UTILIZATION OF TECHNOLOGY-ENHANCED LEARNING IN THE DELIVERY SYSTEM OF AGRICULTURAL EDUCATION TEACHER PREPARATION INSTITUTIONS FOR ENHANCING RELEVANCE OF GRADUATES

BY

[1]OKADI, ASHAGWU OJANG; [2]NWACHUKWU, CHRIATIANA UKAMAKA; [3]ONAH, FREDERICK CHINEDU; [4]EZEBUIRO, FELICIA NGOZI; [5]EKENTA, LILIAN U. & [6]ANI, MARY OLUWATOYIN
[1-6]Department of Agricultural Education, University of Nigeria, Nsukka
Corresponding Author: Ani, Mary Oluwatoyin 08030695933, 07066980933
Email: oluwatoyin.ani@unn.edu.ng; ashagwu.okadi@unn.edu.ng

Abstract

The study ascertained the training needs of vocational adult education instructors for curriculum reform for global competitiveness. The study was carried out in Nasarawa State, Nigeria. Two research questions and two null hypotheses guided the study. The population for the study was 758 vocational adult education instructors in the 292 adult learning centres in the study area. Simple random sampling technique through balloting was used to pick 50 percent of the population (394) for the study. The design adopted for the study was a descriptive survey. A 14-item questionnaire titled "Assessment of the Training Needs of Vocational Adult Education Instructors for Curriculum Reform (ATNVAEI) was used for the data collection. The instrument were validated by four experts, two in the Department Adult Education, University of Nigeria Nsukka and two in the Department of Measurement and Evaluation, Nasarawa State University Keffi. Mean and t-test statistics were used for the data analysis. The findings revealed amongst others that the instructional development needs of vocational adult education instructors for curriculum reform include: training in problem identification, skills in the selection/combination of appropriate teaching methodology and learning experiences for self reliance. Also, the strategies for enhancing the competencies of the instructors for skill training were identified. Based on the findings, it was recommended amongst others that government, NGOs and stakeholders in the educational sector should sponsor vocational adult education instructors to workshops/conference.

Key words: *Assessment, Training needs, Vocational adult education instructor, Curriculum reform*

Background of the Study

Adult education is an inevitable instrument for the achievement of growth and development. In the 21st century, it has become associated with every life-long learning initiative for the adults. Adult education is all-embracing as it brings about changes in information, knowledge, understanding or skills, appreciation and attitude. It enables individuals to become more useful to their society socially, economically, morally and politically (Asojo, 2017). The importance of adult education in every society cannot be over-emphasized especially in this era of global competitiveness.

Global competitiveness is the ability (or firm) to produce goods and services, which provide better value than do their overseas rival (Riley, 2012). It implies the ability of a nation's educational system to produce competent labour forces which are nationally and globally relevant. In this study, global competiveness refers to the ability of the Nigerian adult education programmmes to produce adults who are self-reliant and/or possess the necessary employable skills for effective national and global utilization. Adult education remains an indispensable aspect of education that enables an individual to live well and equally participate actively I the affairs that concerns him/her. Nzeneri (2008) defined adult education as any form of education (formal, informal or non-formal, even adults based on their felt social, economic, political and cultural needs to enable them adjust fully to life

challenges. Adult education has come to be associated with the everyday life activities of adults; it has grown to encompass literacy programmes, remediation and retraining programmes. The general objectives of adult and non-formal education in Nigeria, includes: provision of functional literacy and continuing education for the adults and youths; functional and remedial education for the young drop-outs; further education for different categories of completers of formal schools; in-service, on-the-job, vocational and professional training for different categories of workers; and the necessary aesthetic, cultural and civic education for public enlightenment (Federal Republic of Nigeria, 2004).

The achievement of the aforementioned object ives depends on the quality of the adult education instructors. According to Nzeneri (2008), an adult education instructor is a person who consciously or systematically administers the teaching. Learning activities, programmes and the processes with the primary aim of assisting others to learn or attain their desired learning goals. Therefore, instructors are key individuals in the nation's adult education enterprise whose quality of training could mar or improve the educational outcome of the adult learners. In recognition of this fact, the Federal Republic of Nigeria (2004) stated that no educational system could rise above the quality of its teachers viz; the need to assess the training needs of adult education instructors. Patizhiko (2014) explained that planning and evaluating skills are determinants for improving instruction delivery in adult education programmes. The author added that the competency of adult education instructors increases with proper and appropriate training received.

