ACHIEVING QUALITY ASSURANCE IN INFORMAL AUTOMOBILE APPRENTICESHIP TRAINING SYSTEM FOR SUSTAINABLE SELF-EMPLOYMENT OF TRAINEES IN ENUGU METROPOLIS

[1]Mbah, Chidozie O. & [2]Prof. H. U. Elobuike
[1]doziembah@yahoo.com & [2]drhyacinthelobuike@yahoo.com

Department of Technology and Vocational Education, ESUT

Abstract
The objective of this study was to determine the measures for achieving quality assurance in informal automobile apprenticeship training system for self-employment of the trainees in Enugu Metropolis. The study was necessitated by the demand for quality services in informal automobile workshop and emerging technology in automobile vehicles today. Two research questions in line with the purpose of the study and two null hypotheses guided the study. The study adopted a survey research design. The population was 125 Master craftsmen and Senior apprentices purposively sampled from informal automobile apprenticeship training system in Enugu Metropolis of Enugu State. The instrument used for data collection was questionnaire meticulously structured in two sections according to the research questions that guided the study and was validated by three experts. The questionnaire which contained 20 item statements structured in for point rating response category of strongly agree, agree, disagree and strongly disagree with numerical values of 4,3,2and 1 respectively. Cronbach Alpha formular was used to determine the reliability of the instrument and it yielded a reliability index of 0.83. Out of 125copies of the questionnaire distributed 121 copies were properly completed and returned, with a return rate of 96.80%. Mean with standard deviation was used to answer the research questions while t-test was used to test the hull hypotheses at 0.05 level of significance. The findings of the study showed that quality assurance was needed in informal automobile apprenticeship training system for enhancing the quality of transferrable skills and to accelerate the technological development through skill development. The findings also showed the policy measures for achieving quality assurance in informal apprenticeship training system. Based on the findings of this study, recommendations were made which included, that government should make legislation for recognizing certificates of apprenticeship training and vocational guidance should be attached to apprenticeship training system for effective guidance.

Key Words: *Apprenticeship, skill development, informal automobile apprenticeship training*

Introduction
Skill acquisition and development in the informal economy have formed suitable means of training young people for life career. Skill acquisition is usually carried out through apprenticeship training system. Skill development is a learning sequence that leads to coordination and mastery of certain dexterities needed to perform given tasks. Quality assurance is needed in apprenticeship skill development to stimulate job creation among the youths and link formal and informal training through a cooperative industrial training system. According to

Nubler (2006), apprenticeship is a system which combines enterprise-based training in productive skills with a financing scheme to meet the financial constraints of young people in skill development. Apprenticeship in general is a form of vocational education and training that combines and alternates periods of theoretical learning with practical training at a work place (Onoh, 2012). This type of training system provides an opportunity for young people irrespective of economic and social background to access training with ease.

Apprenticeship in automobile works is a training system through which relevant skills and experiences in automobile maintenance and repair are acquired by the apprentices for future participation in national economic development. The informal automobile sector of the economy forms a linkage with the formal sector especially in depressed economy where there is need to address its challenges. Skills demanded by employers and those possessed by prospective employees appear not to match. This mismatch according to Aivazova (2013) can be addressed in part through the implementation of quality apprenticeship training programme and effective coordination with employers.

Nubler (2006) noted that in apprenticeship training, the apprentices acquired skills in a process of cognitive apprenticeship. This means that the apprentice works side-by-side with the trainer to acquire tacit knowledge and vocational skills in a process of imitation and practice. Tacit knowledge is non-codifiable and cannot be taught, but needs to be acquired and discovered in a process of observation, practice and experience, working side-by-side with skilled person. It is difficult for apprentices to develop any unit of purpose in what they do. Haan (2006) also observed that apprenticeship training could be traditional, informal or modern. The traditional apprenticeship refers to the informal transfer of skills within families and social groups and based on socio-cultural conventions. In this, there is an agreement between the master craftsman and the parent or guardian of the apprentice which regulates the skills to be trained with moral upbringing. The informal according to Haan (2006) is more open in the sense that the majority of apprentices come from outside the family. Informal apprenticeship training is common in the technological and service oriented activities like automobile mechanic, welding and fabrication, carpentry, hairdressing, cloths designing, etc.

