



## **E-ENGINEERING ENTREPRENEURSHIP EDUCATION AND ACADEMIC PERFORMANCE OF YEAR 2 STUDENTS IN AKWA IBOM STATE COLLEGE OF EDUCATION, AFAHA NSIT THROUGH ACTIVITY – BASED LEARNING**

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### **ABSTRACT**

*The research investigated the effect of activity–based teaching on the academic performance of year 2 students of Akwa Ibom State College of Education, Afaha Nsit. To conduct this study, the researcher employed pre-test post-test (quasi-experimental) research design. A total of One Hundred (100) respondents were used for the study being the population of year 2 students which was also used as the sample of the study because it very was small. This comprised of 42 males and 58 females. The study adopted simple random sampling technique. The main instrument used for the study was Entrepreneurship Education Achievement Test (EEAT) which was researchers made. It was developed to measure the students' academic performance in Entrepreneurship Education. It served as the pre-test that was given to the students before the treatment to know the student's mastery of the subject matter before the experimental treatment which consisted of 20 items each. The post-test came after the treatment in order to know the difference between both of them (i.e., the performance of those taught by traditional method and those taught by activity –based method). All items were multiple choice in both pre-test and post-test scenarios. The instrument was subjected to reliability test for internal consistency and a reliability coefficient of 0.87 was obtained. To ensure the validity of the instrument, the initial draft of the instrument was subjected to face validation. It was done by three experts, two in Educational Foundations and one in Measurement and Evaluation all in the Akwa Ibom State College of Education, Afaha Nsit. The data collected were analyzed using independent t-test and hypotheses were tested at 0.05 level of significance. The findings of the study revealed that activity –based teaching method enhanced academic performance of students in Entrepreneurship Education and it impacted on the performance of gender in Entrepreneurship Education. The study recommended that seminars and workshops should be organized for Entrepreneurship Education teachers to acquaint them the mechanics of activity –based teaching method.*

**KEYWORDS:** Entrepreneurship education, Education, Activity-based learning and Traditional–based learning.



## INTRODUCTION

Researches on how to successfully achieve the essence of entrepreneurship education in both developed and developing countries of the world have been topical and gaining momentum. This is true because, the only way to get rid of poverty or reduce its effect on the society is to equip the people with the requisite abilities and skills to be able to create value for themselves and the society. This feat, no doubt can be holistically achieved through activity-based learning and eventually reduce the high rate of unemployment which has been the major reason for youths' societal vices. Entrepreneurship education, according to (Katz, 2003; 2008) argued that researches on entrepreneurship education have been in place for nearly 75 years and this makes one churning given the abject poverty many faces in the nations of the world in spite of long years of its existence.

Acquisition and application of entrepreneurship education skills have been recognized as a sine qua non because of the role it plays in economic growth, where the opportunities drive the creation, evaluation and exploitation of business ideas. In this wise, not only entrepreneurs and innovators have recognized the increasing need for activity – based approach to entrepreneurship education, but also researchers and educators have taken interest in this phenomenon. Entrepreneurship education (EE) programs and research have expanded significantly in the U.S.A and Europe over the past few decades (Matlay, 2008; Packham et al., 2010). This expansion in trend of entrepreneurship education research has suggested that exposure to entrepreneurship education may benefit students in their acquisition of knowledge and skills as well as in the increasing intentions toward entrepreneurship (Nabi et al., 2017). Linan and Chen (2009) define entrepreneurial skills as the activities or know -how required to establish and operate an enterprise successfully. Skills are, however, not equivalent to competencies, which are considered a rather specific set of quality characteristics that describe the ability of an entrepreneur to perform a job (Man et al., 2002; Mitchel more & Rowley, 2010).

Activity-Based learning is a teaching method adopted by an instructor to facilitate instruction through the task. The learners participate absolutely and bring about efficient learning experiences. It is a technique in which the learner is actively engaged mentally and physically.

Activity based teaching is a strategy focused on the idea that learners ought to be included through activities. Activity based teaching is a method adopted by a teacher to emphasize his or her technique of teaching through action in which the learners take interest comprehensively and realize effective learning practices.