Training needs is a condition which reveals a gap between "What is and what should be" in terms of incumbent's knowledge, skills, attitudes, and behavior for a particular job at any point in time (Halim & Ali, 1997). Training needs in any enterprise usually arise from three sources; those caused by changes, market legislation and manpower composition; those derived from work problems and those from manpower wastage associated with poor recruitment, induction and training programmes (Obikeze & Obi, 2004). Thus, effective assessment of the training needs of adult education instructors will help reveal the extent to which their lack of adequate training hinder their education outcomes as well as identify strategies which if put in place, will enhance their competencies for global competitiveness. In this study, assessment of the training needs of adult education instructors is the same as measuring their training needs to determine the areas where they need training most and to identify the strategies for enhancing their competencies in their adult education teaching/learning centres. Usman (2013) stated that teachers without sufficient training have been teaching but not improving the teaching of adult education in Nasarawa state.

Training of instructors is further necessitated by their cardinal roles in the teaching processes, which includes; establishing conducive climate for learning, creating a mechanism for mutual planning, diagnosing of learning needs, designing a pattern of learning experience using appropriate techniques and materials as well as evaluation of the learning outcomes (Hiemstra & Sisco, 3=2004). The quality of instructors' initial and continuous training therefore, is essential for the overall success of the entire adult learning programme. Thus, if Nigerians are to be effective

in today's globally competitive world, adequate attention needs to be placed on improving the quality of adult education prgrammes so as to help it enhance the critical thinking, creativity, positive work values and innovative skills of the adult learners who are varied in terms of experience and attitude (Jegede & Obashoro, 2007). In other words, effective planning and implementation of adult education programmes requires a qualified and enterprising adult instructor who understands the adult learners and their societal demands, hence, the need for the present.

Quality adult education provision demands the use of well-trained instructors. This is because no education system could rise above the quality of its teachers. Consequently, the challenges posed by the current global competitive market economy can only be met with adequately informed, creative and innovative adult citizenry. Regrettably, most adult education instructors in Nigeria and and particularly in Nasarawa State seem to lack the necessary skills and knowledge base with which to facilitate effective adult teaching/learning process. The problem of this study put in question form is; what are the training needs of adult education instructors for global competitiveness.

The general purpose of the study is to assess the training needs of adult education instructors for effective teaching and learning. Specifically, the study sought to:

1. Ascertain the planning needs of adult education instructors for effective delivery of instruction for global competitiveness in Nasarawa State.
2. Identify the evaluation needs of adult education instructors for effective delivery of instruction for global competitiveness in Nasarawa State.

Research Questions

The following research questions were formulated to guide the study:

1. What are the planning needs of adult education instructors for effective delivery of instruction for global competitiveness in Nasarawa State?
2. What are the evaluation needs of adult education instructors for effective delivery of instruction for global competitiveness in Nasarawa State?

Hypotheses

The following two null hypotheses guided the study and were tested at 0.05 level of significant:

H_{01}

There will be no significant differences in the mean ratings of male and female adult education instructors on their planning needs for effective instruction delivery for global competitiveness in Nasarawa State.

H_{02}

There will be no significant differences in the mean ratings of male and female adult education instructors on their evaluation needs for effective instruction delivery for global competitiveness in Nasarawa State.

Methodology

Descriptive survey design was adopted for the study. Nworgu (2006) defined descriptive survey design as studies, which aims at collecting data on, and describing in a systematic manner the characteristic, features or facts about a given population. This design was considered appropriate for this study as it sought to collect

as well as analyze data from the instructors to ascertain their training needs for effective teaching for global competitiveness. The population of the study comprised of 788 instructors in the 292 adult learning centres in Nasarawa State. Using simple random sampling technique through balloting, 50 percent of the population (394) instructors were picked and used for the study. The instrument for data collection was a researcher-structured questionnaire titled "Assessment of the Training Needs of Adult Education Instructors" (ATNAEI). The instrument was based on the four-point rating scale of Strongly Agreed (4), Agreed (3), Disagreed (2), and Strongly Disagreed (1).