Furthermore, the modern apprenticeship is usually regulated by an "Apprenticeship Act'' which stipulates the length of the training period, the training format, the number of working days, training hours, the payment of minimum wage, etc. Haan (2006) opined that in most developing countries there are few modern apprenticeship which are mainly concentrated in medium and large enterprises. It is imperative to note that apprenticeship in the informal economy is governed by informal institution such as traditions, social norms and network. In order to achieve sustainable empowerment among the youths in informal apprenticeship training, some mechanisms need to be considered such as software intensive distributed electronic systems.

The informal automobile workshop is becoming challenging as a result of technological innovations in automobile designs. Larrigan, Kavulya, Narasimhan, Fuhrman and Salam (2011) stated that the innovation resulted from software intensive distributed electronic control systems which are being used in

automobile industry to provide convenience and safety features to vehicle drivers and passengers, with increasing levels of automation and control authority. This development demands that informal apprenticeship training needs to adopt quality assurance in order to impart these skills in the maintenance of millennium vehicles. Quality assurance according to Hayward (2006) means meeting and conforming to generally acceptable standards as defined by quality assurance bodies or appropriate academic and professional committee. Quality assurance in this context refers to monitoring and evaluation of performance of the various levels of the training system in achieving the specific goals at each level and overall objective of the training. Quality in apprenticeship training may also be considered on the basis of how good and efficient is the trainer, how adequate and accessible the facilities and materials needed for effective skill development and how prepared the apprentices are in meeting the challenges of work and societal problems.

Moreover, quality assurance includes; defined standards of achievement, documented procedures for all indentified processes in skill development, established ways of responding to issues and clear accountability for outcomes. Onoh (2010) opined that in quality assurance, the main focus is on the sustainability of high standard, which hitherto might have attracted different individuals into subscribing to the services or product. Quality assurance in informal automobile apprenticeship will enable the youth to acquire the skills needed to stimulate the informal economy and encourage the shift from a survival-base approach to a development-based approach. Quality in informal automobile apprenticeship training is also needed in order to provide the contemporary skills and competences to a growing number of young women and men entering the labour market. Aivazova (2013) pointed out that to complement successful apprenticeship training programmes, government should enact a legislation to create nationally recognized apprenticeship-completion certificates as well as regulate content to ensure quality and transferability of skill. Without quality assurance in informal apprenticeship training, the sustainable employment in this area will be a mirage.

Apprenticeship training system is an aspect of vocational training that equips apprentices with practical skills for self-reliance and quality assurance through tacit knowledge acquisition. There is need to formulate a supporting policy to apprenticeship training to avoid undermining the strengths and sustainability of the informal apprenticeship. This would also influence the quality of skill rendered in this system.

Informal automobile apprenticeship system builds on the tacit knowledge and is a self-regulating and self-financing system embedded in the local social context. For the system to train competent apprentices, the quality of the training needs to be determined. It is imperative to note that the informal apprenticeship system demand quality assurance strategy for optimal performance on their skill development. Consequently, the need arose to determine how quality assurance in informal automobile training system would be achieved for sustainable youths' employment in Enugu State.

Purpose of the Study

The main purpose of the study was to determine the measures for achieving quality assurance in informal automobile

apprenticeship training system for sustainable self-employment in Enugu Metropolis. Specifically the study sought to determine the;

1) need for quality assurance in informal automobile apprenticeship training system for sustainable self-employment in Enugu Metropolis.
2) policy measures for achieving quality assurance in informal automobile apprenticeship training system for sustainable self-employment in Enugu Metropolis.

