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BUSINESS EDUCATORS' EDUCATIONAL AWARENESS AND ADOPTION OF WEB 2.0 TECHNOLOGIES FOR INSTRUCTIONAL PURPOSES IN TERTIARY INSTITUTIONS IN SOUTH EAST NIGERIA

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Abstract:
Education today has gone digital and has created the need for players in the sector to appreciate the benefits of utilizing Web 2.0 technologies for educational purposes. This study set out to assess business educators' awareness and adoption of adoption of Web 2.0 technologies for instructional purposes in tertiary institutions in south east Nigeria. Two research questions guided the study. Four null hypotheses were tested at 0.05 level of significance. Population of the study was 144 business educators teaching in tertiary institutions offering business education programme in south east Nigeria. A structured 5-point scale questionnaire was used for the study. The questionnaire was validated by one expert in ICT and two experts in measurement and evaluation. The reliability of the instrument was established using Split half method. Data collected in respect of the research questions were analyzed using mean of scores while t-test was used to test the null hypotheses. The results revealed that the respondents were moderately aware of the educational benefits of Web 2.0 technologies and adopted Web 2.0 technologies for instructional purposes to a very low extent. The result also revealed that age was a critical factor in business educators' rating of awareness and adoption of Web 2.0 technologies for instructional purposes while gender, sex, years of experience in teaching and type of institution did not affect the respondents' ratings. It was recommended, among others, that business educators should be abreast of all emerging technologies and be attuned to the contemporary methods and applications of web technologies in the instructional process.

Keywords: business educators, web 2.0, instructional purposes

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1. Introduction

The essence of educational instruction in schools is to direct the learning process towards the acquisition of knowledge and skills which lead to learners acquiring requisite capabilities. Educational instruction could be provided through teacher-centered approach or student-centered approach. Fowler and Mayes (2000) noted the teacher-centered delivery of instruction as a representational view of learning, where the acquisition of knowledge is exhibited in the learners' memorization which occurs out of context. Di Napoli (2004) described the teacher-led instructional approach as one in which teachers serve as the center of knowledge, directing the learning process and controlling students' access to information. Explaining further the teacher-centered approach of instruction delivery, Namgyel (2013) held that the transmission of knowledge as one-way with little interaction between teachers and students, and participation in classroom is dominated and controlled by the teacher. Zohrabi, Torabi and Baybourdiani (2012) highlighted this instructional approach as aimed at getting learners to perform well on state-mandated test rather than catering for students' needs.

Instructional delivery in business education programmes in Nigeria is mainly based on face-to-face method of teaching and learning. Thus, Mamman and Nwabufo (2014) affirmed that instructional provision in business education programmes is carried out using conventional methods in which students are told what to learn, where to learn as well as when and how to learn. This type of learning environment cannot prepare the students for the contemporary world of work and enterprise activities. Igberaharha (2009) noted that teacher-centered instruction in higher institutions has proved ineffective for producing graduates who can perform optimally. Furthermore, Polka (2001) expressed the need for institutions to migrate from a teacher-centered to a student-centered model of instruction so as to facilitate effective instruction. In addition, Ahmed (2013) emphasized the need for faculties to shift focus from the teacher to the learner as to ensure the effectiveness of the educational process as well as to empower the learner. Student centered instruction is an instructional or pedagogical approach where learners use their experiences to keenly construct understandings that seem right and present meanings to them, instead of having knowledge conveyed to them in an organized manner (Ementa & Ile, 2016). In student centered approach, students work with teachers to select learning goals and objectives based on authentic problems and students' prior knowledge, interest and experience (Di Napoli, 2004).

Nevertheless, teacher-centered instructional approach currently seems to face great challenges with the emergence of internet and high-tech gadgets. The advent of the internet and associated learning technologies has produced a climate in which online learning is seen as a means of improving higher education instructional delivery (Ementa & Ile, 2016). Yuen, Yaoyuneyong and Yuen (2011) asserted that the advent of

Web 2.0 as a learning technology has transformed the internet into a global network of interconnected learning communities and have changed the ways teachers and students interact.

