2: Mean responses of the respondents on instructional resources /highlight needed for training of technical teachers.

S/N	Instructional resources for training of technical teachers	$\bar{X}$	SD	Remark
1	Cutlass	2.57	0.95	HN
2	Hoe	2.74	0.91	HN
3	Spade	3.29	0.84	HN
4	Pick axe	3.01	0.92	HN
5	Hand trowel	2.68	1.15	HN
6	Hammer	3.18	0.89	MN
7	Garden fork	3.17	0.79	HN
8	Shovel	3.50	0.61	VHN
9	Rake	3.37	0.67	HN
10	Head pan	3.53	0.54	VHN
11	Measuring tape	2.92	0.96	HN
12	Watering can	2.79	1.01	HN
13	File	2.68	1.06	HN

14	Knap sack sprayer	3.39	0.63	HN
15	Wheel barrow	3.14	0.87	HN
16	Sickle	3.15	0.83	HN
17	Sheers	2.49	0.96	MD
18	Secateurs	3.13	0.86	HN
19	Spanner	3.32	0.79	HN
20	Screw driver	3.52	0.53	VHN
21	Prismatic compass	3.52	0.52	VHN
22	Theodolite	3.56	0.49	VHN
23	Ranging pole	3.39	0.64	HN
24	Spirit level	3.19	0.77	HN
25	Wood turning lath machine	3.17	0.80	HN
26	Cordless power drill	3.51	0.56	VHN
27	Hammer	3.07	0.78	HN
28	Building square	3.29	0.69	HN
29	Building drawing plan	2.39	1.36	MN
30	Angle joints	3.51	0.54	VHN
31	T joint	3.33	0.78	HN
32	Meter machine	3.25	0.77	HN
33	Cement	3.40	0.71	HN
34	Pliers	3.32	0.73	HN
35	Bench device	2.80	1.03	HN
36	Board gum/adhesives	3.27	0.75	HN
37	Sharp and smooth sand	3.38	0.67	HN
38	Moulder	3.40	0.71	HN
39	Wood	3.32	0.73	HN
40	Sand paper	2.80	1.03	HN
41	Iron rod	3.27	10.75	HN
42	Finisher	3.38	0.67	HN
43	Concrete mixer machine	3.45	0.67	HN
44	Blocks	3.48	0.69	HN
45	Mud	3.39	0.65	HN
46	Paint of all colours	3.18	0.89	HN
47	Mortar	3.17	0.79	HN
48	Bamboo	3.50	0.61	VHN
49	Rafter wood	3.37	0.67	HN
50	Ply wood	3.53	0.54	VHN
51	Jack plane	2.92	0.96	HN
52	Chuckline	2.79	1.01	HN
53	Circular saw	2.68	1.06	HN
54	Bulldozers	3.30	0.76	HN
55	Stone	2.45	1.00	MN
56	Wood chisel	3.23	0.77	HN
57	Oscilloscope	3.27	0.79	HN
58	Signal generator	3.45	0.74	HN
59	Avo meter	3.23	0.84	HN
60	Digital multimeter	3.09	0.87	HN
61	Electrical bell	3.15	0.94	HN
62	Flat screw driver	3.17	0.87	HN
63	Conduit bending and string	2.47	0.98	MN
64	L-Marshall conduit coupler	3.32	0.80	HN
65	L-Marshall conduit boxes	2.74	1.04	HN
66	Cable strippers	2.96	0.96	HN
67	1-8 way consumer unit	2.98	1.11	HN
68	1-4 way consumer unit	2.80	0.67	HN
69	60 ABS cutout fuse	2.51	0.97	HN
70	Bread board	3.04	1.17	HN
71	Photo transistor	3.15	0.76	HN
72	Fire extinguisher	2.73	1.06	HN
72	AM/FM Transmitter	2.88	1.18	HN
74	Transistor, diodes, resistors, capacitors of different types	3.29	0.95	HN

Ndem, J. O. & Udensi E. O.

