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# Skills Training Need of TVET Lecturers in Scaffolding Technique for Teaching Vocational Subjects in College of Education Afaha Nsit

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#### Abstract

The study identified skills training need of TVET lecturers in scaffolding teaching for teaching vocational subjects in college of education Afaha Nsit in Akwa Ibom State. The population of the study consisted of ninety six (96) TVET lecturers in the study area. This study employed survey research design with three (3) research questions and hypotheses formulated to guide the study. The instrument used to collect data was "Skills Training Need in Scaffolding Teaching for Teaching Vocational Subjects Questionnaire (STNSTTVSQ)" and validated by three experts in Department of Vocational Education, University of Uyo, Akwa Ibom State. Reliability was established using Cronbach's Alpha and reliability coefficient obtained was 0.78. Mean and standard deviation were used to answer the research questions while t-test was used to test the null hypotheses at 0.05 level of significance. The findings revealed that brainstorming approach, inquiry teaching approach and active learning approach are needed skills by TVET lecturers in scaffolding teaching for teaching of vocational subjects. Based on the findings, the researchers recommended among others that TVET lecturers should be properly trained on how to apply brainstorming, inquiry approach and active learning approach skills in scaffolding students in learning to avoid problem of spoon feeding and half baked skills graduate that cannot fit-into labour market.

Key words: Skills Training, Scaffolding Technique, Teaching, Vocational Subjects

# Introduction

The entire educational system is designed to achieve some specific objectives often derived from the national policy of education. The objectives of vocational education need to be articulated in the teaching process to bring desired behavioural changes of the learners. In vocational education, the process is usually planned to achieve positive changes or modification in skills, attitudes, knowledge, competence, which may result from series of encounter with some experiences from lecturers. Uwaifo (2011) observed that for teaching to be successful, it must be deliberate, methodical, planning, resourceful, activity based, related to the learners experiences and life. He further explained that the lecturers as the prime mover of the process must have sound knowledge of the subject matter with various skills to impart and motivate learners to learn and apply in real life situation.

Nwokolo (2010) stated that, one aspect of education which is of vital importance to the entire educational system and national development is vocational education also known as Technical Vocational Education and Training (TVET). Perhaps, Okon, Eminue and Leema



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(2016) averred that technical vocational education and training is a functional type of education that emphasizes skill acquisition and manpower development. Hence, the task of technical vocational subjects is the transmission of ideas, skills, knowledge and value of work and what individual can do with his or her life. In recognizing the values of technical vocational education and training as a vehicle to produce the skilled human capital through the various vocational subjects, the key to excellence in technical vocational subjects is the quality, effectiveness and relevance skills of lecturers teaching the subjects. In agreement with this, Audu (2010) maintained that vocational subjects are better taught by full participation or involvement of students as it will promote their development of problem solving skills and functional knowledge and manipulation skills. One of the fundamental achievements of technical vocational education and training is to enable students use that knowledge and skills in problem solving.

Consequently, TVET lecturers must know very well the skills being taught and to device a means in the lesson to pass much of the work skills to the learners as possible. The persistent poor representation of students or graduates today has given rise to an assumption that most of the lecturers probably do not make use of some stipulated contemporary teaching strategies in scaffolding teaching that will make students cope with the challenges of learning vocational courses or subjects for skill acquisition. In consonance with Odoh (2013) experience and researchers have shown that TVET lecturers still adopt or operate on conventional instructional teaching approach that are mainly lecturers self centered and not logically sequenced to fit the ability of the learners and what the society needs, as lecturers could not provide lecture led participation to engage in reciprocal teaching of vocational subjects. This could be because the TVET lecturers do not acquire skills in scaffolding teaching, which constitute a gap that training is needed to fill. This implies, there is need to train TVET lecturers to acquire skills in scaffolding teaching for effective teaching and learning of technical vocational subjects.

Green (2011) asserted that "skill" is widely regarded as a focus for analytical research and as a core object for policy interventions in the modern global high-technology era. A substantive body of evidence shows that different skill levels have large economic effects for individuals, employers, regions and whole national economies. Yet there is no consensus among social scientists about the meaning of the concept of skill. Unlike constructs in the natural sciences, skill is one of those social science words in common parlance with many meanings, numerous synonyms such as "ability", "competence", "knack", "aptitude" and "talent", and varied imprecise translations in other languages. Williams (2007) explained skills to be organized sequence of action, competences and proficiencies executed in carrying out a given displayed in flexible but systematic pattern. Okorie (2000) saw skill as a well established habit of doing something and involves the acquisition of performance capability. Skill in the context of this study involves those knowledge, competences which a lecturer acquire through training and can gainfully utilized in the teaching of vocational subjects for the purpose of achieving stated objectives.