The instrument was validated by three experts; two from the Department of Adult Education & Extra-Mural Studies and Measurement and Evaluation both in the University of Nigeria, Nsukka. The reliability of the instrument was determined using Cronbach Alpha method and yielded a co-efficient of .88. The reliability co-efficient of .84 and .88 is an indication that the instrument is highly reliable. Three hundred and ninety-four (394) copies of the instrument were administered to the respondents during their teaching/learning endeavors. At the end 392 copies rightly completed and returned were used in the data analyses. The data collected were analyzed using mean scores and t-test statistics. A mean score of 2.50 and above was accepted as the criterion means score while those below 2.50 were not accepted. The t-test statistics was used to test the two null hypotheses at 0.05 level of significant. The decision rule was based on the 0.05 level of significance. Thus, any item whose calculated t-value is less than its critical t-value at 0.05 level of significance were not rejected while those whose calculated t-value is more than its critical t-value at 0.05 level were not accepted as being significant.

Results

Table 1: Mean Scores of the adult education instructors' responses on their planning needs for effective instruction delivery in Nasarawa state

S/N	Items relating to planning needs of adult education instructors in Nasarawa state	mean	SD	Decision
1.	Selection of appropriate materials, tools and equipment to used for adult teaching	3.65	0.97	Accepted
2.	Identification of various innovative functional literacy programmes for the adults	3.69	0.90	Accepted
3.	Selection of practical projects/assignments within the ability of adult learners	3.72	0.86	Accepted
4.	Identification of practical lesson objectives	3.70	0.89	Accepted
5.	Skills in the selection of appropriate learning experiences for adults	3.67	0.95	Accepted
6.	Preparation of learning sequence that start from simple to complex steps	3.62	1.02	Accepted
7.	Fixing of lessons to avoid clashing with major community events	3.55	1.01	Accepted
	Grand mean	**3.67**	**.93**	**Accepted**

Table 1 above shows that all the items (1-7) were all accepted as the planning needs of the instructors for effective teaching. The grand mean of 3.67 and standard deviation of 0.86-1.02 further reveals that all the identified items were necessary requirement for teaching adult education in Nasarawa state.

Table 2: Mean Scores of the adult education instructors' responses on their evaluation needs for effective instruction delivery in Nasarawa state

S/N	Items relating to evaluation needs of adult education Instructors in Nasarawa state	Mean	SD	Decision
8.	Checking and marking given assignments by the instructors	3.51	1.09	Accepted
9.	Administration of tests, class quiz and take home assignments	3.70	0.86	Accepted
10.	Reviewing of lessons after each teaching	3.67	0.81	Accepted
11.	Checking the accuracy of finished assignments	3.49	1.10	Accepted
12.	Identifying any particular topic that is difficult to adult learners	3.49	1.10	Accepted
13.	Finding how much knowledge and skills the learners have acquired on completion of program	3.50	1.07	Accepted
14.	The instructor asking what was his achievement and failures on his lesson.	3.67	0.96	Accepted
	Grand Mean	**3.59**	**.99**	**Accepted**

Table 2 above shows that all the items (8-14) were all accepted as evaluation needs for adult education instructors in Nasarawa state for effective teaching. The grand mean of 3.59 and standard deviation of .99 further reveals that all the identified items were potent evaluation needs for enhancing the teaching of adult education in Nasarawa state.

Table 3: Summary of the t-test analysis on the planning needs of adult education instructors in Nasarawa state

Group	N	$\bar{X}$	SD	DF	t-Cal	t-Crit	Level of Sig.	Remark
Male	106	3.23	.29					
Female	298	3.27	.56	390	-2.59	1.96	0.05	Significant
Total	**392**							

Table 3 indicates that there were no significant differences in the mean ratings of male and female adult education instructors on their planning needs for enhanced teaching for global competiveness. This is shown by calculated "t" of -2.59, which is less than 1.96 critical "t" value at 0.05 level of significance and 390 degree of freedom. The null hypothesis is therefore not rejected, as the calculated "t" of -2.59 is less than critical table value of 1.96 at 0.05 levels.

Table 4: Summary of the t-test analysis on the evaluation needs of adult education instructors in Nasarawa state.

Group	N	$\bar{X}$	SD	DF	t-Cal	t-Crit	Level of Sig.	Remark
Male	106	3.35	.39					
Female	298	3.29	.46	390	.59	1.96	0.05	Significant
Total	**392**							

Table 4 above indicates that there were no significant differences in the mean ratings of male and female adult education instructors on their evaluation needs for effective teaching for

global competiveness. This is shown by calculated "t" of .59, which is less than 1.96 critical "t" value at 0.05 level of significance and 390 degree of freedom. The null hypothesis is therefore not rejected, as the calculated "t" of .59 is less than critical table value of 1.96 at 0.05 level.