Web 2.0 is a collection of web based applications which create and facilitate collaboration and interactions among people. O'Reilly (2007) defined Web 2.0 as a web platform and web applications that run on the platform that provides users control over content and facilitate collaboration between individuals and groups. Furthermore, it is a collection of web-based technologies which share a user-focused approach to design and functionality where users actively participate in content sharing and editing through open collaboration between members of communities of practice (McGee & Begg, 2008). Wilclox, Winn and Fyvie-Guald (2005) asserted that Web 2.0 technologies enhance learning, teaching and assessment strategies, quality of staff/student relationships and collaborative approaches to student learning. Light and Polin (2010) noted that Web 2.0 in education offers resources in four categories: tools that create or support a virtual learning environment, tools that support communication and cultivate relationship, resources to support teaching and learning, tools enabling students to create artifacts representing what they are learning. Significant gains of using Web 2.0 for instruction according to Weller (2013) are that same application can be accessed on different devices (smartphones, tablets, netbooks, etc), accessible from any computer anywhere in the world, many are free to use, applications are written in html (which is the common language of internet) and is certain to run on all devices that have an up-to-date web browser.

There are numerous Web 2.0 tools/applications with potentials in education. The tools include but are not limited to:

A. Blogs: The term 'Blog' is the short form of weblog. They are websites maintained by an individual with regular commentary entries, event descriptions, or other materials such as graphics or video. Herring, Scheidt, Wright and Bonus (2005) described blogs as frequently modified webpages in which dated entries are listed in reverse chronological sequence. Baxter, Connolly, Stansfield, Tsvetkova and Stoimenova (2011) explained that the diary-like format for blogs promote thinking by writing and allows bloggers to insert posts to reflect the context of personal experience. Instructors can use blogs for networking and personal knowledge sharing, instructional tips for students, course announcements and readings, annotated links for reading or reference and for experience and content sharing (Baker, 2003).

B. Social networks: Social networking sites are websites that permit individuals to create and become members of a virtual community. Lenhart and Madden (2007) described social networks as websites that allow a user create personal files and establish a variety of networks that connect one with family, friends and colleagues. Crook, Cummings, Fisher, Graber, Harrison, Lewin, Logan, Lukin, Oliver and Sharples

(2008) explained that mainstream social networking sites typically include education oriented friendship groups. Some sites convene members online based on alumni relations (Friends reunited), business curriculum vitae and professional connections (LinkedIn) while some have strong student base (Facebook), some more media oriented (MySpace) and others create social links based on users tagging their personal goals (43things). Other sites provide student-oriented design and security service for cross-site collaboration (Schoolnetglobal); teachers also create learning communities (Learnhub) while some other tools exist for special interest groups to design their own social network sites (ning). In addition, Crook et al (2008) noted social networking sites as platforms that allow users to create digital spaces into which they can invite 'friends' to share messages, texts, videos among others.

C. Wikis: 'Wiki' or 'fast' originated from Hawaii. Stern (2008) viewed wiki as a page or a collection of webpages designed to enable anyone who accesses them to contribute or modify the content easily. Noting the usefulness of Wiki in educational setting, Ramanau and Geng (2009) highlighted the primary use of wikis in higher education as support to group work among students. It provides students with a sense of autonomy to learn collectively from one another through reciprocal feedback. Harris and Lea (2009) stated that wikis can be used in project development with peer review as a group authoring tool to track a group project, collect data for a class project, class and teacher evaluation, and tracking research groups. In addition, instructors can use wikis for collaborative curriculum design and course content authoring.

D. Virtual Worlds: known as virtual learning environment are computer simulated environments where real people are characterized by avatars, which enable users to interact with others without environmental borders (Ementa & Ile, 2016). Here, real people meet, interact and exchange ideas with each other at virtual locations. Light and Polin (2010) referred to virtual learning environment as a software platform that provides a private (password-protected) virtual classroom space where teachers can perform static and interactive tasks and provide classroom resources. Baker, Wentz and Woods (2009) asserted that virtual worlds increase students' engagement, particularly for online classes, by providing opportunities for real time (virtual) face-to-face student-faculty and student-student interactions. Students who are reluctant to comment or ask questions in class might feel comfortable doing so in a virtual world.