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Training is defined by Amechi (2016) as involving an expert working with learners to transfer to them certain areas of skills that is lacking to enable them improve on their current jobs. Teaching which is used in the training process is a way of communicating ideas,

knowledge, skills, attitudes, culture, belief, concept, values with the aim of effecting a positive change in the learner. Grace and Yohanna (2004) maintained that teaching includes both strategies, tactics and activity designed by a person more experienced, knowledgeable and more matured with respect to learning experience to further the education of another. Vocational subjects like agriculture, business, computer, technical drawing, home economic etc are better taught with skills that incorporate scaffolding teaching. Farinde and Ajayi (2005) define need as what is and what ought not to be. Adekoya (2010) posits that need shows there is lack of something which if present, will better the welfare of an individual or group of individual whose situation is at stake. This implies that need constitutes a gap to be filled. Training bridges the gap between the known and the unknown, what is and what ought not to be, hence impacting TVET lecturers with basic skills required in scaffolding teaching for effective teaching and learning.

Moreover, skill training needs of TVET lecturers will ensure that they have the requisite knowledge and skills in using scaffolding teaching approach for teaching vocational subjects in order to promote and develop manipulative skills of learners to fit-in the world of work. According to Audu (2010), skills training need given to individual in any formal organization is very important. In this vein, training of TVET lecturers will help them to be equipped with the capacity to organize, plan or set goals and execute to achieve the desired result. Also to ensure high degree of competence and sense of responsibility, therefore it become necessary to keep them up-to-date with new techniques and skills in scaffolding for teaching vocational subjects, hence the future of vocational education depends on the quality of lecturers and the students produced which are expected to be productive in the society. To achieved the desired goal of producing quality and productive graduates, the TVET lecturers require skills in scaffolding teaching.

Meanwhile, scaffolding teaching approach is a teaching process designed to promote a deeper level of learning. It is the provision of sufficient support by lecturers to promote learning concepts and skills in students during the introduction of new lesson. Adieze (2010) recorded that scaffolding techniques is considered as a very good, solid teaching technique for vocational students for learning to take place and during instruction, scaffolds is gradually taken away so that students will perform a task independently. Scaffolding involves the lecturer controlling the learning task to be able to solve a problem which would not have been possible without assistance. Monica, Ablerto, Elena and Elisa (2010) explained that scaffolding teaching involves a wide variety of approaches such as assisting the learners in acquiring skills, revise the previous work and ask relevant questions that will link what is to be learnt with what is already known, breakdown complex tasks into manageable bits and reduce the number of steps in the learning task to manageable number. Scaffolding teaching approach for teaching vocational subjects are brainstorming skill, inquiry skill, active-



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learning approach skill, learner-facilitated skill, and learner-centered and learning process, among others.

Brainstorming is a comprehensive skill applied by TVET lecturers which lays emphasis on what students should learn and how they learn. Ogwo and Oranu (2006) opined that brainstorming is a teaching strategy in which the lecturers conceive self as flexible,

permissive, interested in stimulation discussion and seeing others grow. It has a contribution to make in a way that each group member serves as a tutor to one another thereby promoting greater flexibility, permissiveness and acquisition of skills in the mastery area of vocational subjects. Furthermore, the shared responsibilities and interactions are likely to generate better inter-group relations which individual learner brings out his/her ideas which are subjected to criticism by the group members and the lecturer do the moderation and summary. Another type of scaffolding teaching approach is inquiry teaching.

Inquiry teaching skill is another skill training needed by TVET lecturers for effective execution of vocational skill in learners. Wan-Azlinda (2010) said that inquiry approach when utilize is to give the learners opportunity to carry out the search and discovery of facts, knowledge and scientific ideas in vocational areas or discipline. Inquiry entails practicing of attitudinal skills when carrying out vocational task. Inquiring teaching skill is the strategy requiring the arrangement of subject-matter structure so that the learner is able to go beyond the evidence presented to acquire new insights. This makes students to participate in the process that makes the establishment of knowledge and skill possible. Instead of presenting the learners with conclusions, the learning situation is structured so that they learn how to work with data, equipment to make inference and ask questions that will enhance their development process skills. Active learning approach is another teaching method in scaffolding.