Research Questions

The following research questions were answered by the study;

1) what are the needs for quality assurance in informal automobile apprenticeship training system for sustainable self-employment in Enugu Metropolis?
2) what are the policy measures for achieving quality assurances in informal automobile apprenticeship training system for sustainable self-employment in Enugu Metropolis?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance;

1. There is no significant difference between the mean responses of automobile master craftsmen and senior apprentices on the need for quality assurance in informal automobile apprenticeship training system for sustainable self-employment in Enugu Metropolis.
2. There is no significant difference between the mean responses of automobile master craftsmen and senior apprentices on the policy measures for achieving quality assurance in informal automobile apprenticeship training system for sustainable self-employment in Enugu Metropolis.

Method

The study adopted descriptive survey research design. This design was adopted because data were collected from the respondents through a polychotomously designed instrument, analyzed and findings described as they were obtained. Descriptive research design according to Idoko (2011), is concerned with the collection, analysis, interpretation of data the way they existed from relevant sources with appropriate tools, methods and then, using the result of the interpretation to describe existing situations, events, characters, opinions, behaviours, belief and relationship

The area of the study was Enugu Metropolis of Enugu State. The population for the study comprised 31 master craftsmen and 94 senior apprentices purposively sampled from informal automobile apprenticeship training system in Enugu Metropolis. Therefore, the total population used for the study was 125 master craftsmen and senior apprentices. There was no further sampling because of the manageable size of the population. The instrument for data collection was a questionnaire which consisted 20 items statement structured in a four-point rating scale of strongly Agree (SA), Agree (A) Disagree (D) and Strongly Disagree with numerical values of 4, 3, 2 and 1 respectively. The instrument was face validated by three experts, two from Technology Education and one from Measurement and Evaluation in the Department Science and Computer Education in the Faculty of Education, Enugu State University of Science and Technology (ESUT). The reliability of the instrument was determined by administering the instrument to similar 10 master craftsmen and 10 senior

apprentices in Anambra State. The data collected were analyzed using Cronbatch Alpha formula to establish the reliability index which was found to be 0.83, indicating that the instrument was reliable for use to collect data for the study.

Out of 125 copies of the questionnaire distributed, 121 copies were correctly completed and returned, hence representing 96.8% return rate. The researcher carried out this exercise with the help of two trained research assistants. Mean with standard deviation was used to answer the research questions of the study and any item with a mean score of 2.50 and above was regarded as agreed while items with mean rating below 2.50 were regarded as disagreed. For the null hypotheses of the study, they were tested using t-test at 0.05 level of significance. Thus, the decision was that if the t-calculated was greater or equal to t-table value at 0.05 level of significance, the null hypothesis would be rejected otherwise, they would be rejected.

Result

The result of the study was presented based on the research questions and hypotheses that guided the study. Details of the result were contained in tables 1-4.

Research Question 1

What are the needs for quality assurance in informal automobile apprenticeship training system for sustainable self-employment of trainees in Enugu Metropolis?

Table 1: Mean responses with standard deviations of respondents' responses on the need for quality assurance in informal automobile apprentice training system for sustainable self-employment of trainees in Enugu Metropolis.

S/N	The needs for quality assurance in informal automobile apprentice ship training system include to;	Master Craftsmen N=30		Senior Apprentices N=91		Overall		Decision
		$\bar{X}1$	SD1	$\bar{X}2$	SD2	$\bar{X}G$	SDG	
1	promote quality skill development in maintaining automobile vehicles businesses successfully	3.57	0.63	3.55	0.58	3.55	0.59	Agree
2	promote labour standard in informal system	3.67	0.80	3.69	0.67	3.69	0.67	Agree
3	enhance the quality of transferable skills	3.47	0.68	3.43	0.69	3.39	0.65	Agree
4	streamline the duration of informal automobile apprenticeship training	3.60	0.62	3.89	0.41	3.82	0.48	Agree
5	overcome the constraints of upgrading skills in informal development	3.53	0.51	3.47	0.54	3.49	0.53	Agree
6	accelerate the technological development through skill acquisition	3.90	0.31	3.70	0.48	3.75	0.45	Agree
7	ensure proper recognition of skill in formal System	3.57	0.73	3.49	0.77	3.51	0.77	Agree
8	promote diffusion of new skills as a result of emerging technology	3.77	0.43	3.53	0.70	3.59	0.65	Agree