E. Podcasts: These are digital media files (usually audio or video) which can be downloaded from the internet. The files can be played on a personal computer or mobile device at the users' convenience. One of the reasons for the popularity of podcasts is that they can be played using laptops, ipods, mobile phones, PDAs or other portable devices. Stating the educational relevance of podcasts, McGarr (2009) categorized the purpose of podcasting in education into three; enhancing the flexibility of learning, increasing accessibility to learning (particularly in relation to enabling

mobile access) and enhancing the students' learning experiences (particularly in on campus courses through the use of more blended learning experiences). YouTube is the most popular site to post and see podcasts.

F. Online Forum: Often referred to as online bulletin boards or online discussion boards. Online forum is a many-to many discussion space where participants can communicate, discuss and share ideas on issues of interest. Explaining online discussion boards as a learning tool, Balaji and Chakrabarti (2010) held that it is as an e-learning platform that allows students to post messages to the discussion threads, to interact and receive feedback from other students and instructors to foster deeper understanding of a subject under study.

Expatiating on the educational benefits of Web 2.0 technologies, Yuen, Yaoyuneyong and Yuen (2011) noted that teachers can use Web 2.0 tools to captivate students, hold their attention and enhance their learning experiences. Jimoyiannis, Tsiotakis, Roussinos and Siorenta (2013) highlighted six interrelated aspects of Web 2.0 to include:

a. *Participatory web:* rooted in the features of Web 2.0 tools which promote students' engagement and make publication an easy task for both teachers and students.
b. *Open web*: support creativity through learner generated content and peer review, and the evolution of a collective intelligence within the Web 2.0 environments.
c. *Collaboration:* Web 2.0 tools effectively support collaborative work and learning through discovering, sharing and transforming media, co-creating new content, concepts, ideas and, finally, developing new forms of thinking.
d. *Sociability:* It offers enhanced opportunities for communication and interaction among participants, developing social groups and networks (social networking), and at the end supporting autonomous communities of learning.
e. *Open classroom:* It transforms the notion of classroom by extending students' learning spaces (both physical and virtual) beyond the walls of the classroom.
f. *Web as a learning platform:* This concept is tightly related to the five notions above which determine the new learning paradigm supported by Web 2.0.

The essence of teaching is to impart learning and advance knowledge. Teaching is the process of passing knowledge and information to students and a coaching process that can be modified to suit the learning needs of students (Enonbun, 2012). Business educators as teachers are expected to be well-informed in the use of technology to effectively provide for the learning needs of young learners who prefer graphics to texts, access and process information quickly and multitask more easily. Business educators are teachers who impart knowledge and skills needed to prepare individuals for the workplace and for self-reliance. A business educator in the context of this study is the same as the teacher in the business education programme. The role of the business educator in the instructional process is to make students' learning possible.

Emphasis is placed on the learning procedure where learner participation is enhanced with the use of technological devices. Okpala (2014) stressed that teachers are responsible for monitoring changes in technologies, determining if they appeal to their learners and seeking ways to use technologies to compliment and support instructional methodologies. Okolocha, Ile and Okolocha (2012) noted that for business educators to apply on-line delivery of instruction, they must first be familiar with hi-tech tools and utilize the tools effectively in teaching and learning process. Ramsden (2003) advocated that teachers should think deeply about what and how they want their students to learn, placing emphasis on active participation and social aspects of learning guided by the discipline they teach in.

Today's young learners are heavily immersed in the use of Web 2.0 technologies for current and trending information. The use of web tools change the values and interests of students and when educational instruction is attuned with students' interest, academic achievements and learning goals are bound to improve greatly. Business educators need sophisticated abilities in the use of Web 2.0 technologies to make learning interesting for the new generation learners as the traditional instructional environment cannot effectively prepare students for today's workplace where the use of web tools guide information gathering and sharing.

1.1. Research Questions

The following research questions guided the study:

1. To what extent are business educators in tertiary institutions in south east Nigeria aware of the educational benefits of Web 2.0 technologies?
2. To what extent do business educators in tertiary institutions in south east Nigeria adopt Web 2.0 for course planning?
3. To what extent do business educators in tertiary institutions in south east Nigeria adopt Web 2.0 technologies for students' assessment?

