INTEGRATION OF WEB-BASED INSTRUCTIONAL TECHNOLOGIES IN TEACHING ENTREPRENEURIAL COURSES IN TERTIARY INSTITUTIONS IN DELTA STATE

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Abstract
The study examined the extent to which business educators integrate web-based instructional technologies in teaching entrepreneurial courses in tertiary institutions in Delta State. One research question and three hypotheses guided the study. A survey research design was adopted for the study. The population consisted of 122 business educators in tertiary institutions in Delta State. A 15-item questionnaire was used for data collection. Mean, standard deviation and z-test were used in the analysis of data. Findings of the study revealed that business educators integrated web-based instructional technologies in teaching entrepreneurial courses to a low extent irrespective of gender and institution type. The age of business educators significantly affected the integration of web-based instructional technologies in teaching entrepreneurial courses. The study concluded that the low level of integration of web-based instructional technologies in teaching entrepreneurial courses will fail to provide a platform with which business education students can have competitive edge in the digitalized business world over their contemporaries in other climes. The study recommended among others that ICT manufacturing companies, internet service providers, employers of labour and international communities should support entrepreneurship education programmes in Nigeria by providing affordable computers and telecommunication gadgets, reliable internet services as well as sponsor web-oriented in-service training for business educators for effective teaching of entrepreneurial courses in Nigeria.
KEY WORDS: Integration, web-based instructional technologies and entrepreneurship education

Introduction

The act of bringing different sectors of a system into uniformity is called integration. Integration means adding separate components to a form a unified system. Similarly, Earle (2002) posited that integration involves a sense of completeness or wholeness. In respect to this study, integration is the combination of web-based instructional technologies into the entire teaching and learning process that is not separated from any forms of classroom activities. This means that web-based instructional technologies become a vital medium of instruction. It is an attempt to merge

internet learning and teaching in the process of instructional delivery. Hence, Fan (2004) opined that, the integration of web-based instructional technologies must take place across the curriculum in ways that deepens and enhance learning experience.

There is no doubt that web-based instructional technologies provide productive teaching and learning experiences aimed at increasing students' intellectual capability in today's information age (Onokpaunu, 2016). Onokpaunu further maintained that web-based instructional technologies include a wide variety of e-learning platforms with ICT software and hardware for communicating information and imparting knowledge. Carlson and Gadio (2002) posited that web-based instructional technologies provide not just text, but also sound, video, simulations, and collaboration with other learners who may be scattered around the country or the world**.** Similarly, Yoder (2002) averred the advantages accrued to the use of web-based instructional technologies to include: extensive resources, opportunities for achieving specific goals, convenience, flexibility, a larger learning community and the ability to interact with emerging technologies. In support, Ementa (2015) noted that web technologies are used for course planning, class interaction and assessment.

Schools cannot improve the academic achievement of students or the overall value of their programs without sufficiently integrating web technologies (Donahoo & Whitney, 2006).The future of education is in the internet, as a lot of online universities are on the increase, making teaching and learning in the four corners of a classroom less significant (Onokpaunu, 2016). The web, that is the most important component of the internet, has been widely used as an ICT in industry and academic environment (Lee & Shih, 2001).In their view, Pollicia, Simpson and Aldredge (2001) asserted that, the widespread availability of the internet has precipitated a vast change in higher education and especially in the delivery of instruction.

The web is becoming an important instructional environment which provides students' with a rich and innovative style of learning in entrepreneurship education. Entrepreneurship education is an aspect of general education that focused on equipping students with entrepreneurial abilities that goes beyond just developing and nurturing a new business entity. Entrepreneurship education is designed towards inculcating students with cognitive and brainstorming abilities to search and transform untapped business opportunities into market value for themselves and the society. Ementa (2013) viewed entrepreneurship education as a tool for securing employment and emancipation of people through the provision and acquisition of necessary knowledge and skills for making a living. According to Bassey and Archibong (2005), the goal of entrepreneurship education is to empower graduates irrespective of their areas of specialization with skills that will enable them engage in income yielding ventures if they are unable to secure

jobs. It is believed that the knowledge of entrepreneurship education will equip students with navigational skills to succeed in uncharted business ventures.

