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Training Needs by Apprentices under Non-Formal Education in Technical Colleges and Technical Colleges to be Self Employed

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Abstract
The purpose of the study was to examine the training needed by the apprentices and technical college students so that they can become self employed in Ekiti State, Nigeria. The research design used for the study was a survey. The estimated population of the respondents is 1430 comprising 63 students, 17 technical teachers, 40 master craftsmen and 1310 apprentices. The entire population of the respondents was used except that of the apprentices that were subjected to stratified random sampling method. The instrument was subjected to reliability test using Split-half method and Spearman Prophesy Brown Formula and the coefficient was found to be 0.82. Results of the study showed that the basic requirements for training the apprentices and technical college students are absent which makes skills acquisition not only difficult but impossible. Some recommendations were made to improve the training needed by the apprentices and technical college students.

Introduction
Before independence in 1960 education in Nigeria was colonial regime affair geared towards evangelization and with emphasis on the acquisition of literacy to enable the learners pass examinations, obtain certificates and take white collar job. This to a great extent eroded the traditional Nigerian education goals which were basically vocational in nature and largely run on the apprenticeship training system in such fields as agriculture, arts and crafts, (Osuala, 1989).

However, the country has shifted focus from literacy to vocational education which gave birth to Federal Republic of Nigeria (1977) revised 1981, 1998 and 2004. The Federal Republic of Nigeria (2004) describes technical education as that aspect of education, which leads to the acquisition of practical and applied skills as well as basic scientific knowledge. Nigeria having recognized the important of vocational technical education and the fact that every citizen should be equipped to contribute effectively to the welfare of the nation; it is believed that apprenticeship training in any trade is a means of improving the productive power of the nation. At the stage of Nigeria's development substantial section of the workforce must be able to initiate business ventures independently or to perform skilled work of a diversified nature. This is why many people in Ekiti State are engaged in different vocational trades such as Woodwork, Metal-work, Iron bending, Carpentry, Building Construction, Auto Mechanics, Tailoring, Spinning, Weaving, Dyeing, Dress Making, Shoe Making, Blacksmithing, Block Laying, Radio Repairing, Sign Writing, Printing And Agriculture.

To acquire skills and achieve competency in vocational trades requires training in manipulative skills to operate efficiently and effectively. This is because vocational education whether local or modern requires a high degree of ability and skills development. Mechanical craftsman for example; require possession of technical knowledge in addition to manual skills. Craftsman requires theoretical knowledge as well as practical skills in construction and fabrication. Thus, they require training in skills which will make them productively self-employed or be able to work as operatives in factories and in construction firms. It is because of this awareness that the Federal Government of Nigeria has invested much money in establishing many technical schools and also the training of technical teachers through the Technical Teacher Training Programme (T.T.T.P) (Olayinka, 1988).

Apprenticeship training system also called non-formal vocational education and training refers to training on the job. This is based on an arrangement between the Master Craftsmen and the trainee established by either written or verbal agreement which allows the apprentice to be trained under the tutelage of a master craftsman (Okorie, 1979). It was predominantly the system of mastering the arts or skills even in the traditional society. The apprenticeship training in vocational trades was largely operated as a family trade Olaitan (1992) observed that in the family training methods, children learn the trades of their parents by native association with their parents at work. This system of family training gradually evolved into a more efficient system called apprenticeship training. Under traditional apprenticeship scheme the children are not trained by their parents, but relative or master craftsmen in particular case.

In the traditional apprenticeship system of training in vocational trades, a youth would become a housemaid to a close relative who would within some years be gradually introduced to the vocation of the

guardian. Emida (1979) defined apprenticeship as an arrangement in which infants or adults bind themselves to serve and learn for a definite time from a master craftsman, who is conversant with the calling and would teach the apprentice.

In the view of Amaize (1983) local apprenticeship waxes stronger instead of diminishing in Edo State, thus, becoming more popular than technical education which is formal. Local mechanical workshops are producing mostly semi-skilled journeymen who specialize in a narrow aspect of a trade. The principles and the trade theories are not taught by the master craftsmen because they cannot teach what they do not know. The practical experience of the master craftsmen are the only skills and knowledge obtained in the workshops. Since the experiences of the Master craftsmen vary, graduates of local apprenticeship scheme do not acquire the same habits, skills and knowledge.