Active learning approach skill is in response for the need for lecturers teaching methods to move away from the traditional "chalk and talk" and "minds-on" approaches to "hands on and learning by doing approaches". According to Udosen (2004) it has been acknowledged widely that for students to do well in vocational studies and science and to develop practical skills which will be useful to them in their later lives, they must be actively involved in the process of learning. As TVET lecturers commence the use of active learning approach, it will promote and support learning by providing an opportunity for the use of educational materials and ideas for proper skill acquisition of the learners. It encourages the acquisition of manipulation skills because of learners involvement, and also leading to creativity and flexibility. Active learning approach skill to be successful, a number of teaching techniques such as discussion, questioning, practical work etc are involve to arouse students interest in systematic processing of learning. Active learning approach skill has shown significant advantage over conventional instruction in regard to knowledge of process skills.

#### **Statement of the Problem**



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Over the time, vocational education lecturers have been using several contemporary methodologies in teaching vocational subjects but do not seem to have much impart to improve learners psychomotor domain in the field of study to meet the need of the society. This could be as a result of TVET lecturers occasionally applying conventional strategies which are lecturer's self-centered, not professionally skillful, insufficient and inadequate knowledge of their subject matter. Also most of the graduate of vocational education cannot fit into the world of work today due to lack of skills as a result of not been prepared adequately by their lecturers. It therefore means at this critical time that TVET is the bedrock

of national development, there is need to train TVET lecturers for skills acquisition to ensure effective and proper use of teaching strategies incorporating with scaffolding teaching for greater productivity of students.

### **Objective of the Study**

This study therefore focused on the skills training need of TVET lecturers in scaffolding teaching for teaching vocational subjects in college of education Afaha Nsit, Akwa Ibom State. Specifically the study sought to:

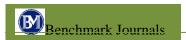
- 1. Determine the skills training need of TVET lecturers on brainstorming approach in scaffolding teaching for teaching vocational subjects in college of education Afaha Nsit.
- 2. Determine the skills training need of TVET lecturers on inquiry teaching method in scaffolding teaching for teaching vocational subjects in college of education Afaha Nsit.
- 3. Determine the skills training need of TVET lecturers on active learning approach in scaffolding teaching for teaching vocational subjects in college of education Afaha Nsit..

# **Research Questions**

- 1. What are the skills training need on brainstorming approach in scaffolding teaching for teaching vocational subjects.
- 2. What are the skills training need on inquiry teaching method in scaffolding teaching for teaching vocational subjects.
- 3. What are the skills training need on active learning approach in scaffolding teaching for teaching vocational subjects.

# **Null Hypotheses**

1. There is no significant difference between the mean responses of male and female TVET lecturers in skills training need on brainstorming approach in scaffolding teaching for teaching vocational subjects.



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- 2. There is no significant difference between the mean responses of male and female TVET lecturers in skills training need on inquiry teaching method in scaffolding teaching for teaching vocational subjects.
- 3. There is no significant difference between the mean responses of male and female TVET lecturers in skills training need on active learning approach in scaffolding teaching for teaching vocational subjects.

# Methodology

A survey research design was used for the study and it was carried out in state college of education Afaha Nsit of Akwa Ibom State. The population of the study comprises all the TVET lecturers in school of vocational education which was estimated to be one hundred and thirty (130). The purposive sampling technique was used to select four departments in school of vocational education which include Agriculture, Business, Home Economic and Technical. A total of ninety six (96) TVET lecturers made up the sample size, this was shared as (27 from agriculture, 31 from business, 20 from Home economic and 18 from technical). The four departments were chosen because it form the major area for the study. This sample size is made of 56 male and 40 female TVET lecturers.

A 15 item researcher's made instrument entitled "Skills Training Need in Scaffolding Teaching for Teaching Vocational Subjects Questionnaire (STNSTTVSQ)" was used to collect data from TVET lecturers. A four (4) point rating scale of very highly needed (VHN), highly needed (HN), moderately needed (MN) and lowly needed (LN) with numerical value of 4, 3, 2 and 1 respectively. The instrument was given to three research experts from the Department of Vocational Education, University of Uyo, Akwa Ibom State for face validation and tested for reliability using Cronbach's Alpha statistics to obtained reliability coefficient of 0.78. The researcher administered the instrument with two research assistants and the completed ones were retrieved immediately for data analysis. Mean and standard deviation were used to answer research question, while t-test was used to test the null hypotheses at 0.05 level of significance. Base on the four point rating scale, any item above 2.50 based on the real limit is regarded as needed while any item with 2.50 below is not needed. In order to test the null hypotheses, calculated t-value was compared with t-critical. When the calculated t-value is greater or equal to the t-critical the null hypotheses (H<sub>o</sub>) is rejected. On the other hand, when the calculated t-value is less than the t-critical, the null hypotheses is accepted.

