

# EXPERIENTIAL AND VICARIOUS LEARNING APPROACHES IN DEVELOPING HIGHER-ORDER THINKING SKILLS AMONG BUSINESS EDUCATION UNDERGRADUATES IN FEDERAL UNIVERSITIES

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## Abstract

*This study examined the relationships between experiential learning, vicarious learning and higher-order thinking skills (HOTS) among business education undergraduate students. A correlational survey research design was used. A sample of 151 business education lecturers (43 Males and 108 Females) was randomly selected across three Federal Universities in South-South, Nigeria. Four-point scale self-constructed questionnaires were used for data collection. The reliability coefficient using Cronbach alpha method was 0.93 for experiential learning, 0.92 for vicarious learning, and 0.96 for HOTS. The bivariate correlation matrix and Fisher-Z transformation were used for data analyses. The results revealed a significant difference in the relationship between experiential learning and development of HOTS based on gender. Conversely, the results revealed no significant difference in the relationship between vicarious learning and development of HOTS based on gender. Based on these findings, managers of business education programmes should endeavour to create an enabling environment and atmosphere that would assist students to experientially and vicariously learn during instructional processes, thereby, equipping them with the requisite skills and competencies required to confidently engage in entrepreneurial careers and lifelong learning tasks upon graduation.*

**Keywords:** *Business education lecturers, business education students, experiential learning, higher-order thinking skills, vicarious learning.*

## Introduction

Business education programmes has been given a pride of place in the Nigerian tertiary institutions as there is a common understanding that it would help prepare students for entrepreneurial careers and lifelong learning upon graduation (Edokpolor & Agbonkpolor, 2018). Despite these laudable roles, questions have been put forward as to the effectiveness and relevancy of business education programme about its capability of equipping students with skills and competencies required to confidently engage in entrepreneurial careers and lifelong learning tasks. Bennis and O'Toole (2005) attributed the ineffective and irrelevant nature of business education to the overemphasis on theory during instructional delivery. Ekpenyong (1999) had earlier stated that, in Nigeria, business education programmes usually place more premium on imparting abstract concept, using traditional methods, while practical skills learning (such as, project-based learning, collaborative learning, technology-enabled informal learning, apprenticeship learning, and so on) have been relegated to the background. It implies that business education programmes in Nigeria have not kept pace with the demand for practical skills learning approaches, such as experiential learning and vicarious learning for the development of higher-order thinking skills (HOTS), such as analytical thinking skill, critical thinking

skill, problem-solving thinking skill, creative thinking skills, logical thinking skill, reflective thinking skill and metacognitive thinking skill among undergraduate students.

The problem that beset business education in Nigeria, such as, low supply of qualified teachers, outdated curricula, skills mismatch, absence of quality assurance frameworks, and endemic policy weakness, seems to be of the same nature with other developing countries across the globe. The challenge on how to develop business education programmes in order to respond to the skills required in gaining entrance into the world of work seems to be a major concern to stakeholders (Nwosu & Ojo, 2014). More recently, scholars have lamented over the gap between the skills required in gaining entrance into the world of work and the skills' students acquire at the end of business education programme (Azih, 2013; Iwu, 2016; Egbri & Nwadiani, 2017). This skills mismatch seems to be contributing to the alarming rate of unemployment, underemployment and poverty among business education graduates in Nigeria (Edokpolor, 2018c). Given the skills mismatch, experiential and vicarious learning approaches need to be integrated into business education curriculum so as to equip students with the requisite skills and competencies required to confidently engage in entrepreneurial careers and lifelong learning upon graduation. Kolb and Kolb (2005) argued that there is need to create the type of curriculum that would equip students with the requisite skills and competencies required to confidently engage in entrepreneurial careers and lifelong learning.

Experiential learning can be defined in its simplest form as learning from experience, or learning by doing. Experiential learning first immerses learners in an experience and then encourages reflection about the experience to develop new skills, new attitudes, or new ways of thinking (Lewis & Williams, 1994). Kolb (1984) propounded experiential learning theory (ELT) and argued that ELT provides individuals' the opportunity to understand how practical skills learning help programmes to stay relevant to students by equipping them with the skills to reason effectively, make judgments and decisions based on critical reflection on learning experience and process and solve problems in both conventional and innovative ways (Global e-Schools and Communities Initiative, 2013). Acquiring HOTS (especially critical reasoning, decision making, problem solving, reflective reasoning, to list but a few) may make business education students gain more confidence to engage in entrepreneurial careers and lifelong learning right after graduation because of their exposure to experiential learning activities.