1.3. Hypotheses

The following null hypotheses were tested at 0.05 level of significance

1. Male and female business educators in tertiary institutions in south east Nigeria do not differ significantly in their mean ratings on their extent of awareness of the educational benefits of Web 2.0 technologies.
2. Business educators aged below 45 years and business educators aged 45 years and above in tertiary institutions in south east Nigeria do not differ significantly in their mean ratings on their extent of awareness of the educational benefits of Web 2.0 technologies.

3. Experienced and less experienced business educators in tertiary institutions in south east Nigeria do not differ significantly in their mean ratings on the extent of awareness of the educational benefits of Web 2.0 technologies.
4. Business educators in universities and colleges of education in south east Nigeria do not differ significantly in their mean ratings on the extent of awareness of the **educational benefits of Web 2.0 technologies.**

2. Theoretical Underpinning

The use of Web 2.0 for educational purposes could be understood better by reviewing certain theories. For instance, social constructivism theory by Vygotsky (1962). Vygotsky's theory stressed the fundamental role of social interaction as a dimension of learning. Two main 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 particular tasks, processes or concepts; and *Zone of Proximal Development* – which is the distance between the actual developmental levels as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Vygotsky, 1978). The implication of Vygotsky social constructivism theory to the study is that Web 2.0 is ideal for mediating social interactions and collaboration, as learning is an active process which requires collaboration between teachers and students in order to facilitate meaning construction in students.

Connectivism is a learning theory associated to this study. The theory known as theory for digital age was promoted by Siemens (2005). The theory postulates that learning is a process which occurs within nebulous environments of shifting core elements – not entirely under the control of the individual. Learning resides outside individuals and is focused on connecting specialized information sets, this connection enables individual learn more which is more important than the person's current state of learning. Learning and knowledge, according to Siemens, rests in diversity of opinion, and knowledge is distributed across an information network which can be stored in a variety of digital format. This theory indicates the effect of technology on how people live, communicate and learn. It also brings to mind that instead of educators bringing information to the mind of the learners, they should rather work towards developing the skills of learners to enable them effectively perform and survive in a connected environment.

The theory of situated learning by Lave and Wenger (1988) is also relevant to this study. The advocators owed their work to John Dewey and Vygotsky. This theory held that learning is situated and occurs by means of legitimate peripheral participation within a community of practice (a group of people who evolve naturally because of

members' common interest in a particular area or domain). Lave and Wenger (1991) argued that learning should not be viewed as simply the transmission of abstract and decontextualized knowledge from one individual to another but a social process whereby knowledge is co-constructed. According to the theory, learning is situated in a specific context and embedded within a particular social and physical environment. In other words, learning in a natural setting occurs as a function of activities, context or culture in which it is situated. This theory helps educators understand how to take advantage of knowledge and skills that their students may already possess in order to help them learn new content and skills. The theory relates to this study as Web 2.0 applications provide and serve as the environment that do not only make learning by doing possible but also enhances participatory learning through rich opportunities and experiences.

3. Method

Survey research design was used for the study. The study took place in five South East States of Nigeria of Abia, Anambra, Ebonyi, Enugu and Imo States. The population of the study comprised 144 business educators in universities and colleges of education. No sample was taken of the population because the population was manageable. A 36-item structured questionnaire set out in two clusters (B1 and B2) was used for data collection. A total of 144 copies of the questionnaire were administered out of which 125 (86.8%) were duly returned and used for data analysis. Mean scores and standard deviation were used to analyze data related to the research questions while t-test was used to test the hypotheses. For the research questions, real limits of numbers of 4.50-5.00 (Very High Extent), 3.50 – 4.49 (High Extent), 2.50 – 3.49 (Moderate Extent), 1.50 – 2.49 (Low extent), 0.50-1.49 (Very Low Extent) was used. Standard deviation value close to 0 was an indication of homogeneity in agreement among the respondents while standard deviation value far from 0 was an indication that the agreement among the respondents was loose or heterogeneous. In testing the hypotheses, the decision rule was to retain the null hypothesis where the p-value is greater than 0.05 and reject the null hypothesis where p-value is less than or equal to 0.05.

4. Results

The results of the study are presented below:

A. Research Question 1

To what extent are business educators in tertiary institutions in south east Nigeria aware of educational benefits of Web 2.0 technologies?