Discussion

The findings of this study has shown that the respondents agreed with all the 7 planning needs for planning instruction in adult education programme in Nasarawa state. These planning needs identified by the respondents include: Selection of appropriate materials, tools and equipment to used for adult teaching; Identification of various innovative functional literacy programmes for the adults; Selection of practical projects/assignments within the ability of adult learners; Identification of practical lesson objectives; Skills in the selection of appropriate learning experiences for adults; Preparation of learning sequence that start from simple to complex steps and Fixing of lessons to avoid clashing with major community events. These findings were in agreement with Hiemstra and Sisco (2004) that instructors cardinal roles include establishing conducive climate for learning, creating mechanism for mutual planning, diagnosing of learning needs, formulating programme objectives based on identified needs, designing a pattern of learning experience using appropriate techniques and materials as well as evaluation of the learning outcomes. Thus, there is the need for them to be well trained so as to perform such roles effectively. The findings also agree with that of Fasokun (2008) that training of instructors on how to investigate local problems and device solutions to them are central to improving the quality of all adult education teaching/learning process. Also in agreement with the findings, Ihejirika (2007) recommended that instructors should understand the nature of the adult learners, identify their needs/problems and that good planning gives the impetus to effective learning. The findings were also in consonance with that of Anaele (2018) that to promote and realize adult education objectives planning techniques are very essential. The above research findings help to strengthen the need for planning by adult education instructors to improve instruction in the classroom.

The study revealed that the respondents agreed to all 7 evaluating needs for evaluating instruction in adult education classes in Nasarawa state. The evaluating needs identified by the respondents include: Checking and marking given assignments by the instructors; Administration of tests, class quiz and take home assignments; Reviewing of lessons after each teaching; Checking the accuracy of finished assignments; Identifying any particular topic that is difficult to adult learners; Finding how much knowledge and skills the learners have acquired on completion of program and The instructor asking what was his achievement and failures on his lesson. These findings were in line with Oluchi (2005) that materials required for adult education teaching be appropriate, sufficiently supplied and the quantity used for lessons be checked from time to time. Also the findings correspond with that of NMEC (2008) that how much knowledge and skills students have acquired in adult education program can be determined by quality of their performance after graduation. In addition, the findings support Usman (2013) that students of adult education program tend to enjoy and appreciate more working with well experienced

teachers/ instructors. The author emphasized the need for appropriate learning materials if the right skills and attitude is to be attained. These findings were also in consonance with Patizhiko (2015) that for effectiveness of adult education lessons and to keep pace with modern technology, curriculum objectives be visited or reviewed after each period of two – three years. The findings by other researchers help to confirm the usefulness of the identified evaluating needs to the adult education instructors to improve instructions in adult education centres in Nasarawa state.

It was also found from the study that there was no significant difference between the mean responses of the two categories of respondents (male and female adult education instructors) on all the 7 planning needs for adult education instructors in teaching their lessons in Nasarawa state. Significance difference did not also exist between the mean responses of the two categories of respondents (male and female adult education instructors) on all the 7 evaluating needs for adult education instructors in teaching their lessons in Nasarawa state. With this result the two null hypotheses of no significant difference were upheld for the planning and evaluating needs for adult education instructors in Nasarawa state.

Conclusion

Based on the findings of the study using the identified training needs, graduates of adult education program in Nasarawa state would be better equipped with skills for self employment and improved living. Adult education instructors' jobs might be easier and more effective since the information provided by the study would have identified areas of deficiencies in their class lessons. The findings would enhance the general efficiency of instruction in adult education classes to achieve the desired objectives in Nasarawa state.

Recommendations

1. The government, NGOs and stakeholders in the educational sector should sponsor adult education instructors to workshops/conferences. This will expose them to current issues pertaining to the effective teaching/learning processes in adult education programs. Refresher courses will also expose the instructors to new teaching methodologies for global competitiveness.
2. The government at various levels (federal, state and local government authorities) should set out a significant sum of their budget towards the promotion of adult education programs and the training of its instructors. They should provide adequate learning environment and effective instructional materials for the learners.

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