Experiential learning can be divided into two major categories, namely field-based and classroom-based experiential learning. Field-based experiential learning is a learning approach that is usually experience by students outside the classroom or in the workplace. Forms of field-based experiential learning include internships, mentoring, community service projects, work-study, feasibility studies, field trip, industrial work experience and teaching practice. Classroom-based experiential learning refers to a learning approach that usually takes place in the classroom. Forms of classroom-based experiential learning include role-playing, case studies, simulations, presentations, guest speakers, class debates, individual or group project, peer tutoring, business planning, group discussion, and other types of group work. All these (along with many others) would provide great opportunities for business education students to become fully engaged directly or indirectly in practical skills learning. However, not only do field-based or classroom-based experiential learning increase students' mastery, they can also provide the opportunity for business education students to learn by observation. For instance, observing teachers during demonstration teaching or observing students during role playing can provide vicarious experiences that foster the development of HOTS.

Bandura (1977) propounded vicarious learning with his theory of social learning. Vicarious learning can be describe as observing experts or listening to peers as they discuss a new topic (O'Neil & Marsick, 2009; Kalaian & Kasim, 2014) and learning through the behaviours of others (Fox, 2003; Schunk & Mullen, 2013). It can also be defined as learning from others' experiences via story-telling (Harden, 2000; Ashworth, 2004; Ellis, Calvo, Levy & Tan, 2004; Northedge, 2003; Davidson, 2004) and discussion (or discourse) and competent persons (Topping, 2005). These definitions have shown that vicarious learning is central to the development of HOTS through interactions, observations, tutoring or modeling.

Vicarious learning supports the notion that students do not necessarily have to participate in experience directly in order to acquire HOTS (Hoover, Giambatista & Belkin, 2012). This may be the reason why Bruner (1986) averred that most of our encounters with people in the world are not direct encounters. Vygotsky also argued that through people we become ourselves (Tudge & Scrimsher, 2003). These assertions imply that it is possible to learn vicariously, other than direct experience (Roberts, 2010). In fact, scholars have argued that many learning outcomes resulting from direct experiences can occur on a vicarious basis (Bandura, 1986; Kim & Miner, 2007; Nadler, Thompson, & Van Boven, 2003). In this way, behavioural response pattern can be established through vicarious learning, where student observation of expert performance can enable him/her to reproduce the expert behaviour (Bandura, 1977). Thus, teachers demonstrating during teaching, students acting during role playing, entrepreneurs performing work roles during work study, while students are watching and imitating can provide the opportunity for students to develop HOTS prior to graduation.

Higher-Order Thinking Skills may be defined as the abilities to perform productive tasks, think critically and solve problems. Brookhart (2010) provides a working definition of HOTS which falls into three categories: transfer, critical thinking and problem solving. Other categories of HOTS are: creative thinking, decision-making, logical thinking, metacognitive thinking, reflective thinking, judgment thinking and caring thinking. These categories of HOTS cannot be acquired in formal learning environment alone, but are acquired in the informal learning environment. Resnick (1987) stresses the importance of social learning settings in the development of HOTS among students, including business education students through group project, collaborative learning, storytelling, group discussion, among others. Therefore, HOTS can be developed with various forms of experiential and vicarious learning through business education programme. These HOTS are likened to the 21<sup>st</sup> century skills (such as, flexibility, adaptability, initiative, self-direction, information literacy, ICT literacy, self-discipline, self-motivation, innovativeness, responsibility, and lots more) which business education students are expected to acquire in order to prepare them for their professional and lifelong learning career tasks upon graduation. Despite the crucial role of HOTS in spurring economic development in the Nigerian context, there are dearth of empirical studies that examined the relationships among experiential learning, vicarious learning and development of HOTS among business education undergraduates. Thus, this study attempts to examine the relationships between experiential learning and vicarious learning as against the development of HOTS among business education undergraduate students. The study aimed to also test the relationships between experiential learning and vicarious learning as against the development of HOTS based on gender.