Unfortunately, the National Centre for Technology Management (NACETEM) in Abiodun, Isaac and Titilayo (2015) asserted that many graduates that received entrepreneurial studies in tertiary institutions are not translating the acquired knowledge to practical venture creation but rather joined the queue of people seeking government or organizational appointments. The traditional methods of teaching and learning entrepreneurship education in educational institutions have been attributed to lack of entrepreneurial-driven graduates roaming unproductively in the society. Emphasis with this method of teaching and learning is more on theoretical knowledge rather than practical skill acquisition that would have made them succeed in the business world (Onokpaunu, 2016). The over dependence of pen and paper, chalk and talk methods of teaching coupled with memorization of facts without hands-on experimentation of acquired knowledge inhibits the development of entrepreneurial studies. The integration of web-based instructional technologies in teaching entrepreneurial courses is pertinent because instructional delivery will be moved from the whole class to group through collaborative work, case study method, experiential learning, interactive learning environment, mentoring, critical thinking and creative experience for students.

In addition, the integration of web-based instructional technologies by business educators can motivate students to learn and think entrepreneurially within and outside the classroom environment. The traditional methods of teaching entrepreneurship education do not stimulate deep cognitive learning for students because they maintain the sit and look position while teaching is taking place. The increasing demand for global competitiveness ensures that teaching and learning of entrepreneurial courses move beyond passive instructional delivery. Models of teaching and learning entrepreneurial courses must work with technology and informal skill acquisition centres to enable students see with their eyes, work with their hands and understand the process of entrepreneurial pursue. Hence, Ezenwafor (2012) posited that the earlier students are taught to move away from the traditional method of using the manual typewriter, cutting stencils, adding with manual calculator, to embrace modern technological devices, the better for them.

Moreover, a number of variables could affect the integration of web-based instructional technologies for teaching. Studies concerning educators' gender and web technologies use have indicated that female teachers' have lower levels of computer usage due to their limited technology access, skill and interest (Volman & van Eck, 2001). While findings of Jamieson-proctor, Burnett, Finger and Watson (2006) claimed that female teachers integrate web technologies in their teaching more than male teachers. Educators' age could be a major determinant in the integration of web technologies in

classroom instructional delivery. Myanja in Kolawole, Sunday and Ibitayo (2015) reported that age of educators have a significant influence on the integration of web technologies in teaching. In their view, Adeyemi and Olaye (2010) averred that universities and colleges of education in Nigeria are yet to fully integrate web-based technologies in teaching because their lecturers are literally comfortable in the traditional method of teaching. This unwholesome situation of lecturers in tertiary institutions in Nigeria intensifies the need for this study to determine the extent business educators in tertiary institutions in Delta state integrate web-based instructional technologies in teaching entrepreneurial courses.

The existence of social media corporation such as Facebook, Twitter and Microsoft among others shows the importance of web-based technologies to modern day entrepreneurial pursue. In order to strengthen the relevance of entrepreneurial courses to the digitalized business world, business educators are expected to integrate web-based technologies in their instructional delivery. The problem is 'to what extent do business educators integrate web-based technologies in the teaching entrepreneurial courses for students to fit in and excel professionally in today's web-powered entrepreneurial landscape? The extent to which business educators integrate web-based instructional technologies in teaching entrepreneurial courses is not clearly known. Hence, the researchers are interested in investigating the extent business educators integrate web-based instructional technologies in teaching entrepreneurial courses in Delta State.

Theoretical Framework

Technological Determinism Theory

The technological determinism theory was propounded by Thorstein Veblen in 1898. He proposed that a society's technology drives the development of its social structure and cultural values. However, this theory was popularized by Marshall McLuhan in 1962. He stated that media or technological determinism will decisively shape how humans think, feel and act and how even the society at large organize themselves and operate. In support of this, the basic premise of technological determinism theory is that the media are extensions of the human body and that the media not only alter their environment, but the very message they convey (Asemah & Edegoh, 2012). The technological determinism theory is relevant to the present study as it identifies how web-based instructional technology influences the teaching and learning processes of entrepreneurship education because it helps to promote pedagogical innovation in the teaching and learning process of entrepreneurial courses that will initiate creativity and problem based learning skills in students academic pursue.

Another theory that supports this study is social constructivism theory by Vygotsky in 1962. Vygotsky's theory stressed the fundamental role of social interaction

as a dimension of learning. Two principles of Vygotsky's work are: More Knowledgeable Other - which refers to someone who has a higher ability level than the learner with respect to a particular task, process or concept; and Zone of Proximal Development - which is the distance between the actual development level as determined through problem solving under adult guidance or in collaboration with more capable peer (Vygotsky, 1978). The implication of Vygotsky's social constructivism theory to the study is that web based technologies is best for mediating social interactions and collaboration, as learning is an active process which requires interaction between teachers and students in order to enhance meaning construction in students.

Purpose of the Study

The major purpose of the study is to determine the extent to which business educators in tertiary institutions in Delta State integrate web-based instructional technologies in teaching entrepreneurial courses. Specifically, the study sought to determine the extent to which:

1. Business educators in tertiary institutions in Delta State integrate web-based instructional technologies in teaching entrepreneurial courses.