The apprenticeship training system in vocational trades seems to have one advantage over that of formal technical education. This has to do with the amount of daily practical work done as compared to that of the technical colleges where both practical and theory, including some basic subjects are taught. In other words, the practical aspects dominate in the apprenticeship training system. For any nation to attain a sound and reliable economy, it is necessary to pursue with vigor her scientific and technological education through apprenticeship training system in vocational trades which will serve as an effective approach to the development of skilled workforce for the nation's economic sector.

Oranu (1993) pointed out that the Federal, State and Local Government having realized the unprecedented unemployment of technical college graduates in the country, emanating from lack of practical experience for productive and marketable skills adopted vocational education and training as one of the measures to address the problem. In actualizing this, an apprenticeship training scheme was introduced and administered under the National Directorate of Employment Scheme, (NDES). The scheme complemented other non-formal vocational training programmes which have been in existence in Ekiti State.

The organization of non-formal training in vocational trades seems to be predominantly informal. The master craftsman is the sole administrator and the entire training is on the job. The methods mostly adopted in teaching the apprentices are mainly lectures, discussion and demonstration. Although, one of the first activities in planning the non-formal training should be the preparation of the schedule, this is practiced by a few master craftsmen, otherwise guided by each day's activities.

The choice of trades and the selection of trainees for apprenticeship are not based on a formal guideline. A trainee is expected to be loyal to his master, willing to learn a trade, be honest and sociable. In some trades, importance is not attached to age, educational qualification and physical fitness. However in some others emphasis is based on such qualities as age aptitude, education qualification, physical fitness, good morals reliability and ability to get on well with others. From the foregoing, it is pertinent that there is the need to appraise apprenticeship training scheme be examined so that the weaknesses.

Akpan (1988) observed that the effectiveness of any educational or institutions programme depends on the curriculum designed for it Apprenticeship schemes or non-formal vocational training do not have established curriculums, but the successful implementation of the non formal training programme depend largely on the trainee and the trainer and the various teaching and training method employed or adopted.

Olayinka (1988) observed that a person or a class of trainees learn a skill best when training involving explanation, demonstration and practice are mixed in a proportion of 20 per cent, 25 per cent and 55 per cent respectively. However, Okorie (1979) did not consider any method of instruction as being the best for every teaching situation, but that a carefully designed teaching method can work wonders in making learning effective. He further said that the success in the use of any method of teaching depends on a intellectual or intelligent analysis of the educational purpose, the pupils in the class and the curriculum content of the type of subject matter being taught. However, the amount of skill required depends on the levels and complexity of the work. For a successful apprenticeship in vocational skill, the emphasis should be upon the leaning activity. Trainees need to be exposed to meaningful drill in the skill to be acquired.

Okorie and Ezeji (1988) supported this claim and further said that the procedure of skill acquisition normally consists of careful demonstration by the mater followed by considerable practice by the learner and thereafter by individual remedial drilling where necessary.

Towe (1985) observed that these graduate, who look for appointment or employment in the labour market with their on-the-job skill experience, find it difficult to adjust to work situation. The administrative problems had led to the production of young secondary leavers and tertiary school graduates roaming the street with their certificates without jobs, because they have no technical or vocational skills. He further said that inadequate training strategies, inadequate training materials in our school and colleges, inadequate training tools and unqualified trained manpower and technical teachers/technicians and poverty among parents pushed some youths to acquire skills in Nigeria. From the foregoing, it is necessary to examine the kind of training given to youths in order to find out the reasons why they do not fit the world of work after graduation.

Statement of the Problem

One of the aims of technical education as stated in the Federal Republic of Nigeria (2004) is to give training and impact the necessary skills leading to the production of craftsmen, technicians and other skilled personnel who will be enterprising and self-reliant. Akaile (1987) pointed out that many candidates of secondary school age opt for apprenticeship training in vocational trades in our non-formal education sector. Apprenticeship training workshops exist at many places in Ekiti State but their level of technology cannot lead to the production of goods, which are of international standards.

Amaize (1983) had earlier pointed out that the problems apprentices encounter in their workshops range from lack of tools, equipment, awful and odd conditions in which the apprentices work under rain and sun in addition to long hours daily. Despite the poor work environment in which apprenticeships training schemes operate and the many problems associated with training under craftsmen the scheme continues to increase in leaps and bounds. Besides there is also the problem of qualified and motivated teachers in technical colleges that cannot attract potential apprentice. Majority of people believe that the apprentices being trained under non-formal system are better in practical work than their college trained counterparts. Consequently, some students opt for apprenticeship training scheme but that had not resulted into massive employment. This has resulted in increase in crime rate in Nigeria because an idle hand is the devil's workshop. This underscores the need to conduct this study.