This approach is based on the core premise that learning should be based on doing some hands-on experiments and activities rather than just listening to lessons. Learning by doing is the fundamental focal point in this method, and the more a person knows and longer he/she retains (Minje, 2013). Activity - based learning involves reading, writing, discussion, practical activities and engagement in solving problems, analysis, synthesis and evaluation (Hansraj, 2017). The use of the activity-based Method in the teaching process can boost a desirable change in students' role from inactive to participative learners. It likely enhances cognitive, affective and psychomotor domains respectively by giving learners enough chances to perform well. Activity-based learning allows learners to learn through experimentation and exploration. The sensory experience and action make education better and more impactful (Shahram, 2018). It is in line with this thought that Mueller and Anderson (2014) note that it is very cumbersome to teach entrepreneurship education successfully and achieving the intended result if the students do not learn real-time and experientially. This is the essence of activity –based learning. The application of activity-based learning has been advocated by various scholars for the teaching of entrepreneurship education so as to achieve its goals. Nevertheless, its application has not yet been widely explored. Therefore, this paper seeks to examine Activity-Based Learning in the light of its acclaimed ability by some scholars to achieve entrepreneurship education goals Akwa Ibom State College of Education, Afaha Nsit.

## **STATEMENT OF THE PROBLEM**

The inability to really create value to achieve the goal of entrepreneurship education from its inception until now has been a source of worry and concern to the stakeholders for almost seventy-five 75 years of researches in entrepreneurship education. Lack of value creation by entrepreneurship education programs seems to stem from the fact that recipients or the students are not exposed to activity-based learning approach where learning is made experiential or practical. It seems that the reason behind the seeming failure and frustration witnessed in Entrepreneurship Education in Nigeria Education system is the application of wrong teaching method such as the traditional teaching method where the teacher takes over the entire process with little or no students involvement. Scholars have unanimously come to terms with the fact that it is difficult to teach entrepreneurship education without students being made to be active in the learning process. Hence, the need to search for instructional approach where students are holistically made to partake in the learning process through activity –based learning method under the guidance of the teacher. Therefore, this study assesses the performance of students based on traditional teaching method and activity –based teaching method in entrepreneurship education.



## **OBJECTIVES OF THE STUDY**

The main objective of this study is to determine the effects of activity -based teaching method on year 2 students' academic performance in Entrepreneurship Education in Akwa Ibom State College of Education, Afaha Nsit. This study seeks to achieve the following specific objectives:

- To compare the academic performance of year 2 students taught by activity - based method with those taught by traditional method in entrepreneurship education.
- To compare the academic performance of male and female of NCE 2 students taught by activity-based method with those taught by traditional method in entrepreneurship education.

## **RESEARCH HYPOTHESES**

1. The academic performance of year 2 students taught by activity - based method with those taught by traditional method in entrepreneurship education do not differ significantly.
2. There is no significant difference in the academic performance of male and female of year 2 students taught by activity - based method with those taught by traditional method in entrepreneurship education.

## **SIGNIFICANCE OF THE STUDY**

This study is of great significant to both teachers and researchers as it unfolds the effectiveness or otherwise of both teaching methods and situations where they can be used to have the intended result or outcome. The researchers in the field of entrepreneurship education can equally benefit from the study as a reference material.

## **SCOPE AND LIMITATIONS OF THE STUDY**

The study examined the use of Activity-Based Learning as a panacea to improving the performance of year 2 students in entrepreneurship education. The study is limited to year 2 students studying entrepreneurship education in Akwa Ibom State College of Education, Afaha Nsit.

## **LITERATURE REVIEW**

Entrepreneurship is the willingness and ability of an individual to seek for investment opportunities, to establish and to run an enterprise successfully (Solomon, 2007). Entrepreneurship according to Omolayo (2006); Baba (2013) is the act of starting a



company, arranging business deals and taking risks in order to make profit through the education skills acquired. The entrepreneurship spirit is a pre-requisite to an entrepreneurial society and culture. This spirit is required for the overall economic growth of any nation especially developing ones like Nigeria. Ojeifo (2013) opined that entrepreneurship is the willingness and the ability of an individual or a firm or an organization to identify an environmental change and exploit such an opportunity to produce goods and services for public consumption.