Research Questions

The following research question guided the study:

1. To what extent do business educators in tertiary institutions in Delta state integrate web-based instructional technologies in teaching entrepreneurial courses?

Hypotheses

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

1. Male and female respondents do not differ significantly in their mean ratings on the extent they integrate web-based instructional technologies in teaching entrepreneurial courses.
2. There is no significant difference in the mean ratings of respondents in universities and colleges of education on the extent they integrate web-based instructional technologies in teaching entrepreneurial courses.
3. Age of respondents do not differ significantly in their mean ratings on the extent they integrate web-based instructional technologies in teaching entrepreneurial courses.

Method

The study adopted a descriptive survey design. The area of study was in Delta state. The entire population of 122 business educators was used for the study without

sampling. A five point rating scale questionnaire was used for data collection. It contained 15 questionnaire items based on the research question raised for the study. Cronbach Alpha reliability method was used to determine the internal consistency of the instrument which gave a reliability coefficient of 0.87. Mean and standard deviation was used to answer the research question while z-test was used to test the null hypothesis at 0.05 level of significance. Mean ratings between 0.50 - 1.49 was regarded as very low extent integration, 1.50 - 2.49 was regarded as low extent integration, 2.50 - 3.49 was regarded as moderate extent integration, 3.50 - 4.49 was regarded as high extent integration and mean ratings between 4.50 – 5.00 was regarded as very high extent integration. For the hypotheses, any item with z-calculated value greater than critical value was rejected, otherwise the hypothesis of no significant difference were upheld.

Results

The result of the study are presented and analyzed in the following tables.

Research Question 1

To what extent do business educators in tertiary institutions in Delta state integrate web-based instructional technologies in teaching entrepreneurial courses?

Table 1:
Respondents' mean ratings on the extent web-based instructional technologies are integrated in teaching entrepreneurial courses (N=122)

S/N	Web-based instructional technologies	$\overline{X}$	SD	REMARKS
1.	Podcast	1.47	0.94	Very low extent
2.	Mobile learning	2.18	0.90	Low extent
3.	Weblogging	1.89	0.91	Low extent
4.	Social Networking Tools	2.72	0.96	Moderate extent
5.	RSS live feed	1.21	0.93	Very low extent
6.	Wikis	1.24	0.96	Very low extent
7.	Internet Telephony	1.13	0.91	Very low extent
8.	Electronic mail	3.30	0.93	Moderate extent
9.	Electronic – Portfolio	1.09	0.96	Very low extent
10.	Cloud Computing	1.06	0.90	Very low extent
11.	Webcasting	1.25	0.94	Very low extent
12.	Live Virtual Classrooms	1.33	0.91	Very low extent
13.	Interactive Whiteboards	1.38	0.92	Very low extent
14.	Electronic Bulletin Boards	1.19	0.95	Very low extent
15.	Internet Relay Chat	1.26	0.93	Very low extent
	Mean of Means	1.58		Low Extent

Data in Table 1 show that two out of the 15 web-based instructional technologies with mean from 2.72 to 3.30 were integrated by the respondents at a moderate extent. Two items with mean values ranging from 1.89 to 2.18 were integrated at a low extent while the remaining items with mean values ranging from 1.06 to 1.47 were integrated at a very low extent. The grand mean of 1.58 indicates that business educators in tertiary institutions in Delta state integrated web-based instructional technologies in teaching entrepreneurial courses at a low extent. The standard deviations for the items are within 0.90 to 0.96 which shows that the respondents were homogeneous in their opinions.

Hypothesis 1

Male and female respondents do not differ significantly in their mean ratings on the extent they integrate web-based instructional technologies in teaching entrepreneurial courses.

Table 2:
z-test analysis of male and female respondents on the extent they integrate web-based instructional technologies in teaching entrepreneurial courses

Gender	N	$\bar{X}$	SD	α	df	z-cal	z-crit	Decision
Male	68	1.46	0.72					
				0.05	120	0.68	1.96	Not significant
Female	54	1.33	0.69					

The result in Table 2 shows that male business educators had a mean of 1.46 and a standard deviation of 0.72 while female respondents had mean response of 1.33 and a standard deviation of 0.69. The calculated z-value of 0.68 is less than the z-critical value of 1.96 at 0.05 level of significance and 120 degree of freedom. This revealed that there is no significant difference in their mean rating. This means that male and female respondents do not differ significantly in their mean ratings on the extent they integrate web-based instructional technologies in teaching entrepreneurial courses.