9 promote collaborative strategies between informal and formal system	3.47	0.51	3.83	0.51	3.74	0.53	Agree
10 extend existing social scheme to informal automobile training system	3.50	0.57	3.11	0.57	3.47	0.73	Agree
11 prevent child labour in apprenticeship training system	3.30	0.65	3.53	0.75	3.47	0.73	Agree
12 create new skills for apprenticeship training	3.53	0.78	3.73	0.63	3.68	0.67	Agree
13 better assess the transferred skills for work	3.70	0.53	3.34	0.79	3.43	0.75	Agree
Grand Mean / SD	3.58	0.60	3.56	0.62	3.56	0.62	Agree

Note: X Mean, SD= Standard Deviation

In table one all the items have the mean score above the cut of mean of 2.50, showing that all the items statements are among the needs of quality assurance in informal automobile apprenticeship system for sustainable self-employment of trainees. The low overall grand standard deviation of 0.62 shows the homogeneity in the respondents' responses.

Hypothesis 1:
There is no significant difference between the mean responses of automobile master craftsmen and senior apprentices on the needs for quality assurance in informal automobile apprenticeship training system for sustainable self-employment of trainees in Enugu Metropolis.

Table 2: t-test of difference between the mean response of master craftsmen and senior apprentices on the need for quality assurance in informal automobile apprenticeship training system for sustainable self- employment of trainees in Enugu Metropolis.

Status	X	SD	N	df	t-cal	t-tab	p	Decision
Master craftsmen	3.58	0.60	30	129	0.122	1.98	0.05	NS
Senior apprentices	3.56	0.62	91					

Note: X = Mean, SD= Standard Deviation, N= Number, df= degree of freedom t-cal= t- calculated, t-tab = t- table Value, NS = not significant.

Table two shows that the t-calculated value is 0.122 tested at 0.05 level of significance and at 129 degree of freedom. Hence, the null hypothesis which stated that there is no significance difference in the mean ratings of automobile master craftsmen and senior apprentice on the needs for quality assurance in informal automobile apprenticeship training system for sustainable self-employment of trainees is not rejected. This shows that the responses of the two groups did not differ significantly.

Research Question 2

What are the policy measures for achieving quality assurance in informal automobile apprenticeship training system for sustainable self-employment of trainees in Enugu Metropolis?

Table 3: Mean responses with standard deviation on the policy measures for achieving quality assurance in informal automobile apprenticeship training system for sustainable self-employment of trainees in Enugu Metropolis.

S/N	Policy measures for achieving quality assurance in informal automobile apprenticeship training system include;	Master Craftsmen N=30		Senior Apprentices N=91		Overall		Decision
		X1	SD1	X2	SD2	XG	SDG	
14	Introducing certificates in informal apprenticeship training	3.40	0.67	3.56	0.69	3.52	0.68	Agree
15	Collaboration with key stakeholders in improving skills for emerging technology	3.80	0.38	3.51	0.50	3.59	0.49	Agree
16	Formalization of working relationship through contract	3.60	0.56	3.56	0.56	3.57	0.59	Agree
17	Making apprenticeship training not to be finance demand oriented	3.93	0.25	3.59	0.63	3.68	0.58	Agree
18	Safety of the apprentices in the work environment	3.63	0.67	3.74	0.44	3.71	0.51	Agree
19	Introducing vocational guidance on apprenticeship training system	3.53	0.78	3.86	0.44	3.78	0.56	Agree
20	Establishment of link between apprenticeship and formal system	3.47	0.68	3.82	0.46	3.74	0.54	Agree
	Grand Mean / SD	3.63	0.57	3.66	0.53	3.65	0.56	Agree

Note: X Mean, SD= Standard Deviation

Data in table five show that all the items on the policy measures for achieving quality in informal automobile apprenticeship training system for sustainable self-employment of trainees have their mean value above 2.50 cut-off point. This shows that the respondents agree that items 14-20 are the policy measures for achieving quality assurance in informal automobile apprenticeship training system. The grand standard deviation of 0.56 shows that the respondents have similar opinions in their responses.