Table 1: Respondents' mean ratings and standard deviation of awareness of educational benefits of Web 2.0 technologies

S/N	Educational benefits of Web 2.0 technologies	Mean	SD	Remarks
17	Increase students active participation in discussion boards (created in social networking sites)	3.06	0.31	Moderate Extent
18	Provide opportunities for students and teachers to share valuable information.	3.21	0.45	Moderate Extent
19	Provide opportunities for students and teachers to share valuable ideas within work groups	4.32	0.11	High Extent
20	Provide opportunities for students and teachers to share valuable sources within work groups	3.85	0.14	High Extent
21	Allow increased use of multimedia videos for effective giving of instruction.	3.93	0.05	High Extent
22	Permits increased use of multimedia texts for effective passing of knowledge	2.63	0.04	Moderate Extent
23	Allow increased use of multimedia pictures for effective giving of instruction	3.43	0.16	Moderate Extent
24	Allow increased use of multimedia audios for effective passing of information	4.10	0.24	High Extent
25	Establish effective communication between students and educators using platforms students are familiar with.	3.47	0.04	Moderate Extent
26	Helps students in developing critical thinking skill as to solve problem.	3.88	0.05	High Extent
27	Allows online delivery of course materials/sources.	2.84	0.04	Moderate Extent
28	Enhance interaction between students and teachers for effective learning and consequent understanding.	3.07	0.04	Moderate Extent
29	Allows online giving of course related tasks	2.54	0.03	Moderate Extent
30	Permits online retrieval of home works/assignments.	3.03	0.04	Moderate Extent
31	Allows forming groups in line with the common interests of students.	2.65	0.04	Moderate Extent
32	Permits forming of groups in line with the needs of students.	3.23	0.05	Moderate Extent
33	Allows student provide feedbacks on understanding of course/subject content.	4.32	0.06	High Extent
34	Provide opportunities for teachers to understand their students in a social learning environment.	3.85	0.14	High Extent
35	Provide students opportunity to take the role of producer in creating content.	3.93	0.03	High Extent
36	Providing students opportunity to take the role of consumer in creating content.	2.63	0.06	Moderate Extent
	Mean of Means	**3.40**	**Moderate Extent**	

Data in Table 1 show that twelve out of twenty items on educational benefits of Web 2.0 technologies had mean values of 2.54 to 3.43 which fell within the range regarded as moderate extent while eight items had mean value which fell within the range of 3.85 to 4.32 regarded as high extent. However, with a mean of means of 3.40, the analysis showed that the respondents were aware of the educational benefits of Web 2.0 technologies to a moderate extent. Furthermore, the standard deviation ranging from 0.03 to 0.45 shows how homogeneous the opinions of the respondents are in rating the items.

B. Research Question 2

To what extent do business educators in tertiary institutions in south east Nigeria adopt Web 2.0 for course planning?

Table 2: Respondents' mean rating and standard deviation on adoption of Web 2.0 technologies for course planning

S/N	Applications of Web 2.0 for course planning	Mean	SD	Remarks
37	Use blogs to post articulated course goals for students to read	1.41	0.23	Very Low Extent
38	Use blogs to read students' post on objectives attainment.	1.28	0.71	Very Low Extent
39	Use blogs to plan study activities to be covered within the duration of the course with students.	2.09	0.40	Low Extent
40	Use blogs to post class conduct policies for students to review.	2.11	0.51	Low Extent
41	Use wikis to create summary pages on unit to be learnt.	1.47	0.52	Very Low Extent
42	Use wikis to create achievement page for parents/guardian to go log in.	1.23	0.18	Very Low Extent
43	Use wikis to delete misleading entry behaviour.	1.21	0.55	Very Low Extent
44	Use social networks to provide links for obtaining additional information about a course.	1.18	0.21	Very Low Extent
45	Use social networks to create group page to plan learning objectives for students to reflect on.	2.07	0.73	Low Extent
46	Use social networks to plan test of students' entry behaviour.	1.38	0.76	Very Low Extent
47	Use podcasts for audio recording of lesson activities to be covered for students to download.	1.45	0.45	Very Low Extent
48	Use podcasts for video recording of lesson activities to be covered for students to download.	1.23	0.54	Very Low Extent