## **ENTREPRENEURSHIP EDUCATION**

Entrepreneurship education is a form of education that seeks to provide knowledge, skills, attitude and motivation to students for entrepreneurial success in any setting. It equips people with the ability to seek investment opportunities (Azonuche and Umeri, 2012). Entrepreneurship education according to Paul (2005) is structured to achieve the following objectives:

- To offer functional education for the youth that will enable them to be self-employed and self-reliant.
- Provide the youth graduates with adequate training that will enable them to be creative and innovative in identifying novel business opportunities.
- To serve as a catalyst for economic growth and development.
- Offer tertiary institution graduates with adequate training in risk management, to make certain bearing feasible.
- To reduce high rate of poverty.
- Create employment generation.
- Reduction in rural-urban migration.
- Provide the young graduates with enough training and support that will enable them to establish a career in small and medium sized business.
- To inculcate the spirit of perseverance in the youths and adults which will enable them to persist in any business venture they embark on.
- Create smooth transition from traditional to a modern industrial economy.

Learning is a transformational process, which takes place in a context (Botha et al.,2010) and indicates a permanent change in an individual's behavior (Alexander et al.,2009). In entrepreneurship education, scholars have found active learning pedagogies to enhance entrepreneurial skills (Sroufe & Ramos, 2011; Jarvi, 2015). These especially include project-based learning (Doppelt, 2003), action learning (Leonard & Lang, 2010), and experimental learning (Clark &White, 2010). According to Pittaway and Cope (2007). Entrepreneurship education requires a context in which students learn entrepreneurially and experientially through action. Research on action learning shows that learning is effective when students encounter real-time problems during the process of achieving



learning goals (Reynolds & Vince, 2004). The action learning framework thus emphasizes real-time and real-world problems in actual working conditions, but most importantly, reflection (talk, dialog, and communication) as a pivotal element of the learning process among individuals, student groups or teams, facilitated by an instructor or adviser. Argument, debate, and collaboration with others are thus central elements of action learning (Pittaway & Cope, 2007). Specifically, the emphasis is now shifting toward environments, which are authentic and contextualized, and in which students collaborate in a team setting to solve problems over an extended period of time (Botha et al., 2010). The focus on deliberately designing learning environments that foster the development of entrepreneurial skills, is thus slowly gaining ground (Doppelt, 2003; Harms, 2015). In action learning, agency is at the heart of the learning process and has been found to develop problem-solving skills and the ability to learn how to learn through reflection in a supporting and challenging environment of peers (Ram & Trehan, 2009).

Extant empirical studies reported that the activity-based approach has significant benefits to the learners. For instance, Ajayi (2017) studied the Effect of activity-based Method on senior secondary students' interest in organic chemistry. The quasi-experimental design was used the quasi-experimental population of the study comprised of 2381 SS II students. One hundred eighty-four students were sampled. Organic Chemistry Interest Inventory was used as an instrument for data collection. The Data Collected were analyzed using ANCOVA. The study revealed that students taught using hands-on activity-based had significantly higher mean interest scores than those taught using the discussion method. Khan, Muhammad, Ahmed, Saeed and Khan (2012) examined the impact of activity-based teaching on students' academic achievement in physics at the secondary level. The experimental design was used for the study. All 9th Grade science students of Khyber Pakhtunkhwa were the population of the study. Fifty students were chosen as the sample for the analysis. MCQs type achievement test was used as an instrument for data collection.

Data collected were analyzed using independent t-test. The finding showed that activity-based Method was useful in developing higher-order skill in learners. Celik (2018) studied the effect of activity-based learning on sixth grade students' achievement and attitude toward mathematic activities. The study employed an experimental design. The participants included 78 sixth grade students—the data was collected through mathematics success tests and the Likert type attitudes towards mathematics activities scale. The analysis of covariance (ANCOVA) was used in the study. The report showed that activity-based Method improves students' academic achievements and attitudes towards activities. Coskun and Eker (2018) examined the effect of teaching activities using activity-based posters on the students' academic achievements and retention levels in their learning. Pre-test-post-test control group model" of quantitative research methods was



used. This study's application group constitutes 60 students studying at the 9th Grade in an Anatolian High School with middle-level students in Eskişehir, in Turkey. Academic achievement test was used as a data collection tool to obtain research data. T-test was used to test whether the scores obtained from the academic achievement test and the retention test between the experimental and control groups were meaningful. The result indicated that activity-based Method significantly affects students' achievement and retention level in the English language. Experiential learning theory defines learning as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience. The Kolb's experiential learning theory is a philosophy of education based on "theory of experience" (Kolb, 2005). Experiential learning or active learning, interactive learning or "learning by doing" has resulted in positive outcomes. Most experts agree that when students take an active role in the learning process the student's learning is optimized (Smart & Csapo, 2007). Students or Learners can be entered the cycle at any points; however, the stages should be followed in the cycle sequence of the experiential learning cycle. The learning cycle provides feedback and result of new action and plan which is the consequence of previous experience and reflection.