#### **Data Analysis and Results**

#### **Research Question 1**

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Table 1: Mean responses of the respondents on the skills training need of TVET lecturers in brainstorming approach in scaffolding teaching of vocational subjects

S/N	Skills training need on brainstorming teaching approach	$\overline{\mathbf{X}}$	SD	Remark
1	Skill to stimulate discussion	2.98	0.59	MN
2	Skill to apply grouping approach to solicit students			
	inputs	2.94	0.58	MN
3	Skill to introduce problem that is relevant to the			
	interest of students for skill mastery	2.92	0.58	MN
4	Ability to make students share responsibilities and			
	interact	2.67	0.53	LN
5	Abilities to analyze and respond satisfactory to			
	student criticism	3.07	0.61	HN

Data presented in Table 1 showed that the five (5) items on skills training need of TVET lecturers on brainstorming approach in scaffolding teaching of vocational subjects are needed based on the mean which ranged from 2.67-3.07. This is also applied to standard deviation, which ranged from 0.53-0.61 showing that the respondents were not far from each other on their responses.

#### **Research Question 2:**

Table 2: Mean responses of the respondents on the skills training need of TVET lecturers in inquiry teaching method in scaffolding teaching of vocational subjects

S/N	Skills training need on inquiry teaching	$\overline{\mathbf{X}}$	SD	Remark
6	Skill to apply open-ended or close ended inquiry			
	approach	3.10	0.62	HN
7	Ability to help students to organize their new			
	discoveries into meaningful ideas	3.20	0.64	VHN
8	Ability to arrange subject matter for easy			
	utilization of students	3.02	0.60	HN
9	Skill to define the problem of inquiry properly by			
	stating the objective to be achieve	2.89	0.57	MH
10	Ability of asking suitable questions related to the			
	topic to test entry behaviour of students	3.06	0.61	HN

The data in Table 2 revealed that the five (5) skills training need items had their mean ranging from 2.89 - 3.20 and were above the cut-off point of 2.50. This indicates that the TVET lecturers are highly in need of inquiry teaching skills in scaffolding teaching of vocational subjects. Based on the standard deviation ranging from 0.57 - 0.64, it shows that the respondents were close in their opinions on inquiry teaching skills training need.

#### **Research Question 3:**



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Table 3: Mean responses of the respondents on the skills training need of TVET lecturers in active learning approach in scaffolding teaching of vocation subjects

S/N	Skills training need on active learning		SD	Remark
	approach			
11	Skill to train students in using real equipment for			
	active participation for skill acquisition	3.12	0.62	HN
12	Skill to integrate multiple teaching instruction for			
	creativity and flexibility of students	3.27	0.65	VHN
13	Ability not to allow individual student dominate			
	the discussion	2.96	0.59	MN
14	Skill to consciously pause and invite questions at			
	interval from students for active participation	3.09	0.61	HN
15	Skill to plan for various activities that will			
	involve students and arouse their interest in			
	learning	3.14	0.60	HN

Data presented in Table 3 showed that the respondents needed all the items as the basic prerequisite skills on active learning approach in scaffolding teaching of vocational subjects, since the mean values ranging from 2.96-3.27 were above the cut-off point. The standard deviation values ranged from 0.59-0.65 which implies that the respondents were close in their opinions on active learning approach skills training need.

# **Test of Hypotheses**

**Null Hypothesis 1:** There is no significant difference between the mean responses of male and female TVET lecturers in skills training need on brainstorming approach in scaffolding teaching for teaching vocational subjects.

Table 4: t-test analysis of responses on the skills training need of TVET lecturers on brainstorming approach in scaffolding teaching of vocational subjects

or the state of th							
n	$\overline{\mathbf{X}}$	SD	df	t-cal	t-crit.	Decision	
56	14.8	2.42					
			94	2.12	1.98	Sign.	
40	14.1	2.18					
	<b>n</b> 56	n X  56 14.8	n X SD  56 14.8 2.42	n X SD df  56 14.8 2.42  94	n X SD df t-cal  56 14.8 2.42  94 2.12	n         X         SD         df         t-cal         t-crit.           56         14.8         2.42           94         2.12         1.98	

(n = 96), significant at p > 0.05

The hypothesis tested in Table 4 indicates that the t-calculated value of 2.12 is higher than the t-critical value of 1.98 at 0.05 level of significance with 94 degree of freedom. The result reveals that both male and female TVET lecturers need skills training on brainstorming



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approach for proper scaffolding teaching of vocational subjects, hence the null hypothesis was rejected and the alternate retained.

**Null Hypothesis 2:** There is no significant difference between the mean responses of male and female TVET lecturers in skills training need on inquiry teaching approach in scaffolding teaching for teaching vocational subjects.