49	Use virtual worlds/Virtual Learning Environment games to simulate students understanding towards achieving course goals.	1.10	0.13	Very Low Extent
50	Create virtual thematic units on topics of choice to be covered.	1.12	0.15	Very Low Extent
51	Use online forum to provide structure for class communication.	1.44	0.45	Very Low Extent
52	Use online forum to plan introduction of lesson to set mood for class discussion.	1.13	0.43	Very Low Extent
	Mean of Means	**1.43**		**Very Low Extent**

The data in Table 2 reveals that three out of sixteen items had mean values ranging from 2.07 to 2.11 which fell within the range regarded as low extent. The remaining thirteen items had mean values ranging from 1.10 to 1.47 which fell within the range regarded as very low extent. With the mean of means at 1.43 which fell within the range regarded as very low extent indicates that the respondents generally adopt Web 2.0 for course planning to a very low extent. The standard deviation which span from 0.13 to 0.76 showed the heterogeneity of the opinions of the respondents in rating the items.

C. Research Question 3

To what extent do business educators in tertiary institutions in south east Nigeria adopt Web 2.0 for assessment?

Table 3: Respondents' mean rating and standard deviation on adoption of Web 2.0 technologies for assessment

S/N	Applications of Web 2.0 in assessment	Mean	SD	Remarks
69	Use blogs to provide assignments for students to work on.	1.43	0.24	Very Low Extent
70	Use blogs to check students' grammatical errors.	1.22	0.76	Very Low Extent
71	Use blogs to evaluate students' projects.	1.38	0.54	Very Low Extent
72	Use blogs to survey students learning needs.	2.11	0.43	Low Extent
73	Use wikis to create assessment criteria.	1.47	0.54	Very Low Extent
74	Use wikis to measure students' course tasks.	1.23	0.14	Very Low Extent
75	Use wikis to edit students' spelling errors.	1.22	0.55	Very Low Extent
76	Use social networks to evaluate home works.	1.17	0.24	Very Low Extent

77	Use social networks group page to grade tests.	1.11	0.78	Very Low Extent
78	Use social networks to give quizzes to students.	1.35	0.45	Very Low Extent
79	Use podcasts to evaluate students' audio recordings.	1.43	0.76	Very Low Extent
80	Use podcasts to grade students' video recordings.	1.47	0.54	Very Low Extent
81	Use virtual worlds/Virtual Learning Environment to measure time spent on course tasks.	1.11	0.14	Very Low Extent
82	Use virtual worlds/Virtual Learning Environment to assess students' participation.	1.12	0.16	Very Low Extent
83	Use online forum to grade students' class contribution.	1.44	0.55	Very Low Extent
84	Use online forum to grade students' collaborative engagements.	1.21	0.43	Very Low Extent
	Mean of Means	**1.34**		**Very Low Extent**

The data in Table 3 show that one out of the sixteen items on adoption of Web 2.0 for assessment had a mean value of 2.11 which fell within the range regarded as low extent while the remaining fifteen items had mean values ranging from 1.11 to 1.47 which fell within the range regarded as very low extent. However, with the mean of means of 1.34 which fell within the range regarded as very low extent shows that the respondents adopt Web 2.0 for assessment to a very low extent. The standard deviation which range from 0.14 to 0.78 shows how wide apart the respondents' opinion are in rating the items.

Hypothesis 1

Male and female business educators in tertiary institutions in south east Nigeria do not differ significantly in their mean ratings on their extent of awareness of the educational benefits of Web 2.0 technologies.

Table 4: t-test of difference between the mean rating of male and female business educators on awareness of educational benefits of Web 2.0 technologies

Gender	N	$\bar{X}$	SD	DF	t-value	p-value	Remarks
Male	22	3.81	0.43				
				20	0.74	0.47	Not Significant
Female	22	3.72	0.55				

The data in Table 4 show t-test of difference between mean rating of male and female business educators regarding educational benefits of Web 2.0 technologies. The p-value of the test is 0.47 which is greater than 0.05. This provides evidence that the null hypothesis of no significant difference is not rejected. This means that male and female business educators do not differ significantly in their mean ratings on their extent of awareness of educational benefits of Web 2.0 technologies.