### **Statement of the Problem**

Business Education is a practical-oriented programme that prepares students' for entrepreneurial careers and lifelong learning tasks. Despite these tasks, Business Education students still graduate without acquiring HOTS needed to engage in entrepreneurial careers and lifelong learning tasks. As a consequence, Business Education students who are not equip with HOTS may become unemployed or underemployed, and would

not have self-efficacy or self-confidence to engage in entrepreneurial careers and lifelong learning upon graduation. This unpleasant situation suggests that business education programmes have been laying emphasis on theoretical learning, thereby relegating practical skills learning approaches to the background, namely: inquiry-based learning, project-based learning, collaborative learning, apprenticeship learning, technology-enabled informal learning, to mention just a few. To the best of the author's knowledge, there are dearth of empirical literature that has specifically examined the relationships between each learning approaches (experiential and vicarious) and development of HOTS among business education undergraduate students. There is, therefore, an obvious gap in business education academic literature as regards the relationships between each learning approaches (experiential and vicarious) and development of HOTS. However, forms of experiential learning, such as, service learning, computer or tablet technology, fun game, and group work, and forms of vicarious learning, such as, negotiation exercises, storytelling, paper and digital technology, team learning, classroom simulations, and digital video cases have been examined separately in other academic disciplines. It is based on all these identified gaps the author embarked on this study in order to provide data on the extent of relationships among experiential learning, vicarious learning and development of HOTS among business education undergraduates in Federal Universities in South-South, Nigeria.

### **Methodology**

A correlational survey research design was used to achieve the objectives of the study. This type of research design involves the collection of data to determine whether, or to what degree, a relationship exists between two or more variables (Gay, Mills & Airasian, 2009). This design is appropriate for this study in that it determines whether, or the extent to which, a relationship exist among experiential, vicarious learning and HOTS. A sample of 151 lecturers (214 Males and 536 Females) of business education was selected through simple random sampling across Federal Universities in South-South, Nigeria. The author of the study made no attempt to adopt a sample procedure because the participants were not too large to cover.

Self-constructed instruments were used for the collection of data, titled: Experiential Learning Questionnaire (ELQ), Vicarious Learning Questionnaire (VLQ), and Higher-Order Thinking Skills Questionnaire (HOTSQ). Nine items measured experiential learning, eleven terms measured vicarious learning, and twelve items measured HOTS, totaling 32 items. A panel of two experts from business education and measurement and evaluation verified the content validity of the instruments. A reliability test was conducted to determine the internal consistency of the instrument and the results revealed a coefficient of 0.93 for experiential learning, 0.92 for vicarious learning, and 0.96 for HOTS via Cronbach's alpha method. The bivariate correlation matrix and Fisher Z statistic was used for analyzing the data. Bivariate correlation was used to analyze extent of relationships among experiential learning, vicarious learning and HOTS, while Fisher Z was used to analyze the differences between the responses of male and female business education lecturers' as regards relationships between each learning approaches (experiential learning and vicarious learning) as against the HOTS.

**Results**

Table 1

Cronbach’s Alpha and Correlation Matrix of the Summated Variables in the Study (N = 151)

Variables	M	SD	1	2	3	4
Gender	1.71	.456	1			
Experiential Learning	3.52	.365	-.066	(.93)		
Vicarious Learning	3.49	.390	-.023	.610**	(.92)	
Higher-Order Thinking Skills	3.43	.412	-.031	.605**	.604**	(.96)

Note. \*\*p <.01, Cronbach’s alpha values are in the diagonal

Table 1 showed the correlations among the study variables. Table 1 showed that Cronbach’s alpha values for the study variables are relatively high. In the study, the alpha values for experiential learning, vicarious learning and HOTS are 0.93, 0.92, and 0.96 respectively, which imply high measure of internal consistency. The mean responses of business education lecturers range from 3.43 to 3.52, while the standard deviations values ranged from .447 to .658. Table 1 showed that correlation of gender with experiential learning, vicarious learning, and HOTS range from -.023 to -.066. The correlation between experiential learning and HOTS is .605, which indicated a high relationship. This explained that experiential learning can foster the development of HOTS among business education students to a very high extent. The table also showed that correlation between vicarious learning and HOTS is .604, which indicated a high relationship. This also explained that vicarious learning can foster the development of HOTS among business education students to a very high extent.

**Testing of the Hypotheses**

Hypothesis 1: There exist no statistically significant difference in the ratings of male and female business education lecturers regarding the relationship between experiential learning and development of HOTS.

Table 2

Fisher Z Transformation for Male and Female Business Education Lecturers’ Differences on the Extent to which Experiential Learning can Foster Development of HOTS among Students

Variables	N	r	Zr	Z
Experiential Learning and HOTS				4.567***
Male	43	.077 (ns)	.080	
Female	108	.727***	.929	

Table 2 showed the Fisher Z transformation results on the differences in the responses of male and female business education lecturers regarding the extent to which experiential learning approach can foster development of HOTS among students. The correlation between experiential learning and HOTS from male business education lecturer’s responses is .077, but not significant. Also, the correlation between experiential learning and HOTS from female business education lecturer’s responses is .727, but significant. The z-value of 4.567 is significant at .05 alpha value. Thus, the null hypothesis is rejected. This means that there is a significant difference in responses of male and female business education lecturer’s regarding the extent to which experiential learning approach can foster development of HOTS among students.