In Traditional Method of teaching, the instructor is viewed as the pivot in the classroom, responsible for all actions and guaranteeing that all class room message goes through him or the deductive strategy for instructing. It is a technique that is content focus. In this, instructor remains more dynamic, more subjective and less affective (Singh, 2004). Conventional techniques are concerned with the review of true information and mainly disregard higher levels of rational outcomes (Rao, 2001). Traditional teaching strategy works against the normal working of human mind (Weber, 2006). Students are involved in repetitive learning. Instructor forces the students to repeat the material that has been told to them. Corporal punishment, hatred of the teachers and frightening role of commanding teacher is noticeable generally in our classrooms. During the long conventional teaching periods, interests and consideration of learners can't be looked after (Cangelosi, 2003). Conventional strategy is an instructor focused technique. In the conventional technique, a lot of tension is laid on the educating of course book by utilizing the technique; traditional teaching strategies are defined as being teacher-arranged, in a speech style and are firm. Lessons are typically educated by the teacher presenting skills utilizing a blackboard joined by a verbal clarification or lecture. Modernity demands that teaching be practical and real time but in traditional teaching method, it is instructor-centered techniques concentrated on repetition learning instead of students centered which eventually makes teaching strategies tend greatly toward class address book knowledge through repetition and retention of actualities, equivalences and formulas. Recitation as a general rule comprises repeating without tending what the book or teacher has communicated.



The teachers are ignorant of the current investigations in the field of dialect educating. The part of instructor inside the class is dictator with the minimum contribution of the learners (Behlol, 2009). The traditional teaching technique comprises primarily conveying addresses by the instructors and pupils are mentally dynamic, however, physically sit without moving. Learners might be involved in note taking (Haghighi, Vakil, & Weitba, 2005). In classroom teaching learning sessions, the main physical task done by the students is either note-taking or remaining on the seat to answer any inquiry of the teacher. There is no way for learners to present somewhat in the class to talk in the class and thus students get to be inactive learners. It makes the entire procedure of learning dull and dry. It provides no room in any movement to the educator and to the learners. The learners think about the dialect yet they are not in situation to talk easily. A disadvantage of this technique is that students who have learning problems can't adjust to how the lessons are conveyed.

## **METHODOLOGY**

The study was quasi-experimental research which adopted a pre-test post-test research design. The population of this study consisted all the year 2 students of batch 2020 session who studied compulsory Entrepreneurship Education in Akwa Ibom State College of Education, Afaha Nsit. A total of One Hundred (100) respondents were used for the study being the population of year 2 students which was also used as the sample of the study because it very was small. This comprised of 42 males and 58 females. The main instrument used for the study was Entrepreneurship Education Achievement Test (EEAT) which was researchers made. It was developed to measure the students' academic performance in Entrepreneurship Education. It served as the pretest that was given to the students before the treatment to know the student's mastery of the subject matter before the experimental treatment which consisted of 20 items. The post-test came after the treatment in order to know the difference between both of them (i.e., the performance of those taught by traditional method and those taught by activity –based method). All items were multiple choice in both pretest and posttest scenarios. The instrument was subjected to reliability test for internal consistency and a reliability coefficient of 0.87 was obtained. To ensure the validity of the instrument, the initial draft of the instrument was subjected to face validation. It was done by three experts, two in Educational Foundations and one in Measurement and Evaluation all in the Akwa Ibom State College of Education, Afaha Nsit. These experts were requested to critically examine the instrument in terms of relevance of the content and clarity of the statement. They were also requested to advice the researcher on the suitability of the rating scale. Comments from these experts were taken into consideration in the final modification of the instrument. The data collected were analyzed using independent t-test and hypotheses were tested at 0.05 level of significance.





## RESULTS AND DISCUSSIONS

**HYPOTHESIS 1:** The academic performance of year 2 students taught by activity – based method with those taught by traditional method in entrepreneurship education do not differ significantly.