Hypothesis 2

Business educators aged below 45 years and business educators aged 45 years and above in tertiary institutions in south east Nigeria do not differ significantly in their mean ratings on the extent of awareness of the educational benefits of Web 2.0 technologies.

Table 5: t-test of difference between mean ratings of business educators below 45 years and business educators 45 years and above on awareness of educational benefits of Web 2.0 technologies

Age	N	$\bar{X}$	SD	DF	t-value	p-value	Remarks
Below 45 years	22	4.19	0.60				
				20	7.78	0.00	Significant
45 years & above	22	2.62	0.68				

The data in Table 5 show t-test of difference between mean ratings of business educators below 45 years of age and business educators aged 45 years and above on awareness of education benefits of Web 2.0 technologies. The p-value of the test is 0.00 which is less than 0.05. This provides evidence that the null hypothesis of no significant difference is rejected. This means that there is a significant difference between the mean ratings of business educators below 45 years of age and business educators aged 45 years and above on their extent of awareness of Web 2.0 technologies.

Hypothesis 3

Experienced and less experienced business educators in tertiary institutions in southeast Nigeria do not differ significantly in their mean rating of awareness of educational benefits of Web 2.0 technologies.

Table 6: t-test of difference between the mean rating of experienced and less experienced business educators on awareness of educational benefits of Web 2.0 technologies

Years of experience in teaching	N	$\bar{X}$	SD	DF	t-value	p-value	Remarks
Experienced	22	4.18	0.50				
				20	0.61	0.55	Not Significant
Less Experienced	22	4.09	0.60				

The data in Table 6 reveal t-test of difference between the mean rating of experienced and less experienced business educators on educational benefits of Web 2.0 technologies. The p-value of the test is 0.55 which is greater than 0.05. This provides evidence that the null hypothesis of no significant difference is not rejected. This means that experienced and less experienced business educators do not differ significantly in their mean rating on the extent of awareness of educational benefits of Web 2.0 technologies.

Hypothesis 4

Business educators in universities and colleges of education in southeast Nigeria do not differ significantly in their mean ratings on the extent of awareness of the educational benefits of Web 2.0 technologies.

Table 7: t-test of difference between the mean ratings of business educators in universities and colleges of education on awareness of educational benefits of Web 2.0 technologies

Type of institution	N	$\bar{X}$	SD	DF	t-value	p-value	Remarks
University	22	4.14	0.69				
				20	2.17	0.14	Not Significant
College of Education	22	3.95	0.56				

The data in Table 7 show t-test of difference between mean ratings of business educators in universities and colleges of education on the educational benefits of Web 2.0 technologies. The p-value of the test is 0.14 which is greater than 0.05. This provides evidence that the null hypothesis of no significant difference is not rejected. This means that business educators in universities and colleges of education do not differ significantly in their mean ratings on the extent of awareness of educational benefits of Web 2.0 technologies.

5. Discussion

The study revealed that the respondents were aware of educational benefits of Web 2.0 technologies. However, the mean of means of 3.40, which fell within the range of

moderate extent, showed that the respondents were aware of the educational benefits of Web 2.0 to a moderate extent. This finding corroborated the findings of Echeng, Usoro and Majewski (2013) who reported that many Nigerians are not quite aware of the benefits of Web 2.0 technologies in the teaching and learning process. The findings also agreed with Mtega, Dulle, Malekani and Chailla (2014) who noted that faculties' awareness of the usefulness and academic benefits of Web 2.0 tools could enhance its adoption. Business educators need to be aware of the educational values of Web 2.0 and use same tools to actively engage students in educational activities.

Regarding the adoption of Web 2.0 technologies for course planning, the respondents held that these technologies were adopted for course planning to a very low extent with mean of means of 1.43. This finding is in disagreement with the findings of Nazatul-Aini (2014) who reported that university faculties in Malaysia used Web 2.0 tools for learning planning to capture not just the interest of students but to cater for the needs of students with different levels of thinking. Most people will readily agree that poor adoption of Web 2.0 technologies for course planning could be attributed to teacher-centered form of course planning adopted by lecturers in most tertiary institutions in Nigeria. Ajise and Fagbola (2013) reported lecturers' high level of usage of Web 2.0 with regards to activities which excludes instruction. Harris and Lea (2009) noted that Web 2.0 technologies are beneficial to instructors to collaborate with students in planning and delivery of course content.