Hypothesis 2

There is no significant difference between the mean responses of automobile master craftsmen and senior apprentices on the policy measures for achieving quality assurance in informal automobile apprenticeship training system for sustainable self-employment of trainees in Enugu metropolis.

Table 4: t-test result on mean responses of master craftsmen and senior apprentice on the policy measures to achieving quality assurance in informal automobile apprenticeship training system for self-employment of trainees in Enugu Metropolis.

Status	X	SD	N	df	t-cal	t-tab	P	Decision
Master craftsmen	3.63	0.57	30	129	0.19	1.98	0.05	NS
Senior apprentices	3.66	0.53	91					

Note: X = Mean, SD= Standard Deviation, N= Number, df= degree of freedom t-cal= t- calculated, t-tab = t- table, NS = not significant

The t-test result in table six shows that there is no significant difference between the mean ratings of master craftsmen and senior apprentices on their responses on the policy measures for achieving quality assurance in informal automobile apprenticeship training. The calculated t-value is 0.19 which is less than the critical value of 1.98 at 0.05 level of significant with 129 degree of freedom. Consequently, the null hypothesis not rejected.

Discussion

The findings of the study pertaining to research question one showed that all the items under the needs for quality assurance in informal automobile apprenticeship training systems were agreed by the respondents. That showed that quality assurance was crucial in the informal automobile apprenticeship training system for self-employment of the trainees. The finding was in consonance with that of Adegbasan (2011) who found that quality assurance helped in ensuring and maintaining high standard of learning at all levels of education. The findings also showed that there was no significant difference between the mean responses of master craftsmen and senior apprentices on the needs for quality assurance in informal automobile apprenticeship training system. Consequently, the hypothesis was not rejected.

Furthermore, the findings of the study with respect to research question three indicated that the listed items were among the policy measures for achieving quality assurance in informal automobile apprenticeship training system. The findings showed that establishment of link between apprenticeship training and formal system, introducing certificates and vocational guidance in apprenticeship training system were among the policy measures for achieving quality assurance in informal apprenticeship training system. The finding was in agreement with the finding of Aivazova (2013) who noted that legislation should be passed to create a national recognized apprenticeship completion certificate and the content of apprenticeship should be standardized to ensure sustainable quality. The t-test result further showed that there was no significance between the mean responses of master craftsmen and senior apprenticeship on the policy measures for achieving quality assurance in informal automobile apprenticeship training for

sustainable self-employment of the trainees in Enugu Metropolis.

Conclusion

Apprenticeship training system is a way for developing practical skills among the youths and effective way of combating youth unemployment. Achieving quality assurance in informal apprenticeship is an effective measure of boosting the quality of human resource produced through it. Training quality of automobile apprenticeship upgrades technological competence in the trade and provides measures to overcome the constraints in the formal system of the economy. Repositioning the informal apprenticeship training system for quality assurance would enable the apprentices to acquire the skills for them to be self-employed. Quality assurance in apprenticeship training is needed to improve the skills of master craftspeople in order to yield positive results in promoting sustainability of skill training, exchange of experiences and transferability of skills.

Recommendations

The following recommendations were made from the findings of the study;

1. The government should make legislation for recognizing certificates for apprenticeship training.
2. Vocational guidance should be attached to apprenticeship training system for personal guidance
3. Master craftsmen should be assisted to undergo a retraining on emerging technology
4. Government should develop an apprenticeship training standard or bench mark for quality assurance in the system.

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