Table 5: t-test analysis of responses on the skills training need of TVET lecturers on inquiry teaching method in scaffolding teaching of vocational subjects

Variable	n	$\overline{\mathbf{X}}$	SD	df	t-cal	t-crit.	Decision
Male lecturers	56	14.51	2.33				
				94	2.27	1.98	Sign.
Female lecturers	40	14.01	2.11				

Table 5 revealed that the t-calculated value of 2.27 is greater than the t-critical value of 1.98 at 0.05 level of significance with 94 degree of freedom. This implies that skills training of TVET lecturers on inquiry teaching approach are significantly needed in scaffolding teaching of vocational subjects. The null hypothesis was rejected and the alternate maintained.

**Null Hypothesis 3:** There is no significant difference between the mean responses of male and female TVET lecturers in skills training need on active learning approach in scaffolding teaching for teaching vocational subjects.

Table 6: t-test analysis of responses on the skills training need of TVET lecturers on active learning approach in scaffolding teaching of vocational subjects

Variable	n	X	SD	df	t-cal	t-crit.	Decision
Male lecturers	56	14.90	2.47				
				94	2.42	1.98	Sign.
Female lecturers	40	14.10	2.20				

The result in Table 6 showed that the t-calculated value of 2.42 is higher than the t-critical value of 1.98 with 94 degree of freedom at 0.05 level of significance. Therefore, the null hypothesis is rejected. The result reveals that both male and female TVET lecturers need skills training on active learning approach for proper scaffolding teaching of vocational subjects, hence the null hypothesis was rejected and the alternate retained.



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# **Discussion of Findings**

The finding of the study on Table 4 revealed that TVET lecturers need skills training on brainstorming approach in scaffolding teaching of vocational subjects for enhanced skill acquisition of students. This finding is in consonance with the view of Ogwo and Oranu (2006) who opined that brainstorming is a teaching strategy in which the lecturers conceives self as flexible, permissive, interested in stimulation discussion and seeing others grow. It is a skill applied to share responsibilities and interactions that generate better inter-group relations which individual learner brings out his/her ideas that is subjected to criticism by group members and lecturers and therefore used to make generalization. brainstorming teaching strategy promotes skills acquisition of students in the mastery area of vocational subjects.

The finding on Table 5 on inquiry teaching skills training need of TVET lecturers in scaffolding teaching of vocational subjects is in support of the work by Wan-Azlinda (2010) who posited that inquiry approach skill when utilized, it gives the learners opportunity to carry out the search and discovery of facts, knowledge, and scientific ideas in vocational discipline. He further explained that inquiry teaching skill is the strategy requiring the arrangement of subject — matter structure to enable learners work with data, equipment, project work to make inferences and ask questions that will enhance their development process skills. Inquiry teaching encourages students participation in the learning process by making then active, rather than passive learners.

The finding on Table 6 revealed that various active learning approach skills are needed by TVET lecturers in scaffolding teaching of vocational subjects. The result is in agreement with Udosen (2004) who asserted that it has been acknowledged widely that for students to do well in vocational studies and science and to develop practical skills which will be useful to them in their later lives, they must be actively involved in the process of learning. As TVET lecturers commence the use of active learning approach, it will promote and support learning by providing an opportunity for the use of educational materials and ideas for proper skill acquisition of the learners. Application of active learning approach by TVET lecturers encourages acquisition of manipulative skills which lead to creativity and flexibility due to a number of using pedagogical skills.

#### **Conclusion**

Vocational education is very vital to the entire educational system and national development of any nation due to it transmission of ideas, skills, knowledge and values of work and what an individual can do in his or her life. The changes involves in industry, labour market, work organization, knowledge, skills, give rise for better training of TVET lecturers in skills to be experts in pedagogical in scaffolding teaching of vocational subjects to meet the needs of the students and the society. The excellence of TVET programme relies on the quality, effectiveness and relevance of skilled lecturers in teaching the subjects because lecturers are the embodiment of knowledge and skills required by the students.

#### Recommendations



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Based on the finding, the following recommendations were made:

- 1. TVET lecturers should be properly trained on how to apply brainstorming, inquiry approach and active approach skills in scaffolding students in learning to avoid problem of spoon feeding and half bark skills product that cannot fit in labour market.
- 2. TVET lecturers should be trained in the use of new pedagogical skill application in scaffolding teaching of vocational subject and to put a stop to conventional approach as it is lecture self-centered.
- 3. TVET lecturers should try to engage learners in reciprocal teaching as this would help to promote the development of manipulative skills of the learner.

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