Purpose of the Study

The main purpose of the study is to examine the apprenticeship training needed by apprentices and technical college students so that they can become self employed in Ekiti State. Specifically the study sought to:

- determine the required training needed by apprentices under non-formal education and technical colleges in order to be self employed;
- determine the measures to be taken to improve training in technical colleges and apprenticeship training scheme.

Research Questions

1. How adequate is the training given to youths in the local apprenticeship workshop and students in Technical College?
2. What are the measures to be taken to improve the training given to students in technical colleges and apprenticeship training scheme?

Hypothesis

There is no significant difference between the mean opinions of technical students and apprentices on the required training needed by them.

Significance of the Study

The result of this study will help the Ministry of Education in determine the basic required training needed by apprentices under non-formal education and technical colleges. This study will also help in recruitment organized by each state and local government in cooperation with appropriate agencies.

Method

The research design that was used for this study is the survey type. Data available at the Ministry of Education technical section reveal that a total of 135 registered apprenticeship/vocational training centres exist in Ekiti State. The estimated population is 1430 respondents comprising of 63 students, 17 technical teachers, 40 master craftsmen and 1310 apprentices. This gives a total of 1,430 as the population of the study. The stratified random sampling technique was to be used in selecting the trainees under apprenticeship workshop. Stratified random sampling technique was used where the population is homogenous but it contains sub-cultures which tend to exhibit a degree of heterogeneous among the strata.

Ten percent of the trainees were sampled for the study. However, stratified random sampling technique was applied only to trainees whose number is in thousands. This is in line with Nwana's (1981) recommendations, which stated that when the entire population is large, then ten percent of the population would constitute the sample size. The 10 percent of 1310 rural trainees is 131.

The trainees under apprenticeship scheme were drawn from the four zones in Ekiti State. The entire population of technical colleges students of 63, technical teachers of 17 and 40 of master craftsmen was used in this study. This is because the size of their population is small, therefore no sampling was needed. Therefore, the total number of the sample size for the study was 257 (i.e. 131, 63, 40, 17). The distribution of the sample size to each group of prospective respondents is presented in table below.

Table 1: Distribution of Sample Size for the Study

Status of Prospective Respondents	Ado L. Govt		Ikole L. Govt		Ijero L. Govt		Moba L. Govt		Total No	
	No in Existence	No Used	No in Existenc	No Used	No in Existence	No Used	No in Existence	No Used	No in Existence	No Used
Technical Teachers	5	5	4	4	3	3	5	5	17	17
Technical Students	20	20	14	14	13	13	16	16	63	63
Master Craftsmen	12	12	9	9	9	9	10	10	40	40
Apprentices	250	35	320	32	310	31	330	33	1310	131
Total	387	72	347	59	335	56	361	64	1430	257

The questionnaires were sub-divided into five sections. Section A will require the respondents to provide their personal data. Section B is for respondents to indicate their agreement or disagreement with the statements. The questionnaire was constructed and administered by the researcher. The questionnaire was designed using a five point rating scales. Response scale for the sections B,C,D and E are as follows.
Strongly Agree (SA) - 5; Agree (A) - 4; Undecided (UD) - 3; Disagree (D) - 2
Strongly Disagree (SD) -1

The instruments were validated by experts. The final draft of the research instrument was trial –tested to ascertain the consistency of the instrument in testing what it is supposed to test forty apprentices, fifteen technical college students, eight technical teachers and ten master craftsmen were randomly drawn from the total population. The instrument was administered to the respondents using Split-Half method and Spearman Prophesy Brown Formula and a reliability coefficient of 0.82 was obtained.

In order to analyse the data, the mean and standard deviation statistical tools were used to determine the extent of agreement or disagreement with each statement by the respondents. A factor is accepted if the mean score associated with it is equal to or more than 3.05 and a factor is rejected if the factor associated with it is less. The t-test statistic was used to test hypothesis at 0.05 level of significance; where the calculated t-value is greater than the critical value, the null hypothesis is rejected and where the reverse is the case, null hypothesis is accepted.