Regarding the adoption of Web 2.0 technologies for students' assessment, the study found that the adoption of Web 2.0 for students' assessment was rated at very low. This finding corroborates the findings of Anunobi and Ogbonna (2012) who expressed concern that despite the opportunities offered by Web 2.0 technologies in teaching and learning, their adoption is very low. Elliot (2008) observed that one of the ways assessment can evolve to suite the digital age learner is to adopt Web 2.0 for assessment in the educational process.

The test of the first hypothesis revealed that male and female business educators did not differ significantly in their ratings of awareness of educational benefits of Web 2.0 technologies. The finding goes counter to the finding of Collins and Hide (2010) who reported that male teachers are more aware of the usefulness of Web 2.0 tools than female teachers because male teachers show more positive attitude towards the use of Web 2.0 than female teachers. Individuals irrespective of their gender use different Web 2.0 technologies readily accessible in computers and handheld devices and are likely to be aware of certain educational potentials of Web 2.0 technologies.

Similarly, the test of the second hypothesis showed that respondents aged 45 years and above and those below 45 years differed significantly in their ratings on the extent of awareness of educational benefits of Web 2.0 technologies. This finding agrees with the findings of Collins and Hide (2010) that young teachers are more aware of Web

2.0 in education than older teachers because young teachers always explore the various uses of web technologies. Providing reasons for this disparity, Koll and Hill (2008) asserted that adult educators do not feel comfortable with web technologies because they have not explored adequately how new and emerging technologies could enhance their work practices. Young people tend to be more aware of web technologies than older individuals as they are always on the web scouting for information and new ways of accomplishing tasks.

The mean ratings of experienced and less experienced business educators in tertiary institutions in south east Nigeria showed that experienced and less business educators did not differ significantly in their ratings on the extent of awareness of educational benefits of Web 2.0 technologies. This result disagrees with the findings of Yeun, Yaoyuneyong and Yeun (2011) who reported that years of experience in teaching predicts one's interest, perception and overall experience with Web 2.0 tools. They noted that experienced teachers are more aware of the benefits of Web 2.0 tools than teachers who have fewer years of experience in teaching.

The test of the fourth hypothesis revealed that business educators in universities and colleges of education did not differ significantly in their ratings on the extent of awareness of educational benefits of Web 2.0 technologies. This result is in disagrees with the report of Meyer and Xu (2009) that university lecturers are more aware of the benefits of web technology than college lecturers because university lecturers focus on research and teaching while college lecturers focus more on teaching rather than research.

6. Conclusion

In view of the findings of this study, it was concluded that there existed a fair awareness of the educational benefits of Web 2.0 technologies. This probably made it difficult for it to be adopted for educational activities. Business educators' level of awareness of these web tools is not compatible with their utilization for educational instruction. This implies that business educators may not effectively harness the potentials of these tools and will find it difficult to tackle the needs of digital learners. Additionally, poor adoption of Web 2.0 tools for educational instruction implies that business educators scarcely provide the learners opportunity to create their own digital learning materials, personal study environments and social groups so as to demonstrate knowledge and aptitude required in a knowledge-based society. The study also concluded that young business educators use Web 2.0 technologies for educational instruction more than older business educators. The reason for this is obvious. The older business educators are digital migrants who were not trained with these web tools.

7. Recommendations

Sequel to the findings and conclusion of the study, the researchers make the following recommendations:

1. Business education curriculum planners, developers and implementers should revise the curriculum framework of business education programme to ensure the inclusion of web technologies in order to enhance collaboration, inclusive participation and interaction between teachers and students.
2. The management of tertiary institutions as well as professional bodies like the Association of Business Educators of Nigeria (ABEN) should institute regular workshops, symposia and seminars to train members on the use of Web 2.0 technologies. This would strengthen their instructional competencies.
3. All business educators should keep abreast with emerging technologies and find ways of adopting them for educational instruction. This would make them to be digitally compliant and have the capability to apply the new technologies in the instructional process.

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