**Table 1: Independent t – test analysis of academic performance of students taught by activity-based method and those taught by traditional method of teaching in Entrepreneurship Education.**

Variable	N	$\bar{X}$	SD	t
Traditional based teaching	100	60.77	7.36	1.595
Activity-based teaching	100	88.90	6.81	

**DF = 98; t = 1.595; P – value = 0.05; Cri t – value = 1.96**

Table 1 presents the t-test value as comparing it with the critical t-value at 0.05 significant level with 98 degrees of freedom. The obtained t –value (1.595) is greater than the critical t –value of 1.96. Hence, the result is significant. The result therefore means that there is significant difference in the academic performance of students taught by activity-based teaching method and those taught by traditional –based teaching method in Entrepreneurship Education. Also, the means of students taught by traditional-based teaching method was greater than that of those taught by activity –based teaching method as indicated by 60.77 and 88. 90 respectively which by comparing means that students taught by traditional method performed better than those taught by activity-based method.

**HYPOTHESIS 2:** There is no significant difference in the academic performance of male and female of year 2 students taught by activity – based method with those taught by traditional method in entrepreneurship education.

**Table 2: Independent t-test analysis of male and female students taught by activity-based method with those taught by traditional method in entrepreneurship education.**

Variable	N	$\bar{X}$	SD	t
<b>Activity-based teaching</b>				
Male	42	89.11	7.543	0.376
Female	58	88.55	7.281	
<b>Traditional-based Teaching</b>				
Male	42	61.833	8.859	1.219
Female	58	66.00	4.783	

**DF = 98; Cri t – value = 1.96; P – value 0.05**



Table 2 presents the t-test values as 0.376 for activity-based teaching and 1.219 for traditional based teaching. These values were tested for significance by being compared with the critical t-value of 1.96 at 0.05 level with 98 degrees of freedom. The obtained t-value of 0.376 for activity-based teaching is less than the critical t-value of 1.96. Therefore, the result is insignificant. This depicts that gender significantly not impact on students' academic performance in Entrepreneurship Education taught by activity-based teaching method with male having the mean of 89.11 and female having the mean of 88.55 respectively indicating that male performed a bit better than female. The table also shows that male students performed better than female students when taught by traditional teaching method.

## DISCUSSION OF FINDINGS

The result of data analysis in Table 1 is significant due to the fact that the calculated t- value of 1.595 is greater than the critical t- value of 1.96 at 0.05 level of significance with 98 degree of freedom. This result therefore implies that there is significant difference in academic performance of students taught by activity-based teaching method and those taught by traditional-based teaching method. The result is in tandem with the study of Coskun and Eker (2018) who studied the effect of activity –based method of teaching improves academic performance of students. This result is also in line with the opinion of learning (Clark &White, 2010) who in their study revealed that the better way to teach the students irrespective of level is to make the teaching real – time. This finding supported Celik (2018) who reported that activity-based Method improves students' academic achievements and attitudes towards activities.

The result of data analysis in Table 2 is significant due to the fact that the calculated t- value of 0.376 is less than the critical t- value of 1.96 at 0.05 level of significance with 98 degrees of freedom. This result therefore implies that there is insignificant difference in academic performance of students taught by activity-based teaching method and those taught by traditional-based teaching method. This study also found that gender significantly not impact on students' academic performance in Entrepreneurship Education taught by activity-based teaching method with male having the mean of 89.11 and female having the mean of 88.55 respectively indicating that male performed a bit better than female. The study also showed that male students performed better than female students when taught by traditional teaching method The result is in support of (Kolb, 2005) whose study revealed that activity-based learning or active learning, interactive learning or learning by doing resulted in positive outcomes. The finding of this study is in line with the opinion of (Smart & Csapo, 2007) that most experts agree that when students take an active role in the learning process the student's learning is optimized.



## CONCLUSION

Based on the findings of the study, it is concluded that there is result therefore implies that there is significant difference in academic performance of students taught by activity-based teaching method and those taught by traditional-based teaching method. This study equally concluded that there is insignificant difference in academic performance of students taught by activity-based teaching method and those taught by traditional-based teaching method and that gender significantly not impact on students' academic performance in Entrepreneurship Education taught by activity-based teaching method.

## RECOMMENDATIONS

- Teachers in Entrepreneurship Education should adopt activity-based learning as an appropriate strategy to enhance students' performance. They should also establish the guidelines and expectations for students.
- The findings of this study revealed that activity-based teaching method enhances academic performance of students in Entrepreneurship education. Therefore, the State Ministry of Education should organize seminars and workshops for Entrepreneurship Education teachers to acquaint them with the use of activity – based teaching method.



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