Results and Discussion

Research Question 1: How adequate is the training given to youths in the local apprenticeship workshop and students in Technical College?

Table 2: Mean Responses of Master Craftsmen, Technical Teachers, Students and Apprentices Training Needed by the Apprentices and Technical College Students.

	Item	$\overline{X_1}$	Sd	Remark
1	The prerequisite for entry into apprenticeship is standardized and that of technical college streamlined.	2.81	1.52	Disagree
2.	Emphasis is more on practicals rather than theory	2.09	0.89	Disagree
3	Machines, tools and equipment are provided for training	2.68	1.66	Disagree
4	Apprentices and technical college students are taught how to use the right tools for the right jobs	1.69	0.58	Disagree
5	Apprentices and technical colleges students are taught how to use equipment and machines to produce the needed articles.	1.95	0.91	Disagree
6	Most of the workshop do not have power supply.	3.65	1.85	Agree
7	Exchange of skill ideas between the apprentices, technical students and workers in the industries are made compulsory before students graduation.	2.10	1.62	Disagree

The values of mean range from 1.69 to 3.65. Most of the respondents indicated that the basic required training needed was not provided.

Research Question 2

What are the measures to be taken to improve the enrolment into technical colleges in order to prevent students running into apprenticeship training scheme.

Table 3: Mean Response of Technical Teacher and Technical Student on Strategies that be used to Improve Training Needed by Apprentices and Technical College Students

	Item	$\overline{X_1}$	Sd	Remark
1	There must be an improvement on the supply of tools, equipment and consumable materials for the training	3.94	0.97	Agree
2	Student should not be made to purchase materials for practical with their personal money	3.84	1.17	Agree
3	Fees in technical college should be abolished or reduced to the lowest minimum	3.71	1.01	Agree
4	Sufficient number of qualified and motivate and technical teachers should be employed to handle technical subjects	3.80	1.06	Agree
5	More hours (time) per week should be allocated for practical work.	3.96	0.99	Agree
6	Industrial centres should be built side by side with technical schools so that students can engage in on the job experience before they pass out.	3.89	1.02	Agree
7	Government should [provide loans and other financial assistance to the graduate of technical college to establish private businesses.	3.86	1.02	Agree
8	Improvement on supply of power to technical colleges for operating equipment and machines during practical periods should be regular	4.20	0.83	Agree
9	All technical college should have a placement office so that products of technical colleges can be placed in appropriate jobs after graduation	3.92	0.96	Agree

Data presented in Table 3 shows that the respondents agreed on all items as the measures to be taken to improve the enrolment into technical colleges in order to improve training needed by apprentices and technical college students. The level of agreement ranged from the mean of 3.71 to 4.20.

Discussion of the Findings

The findings in Table 1 show that the basic requirements for training the apprentices and technical college students is lacking. Perhaps, this is one of the major reasons why the level competencies among the respondents are low. consequently, they are not marketable and find it difficult to be self employed. This finding agrees with the finding of Olayinka (1988) who observed that a person or a class of trainee learn a skill best when the basic training requirements are put in place involving explanation demonstration and practice are mixed together in a proportion of 20 percent, 25 percent and 55 percent respectively. In support of this, Moore (1986) said that trainees have to be taught the competencies required and the given the opportunity to exercise their newly acquired skills and knowledge.

Recommendations

Based on the findings of this study the following recommendations are made.

1. Government with private industrialists to intensify provision of tools, equipments and machines to enhance skill acquisition in various centres across the country.
2. In service training should be provided for teachers at vocational training centres and technical colleges in order to improve their competencies.
3. Measures to improve training of apprentices and technical college students such as improvement in the supply of consumable materials and employment of sufficient number of qualified technical teachers to handle technical subjects should be adopted by all stakeholders.
4. All workshops and training centres should have fire extinguishers for technical colleges in order to prevent fire accidents.
5. Government should provide loans and other financial assistance to the graduates of technical college and apprentices to establish private to make them self-employed.

Conclusion

The training of apprentices and technical students have not met the aspirations of Nigerians are bound to have the challenge of incompetent training craftsmen, irrelevant training needs, lack of funds and absence of workshops facilities because the stakeholders have not identified all these as crucial foundation for any meaningful training. Until the required training needs are provided technological development of Nigeria will be

a mirage.

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