Hypothesis 2

There is no significant difference in the mean ratings of business educators in universities and colleges of education on the extent they integrate web-based instructional technologies in teaching entrepreneurial courses.

Table 3:
z-test analysis of business educators on the extent they integrate web-based instructional technologies in teaching entrepreneurial courses based on institution type

(N=122)

Institution type	N	$\overline{X}$	SD	α	df	z-cal	z-crit	Decision
University	9	2.21	0.74					
				0.05	120	0.97	1.96	Not significant
Colleges of Education	113	1.93	0.66					

The result presented in Table 3 shows that the calculated z – value of 0.97 is less than the critical z – value of 1.96 (0.97 < 1.96) at 0.05 level of significance and 120 degree of freedom. This means that respondents from university and colleges of education did not differ significantly in their mean ratings on the extent they integrate web-based instructional technologies in teaching entrepreneurial courses and the null hypothesis is accepted.

Hypothesis 3

Age of respondents do not differ significant in their mean ratings on the extent they integrate web-based instructional technologies in teaching entrepreneurial courses.

Table 4:

z-test analysis of age of respondents on the extent they integrate web-based instructional technology in teaching entrepreneurial course (N = 122)

Age	N	$\overline{X}$	SD	α	df	z-cal	z-crit	Decision
30 to 45 years	35	2.16	0.81					
				0.05	120	5.51	1.96	Significant
46 to 60 years	87	1.19	0.75					

The result presented in Table 4 shows that the calculated z – value of 5.51 is greater than the critical z – value of 1.96 (5.51 >1.96) at 0.05 level of significance and 120 degree of freedom. This means that age of respondents differ significantly in their mean ratings on the extent they integrate web-based instructional technologies in teaching entrepreneurial courses and the null hypothesis is rejected.

Discussion of Findings

Findings of the study revealed that business educators in the tertiary institutions under study integrated web-based instructional technologies in teaching entrepreneurial courses to a low extent. This finding tallies with that of Adedoyin, Akinnuwesi and

Adegoke (2008) which stated that the use of web-based technologies in Nigerian tertiary institution is less than 5 percent. The outcome of this study is in consonance with Duruamaku-Dim and Duruamaku-Dim (2014) which reported that web-based instructional technologies are not fully integrated into the teaching and learning process of entrepreneurship education in Nigerian tertiary institutions. The integration of web-based instructional technologies in teaching to a low extent was reported by Uwaifo and Uwaifo (2009) on the premise that web-based technologies and facilities are inadequately supplied and that lecturers lack adequate competencies for using them where they are provided.

Furthermore, the study indicate that there is no significant difference in the mean ratings of male and female business educators in tertiary institutions in Delta state on the extent they integrate web-based instructional technologies in teaching entrepreneurial courses. Supporting this findings, Iwu and Nzeako (2012) averred that the demand for web-based instructional technologies is increasing in Nigeria, because educators realize that computers and other web-based instructional facilities can enhance entrepreneurship education as well as Light (2009) who asserted that educators are getting trained in web-based technologies in order to structure their lessons and select ICT resources that support students learning.

More so, the study revealed a significant difference in the mean ratings of respondents on the extent they integrate web-based instructional technologies in teaching entrepreneurial courses based on their age. This is in agreement with the findings of Waugh (2004) that integrating web technology into classroom instruction is partly a function of teachers' age. Supporting this, Sanni, Awoleye, Egbetokun and Siyanbola (2010) affirmed that age of educators influence the integration of ICT in teaching entrepreneurial courses. However, the study is at variance with that of Orr, Allen, Poindexter and Canning (2001) that age did not have significant influence on educators' integration of web-based technological tools for instructional delivery.

Conclusion

Based on the findings of the study, it was concluded that integration of web-based instructional technologies in entrepreneurship education develop students scientific and technological skills for entrepreneurial pursuit. However, poor integration of web-based instructional technologies in teaching entrepreneurial courses will fail to provide a platform with which business education students' can have competitive edge in the digitalized business world over their contemporaries in other climes.

Recommendations

The following recommendations were made;

1. The federal government of Nigeria should review the power sector to achieve uninterrupted power supply and a functional telecommunication network in tertiary institutions in the country.
2. ICT manufacturing companies, internet service providers, employers of labour and international communities should support entrepreneurship education programmes in Nigeria by providing affordable computers and telecommunication gadgets, reliable internet services as well as *as* sponsor web-oriented in-service training for business educators for effective teaching of entrepreneurial courses in Nigeria.
3. There is should be adequate re-training of older business educators to enable them integrate web-based instructional technologies in teaching entrepreneurial courses.

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