75	DC motor commutator	3.04	0.89	HN
76	Micrometer screw guage	3.20	0.87	HN
77	DC stabilized power supply	2.58	0.91	HN
78	Soldering iron	3.08	0.85	HN
79	1000v megger insulation tester	3.01	0.92	HN

Grand Mean = 3.19

Table 2 revealed that items numbers 8,20,21,26,30 and 49 had their mean scores ranging from 3.50-3.56, showing that those items are highly needed for training of technical teachers, while items 17,29,56 and 64 had their mean scores ranging from 2.39-2.49 indicating that those items were moderately needed and other items in the

table had their mean scores ranged from 2.50-3.49 indicating that those items were highly needed for training of technical teachers. On the other hand, the standard deviations ranged from 0.49-1.78, which was an indication that the opinions of the respondents were not far from each other on the instructional resources needed for training of the technical teachers.

Research Question 3: What are the ICT facilities resources needed for training of technical teachers?

Table 3: Mean responses of the respondents on the ICT facility resources needed for training of technical teachers

S/N	ICT facility resources	$\bar{X}$	SD	Remark
1	Computer	3.01	1.73	HN
2	Internet facilities	2.94	1.71	HN
3	Power point	3.02	1.08	HN
4	Chalk board	2.41	1.62	HN
5	Overhead projector	2.77	1.05	VHN
6	Video projector	2.64	1.62	MN
7	E-mail	2.81	1.10	HN
8	Facebook	2.88	0.89	HN
9	whatsApp	2.98	1.72	HN
10	2go	2.85	1.68	HN
11	My space	2.79	1.69	HN
12	Video cassettes	2.76	1.12	HN
13	Audio cassettes	2.50	1.01	HN
14	Television	2.60	1.14	HN

Grand Mean = 2.78

Table 3 indicates that all the items had their mean scores above the cut-off point of 2.50 and their standard deviation ranging from 0.89-1.73. This indicates that the opinions of the respondents were not far too from one another.

Major Findings

Based on the analysis of the data, the following findings emerged;

1. Physical facility resources are highly needed for training of technical teachers.
2. Instructional resources are highly needed for training of technical teachers.

3. Information and communication technology facility resources are highly needed for training of technical teachers.

Discussion of Findings

The findings of this work emanated from the empirical analysis of the data collected. One of the findings of the study was that physical facility resources such as classroom, laboratories, libraries, computer room administrative blocks and teachers offices are

highly needed for training of the technical teachers. This finding is in agreement with Goldstein (2008) who reported that the basic physical and infrastructures required in any training, institution are classroom, workshops, libraries, laboratories where teaching and learning will take place. He further explained that in a situation where the basic infrastructural facilities are not available, training of manpower becomes a mirage.

Furthermore, the analysis of the data collected revealed that instructional resources are highly needed for the training of technical teachers. This finding agrees with the presentation of Igwe (2005) who explain that instructional resources make learning and teaching easier and interesting. He further maintained that technical and vocational education is a skill-oriented programme, and for effective acquisition of the skills, instructional resources are highly required to make the teaching and learning real. This he further stressed, will enable the learner acquire the required skills. Additionally, the study revealed that information and communication technology resources are highly needed for the training of technical teachers.

This finding synchronized with Jaiyeola (2007) who reported that the world is now computer-oriented and information and communication technology driven. He explained that the dynamic nature of education, especially, technical and vocational education require technically trained teachers to close match the modern trend which requires the application of information and communication technology resources. In his explanation, Spencer and Pruss (2001) reported that the application of information and communication technology in training has made teaching and learning simple, interesting and enjoyable. The finding also is in line with Hook (2011) who reported that

technical skills acquisition require modern ICT tools. He further explained that any technical institution that trains technical teachers requires modern tools of information and communication technology facilities.

Conclusion

Training is a type of education that involves development of skills and competencies in the individual for the world of work. For effective development of employable skills and national development, the technical teachers cannot be over looked, and for proper training of the technical teachers, basic resources are required. This study revealed that for effective training of technical teachers, physical and infrastructural facilities, instructional resources and information and communication technology resources are highly needed.

Recommendation

Based on the findings of this research, it is being recommended that;

1. The management of the institutions in the area of study should provide adequate physical and infrastructural facilities for the training of technical teachers.
2. The head of the Departments in the institutions offering technical courses should always collaborate with the lecturers to provide the required instructional resources for teaching and learning.
3. The state and the federal government who are the proprietors of the technical schools should provide adequate information and communication facilities in the institutions for the training of the technical teachers.

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