Hypothesis 2: There exist no statistically significant difference in the ratings of male and female business education lecturers regarding the relationship between vicarious learning and development of HOTS.

Table 3

Fisher Z Transformation for Male and Female Business Education Lecturers' Differences on the Extent to which Vicarious Learning can Foster Development of HOTS among Students

Variables	N	r	Zr	Z
Vicarious Learning and HOTS				4.954***
Male	43	.034 (ns)	.030	
Female	108	.743***	.951	

The data presented in Table 3 showed the Fisher Z transformation results on the difference in responses of male and female business education lecturers regarding the extent to which vicarious learning approach can foster development of HOTS among students. The Table revealed that correlation between vicarious learning approach and HOTS of male business education lecturer's responses is .034, but not significant. The table further revealed that the correlation between vicarious learning and HOTS from female business education lecturer's responses is .743, but significant. Therefore, the null hypothesis is rejected. Thus, there is a significant difference in responses of male and female business education lecturer's regarding the extent to which vicarious learning approach can foster the development of HOTS among students.

### Discussion of Findings

This study added to the dearth of literature on the relationships between experiential learning and vicarious learning as against development of HOTS among business education undergraduates. Specifically, the data gathered from the study revealed positive and high relationships among experiential learning, vicarious learning and development of HOTS among business education undergraduate students. This means that both experiential learning and vicarious learning have important roles to play in development of HOTS among business education undergraduates. This finding agreed with the study conducted by Elengovan and Nagendralingan (2014) who found that the utilization of problem-based scenario grounded in the constructivist and experiential learning theory were key enabler for the development of HOTS. They further found that students who were nurtured using simulation learning model demonstrated higher order thinking pattern, explicit learning through sharing and reflective practices, had self-efficacy in managing business cases as well as leadership and social skills. The findings of this study also supported the research conducted by Balakrishnan, Nadarajah, Vellasamy and George (2016) who found that that the teacher trainers' HOTS were enhanced after two-day continuous professional development programme, such as discovery and active hands-on learning activities.

Furthermore, the study agreed with the research conducted by Espey (2018) who revealed that students expressed significantly greater improvement in HOTS in a vicarious-based learning environment. The finding of this research agreed with the study conducted by Bagdasarov, Luo and Wu (2017) who reported that the use of tablet technology, coupled with vicarious learning was beneficial for developing different types of communication skills, such as oral and written communication. Their findings also indicated that tablet technology usage contributed to positive impact on development of critical thinking and problem solving skills. In addition, the findings of this study conforms to the research conducted by Kim (2017) who demonstrated current trend of computer simulation not only in favour of improving content knowledge but also enhancing HOTS and problem-solving skills in Practical-Based Learning.

The findings of this study imply that when business education programme is able to foster development of HOTS among students, one can say experiential and vicarious learning approaches were used. The findings' of this study therefore strengthens the important role of experiential and vicarious learning in effective

delivery of business education programmes in Nigerian Universities. Although, at this present time, the resources for effective delivery of business education have been found to be inadequate, and teaching and learning process were also found to be ineffective; and HOTS were found not to be acquired by students, which in turn lowers the confidence for entrepreneurial and lifelong learning tasks (Edokpolor, 2018b).

### **Conclusion**

The findings of this study have revealed positive and high relationships between two learning approaches (experiential learning and vicarious learning) as against the HOTS. The findings revealed a significant difference in responses of male and female business education lecturer's regarding the extent to which experiential learning approach fosters development of HOTS among students. Conversely, the findings revealed no significant difference in the responses of male and female business education lecturer's regarding the extent to which vicarious learning approach fosters development of HOTS among students. Thus, the author of this study concludes that experiential and vicarious learning approaches have important roles in developing HOTS among business education undergraduates in Federal Universities.

### **Recommendations**

Based on the findings of the study, the following recommendations are made:

1. Managers of business education programme should endeavour to provide experiential learning methods for instructional delivery in order to assist in equipping the students with HOTS that are required to engage in entrepreneurial and lifelong learning tasks upon graduation.
2. Managers of business education programme should endeavour to provide vicarious learning methods for instructional delivery in order to assist in equipping the students with HOTS that are required to engage in entrepreneurial and lifelong learning tasks upon graduation.

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