



Bridging the Digital Divide Existing Among Business Educators in Colleges of Education in Delta State, Nigeria

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ABSTRACT

This study examined existing digital divide and strategies for bridging the digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria. It adopts the survey design. Two research questions were raised to guide the study and two null hypotheses were tested, at 0.05 level of significance. The sample consisted of 60 drawn from a population of 81 Business Educators. One validated questionnaire with reliability coefficient of 0.86 was used for data collection. Mean, standard deviation and t-test were used for analysis. The findings indicated that digital divide exist among Business Educators in Colleges of Education in Delta State. Thus, greater percentage of the Business Educators secured teaching appointments in Colleges of Education in Delta State, Nigeria with inadequate ICT access, incompetencies of using technology, and availability of inadequate ICT facilities. The researcher concludes that digital divide not only affects Business Educators' access to technology resources, but also affects their opportunities to use ICT facilities and it is imperative that new strategies application and standards should be constructed to bridge the digital divide. Based on the findings and conclusion, it is recommended, among others, that the solutions to bridge the digital divide must be based on an understanding of local needs and situations, and integrating technology into the society in an effective and sustainable way. Also, Delta State Government should make policy for digital environment that will be pragmatic and implementable.

Keywords: ICT, Digital Divide, Bridging, Business Educators, Education

INTRODUCTION

In knowledge-oriented society of today, mankind is passing a phase of evolution. This evolution covers not only technology, its devices and environment, but also covers human lifestyle and fundamental concepts of life; from concept of work to the concept of education, in which major changes have been experienced by all (Tabatabaiye, 2002). These major changes that have occurred recently have essentially impacted societies in many ways. These changes have caused significant changes in educational systems. Educational patterns have turned schools from traditional/conventional teacher-oriented pattern to learner-oriented patterns and have brought about digital instruction era; an era in which learning has made its way outside schools and is accessible from home, workplace and other places (Battro, 2005). In fact, all of these changes are the results of growth of communication technologies.

The advent of information and communication technologies (ICTs) has indeed led to global technological revolution which continues to globally change the social and economic milieus of countries making use of these technologies. Interestingly, it is worthy to note that developed countries have become knowledge societies because of this global technological revolution and most of the developing countries are also

putting in place strategies to bridge the digital divide by encouraging the use of ICTs (Osunkunle, 2008). It must however be emphasized that digital divide exist in these developing and under-developed countries as most of their residents still do not have access to ICTs. This probably, is due to the fact that ICT facilities are not readily available in the areas where they reside or because they cannot afford the use of such ICTs (Osunkunle, 2010).

The term digital divide refers to the gap existing between the availability and usage of internet, and the access to it by individuals and households, organisations, regions and countries at different socio-economic levels of ICTs (Lesame, 2005). Digital divide can also be defined as the gap existing between those who can access and can also effectively use new generation information and communication tool, such as the internet service, and those who do not and cannot have access to it (Beebe, Kouakou, Oyeyinka and Rao, 2003) in (Osunkunle, 2010). This shows that digital divide not only refers to the gap that exist between the impoverished, poor, rural “have-nots” and the affluent, rich, urban “haves”, but it also points to the divide that exist between the underdeveloped and developed nations of the world (Osunkunle, 2008).

The digital divide phenomenon is not exactly new. In the late 1980s and early 1990s, it was fashionable to talk of the information rich and the information poor and the public Internet which helped make visible the information gap between the haves and the have-nots (Cronin, 2002). Measurable differences in ownership of computers, access to information technology and baseline indicators of internet-connectedness, according to Cronin, (2002) have powerfully illuminated the gap between elite and marginal groups within and across nations. They bring the rhetoric of information rich/information poor clearly to life, helping to get the issue of distributive unfairness on the radar screens of the people who supposedly matter. Consequently, the term digital divide, refers to unequal access to information technology.

However, several scholars have addressed the digital divide as a technical issue rather than as a reflection of broader social problems (Light, 2002). Therefore, to have a better understand of the term digital divide, the forces influencing it must be considered. According to Mitchell (2001), every social situation is affected by five general categories of forces: society, technology, economics, politics and the environment. Thus, some believe the digital divide is explainable by income, education and location and that digital divide is the line that separates those who have computer access, along with corresponding skills and usage of internet, from those who neither have access to computer technology nor the internet (Gaillard, 2001).

Digital divide is a term severally used to explain the social implications of imbalanced access of some sectors of the community to information and communications technology and to the achievement of necessary skills (Cronin, 2002). Access to computers and the internet and the facility to aid effective use this technology are becoming increasingly important for full participation in social, economic, and political life. One of the necessary requirements to ensure equality in access to the information economy, to enable government achieve electronic service delivery objectives and to allow people to capitalize on the opportunities for economic growth offered by the information age, is access to online technologies (Cronin, 2002).

The digital divide is a complex and dynamic problem which has political, cultural and ethical dimension (Ahmed, 2007).The digital divide is also, a social problem that is caused by inequalities in the ability to access and to use information communication technologies. Therefore, the digital divide is a threat to social and economic justice as well as to education which could occur on every possible level: locally, nationally and globally. Institutions of learning have been seen always as a panacea for any social problems by several social groups such as educators, policy makers, and parents (Cuban, 2002). Thus, it is not surprising that institutions of learning are being seen as solution to bridging the digital divide today. Many people think that institutions of learning can serve to help bridge this digital divide through the classrooms (Cohen, 2002; Cuban, 2002; Bolt and Crawford, 2000), but they miss an important point that since the problem has already taken its controversial dimension in places and organizations such as rural and. urban settlements, public and private sectors, or small and. large firms, etc, how can every institution of learning in different settings help bridge the digital divide?

Statement of the Problem

Inequality to access to new generation of ICTs among academic staff in institutions of higher learning has attracted widespread attention and prompted debate among professionals and research bodies. Digital divide researches into ICTs as found at different educational levels, are derived from innovative experiences that highlight the relevance of ICTs for collection and dissemination of information, and communications within the educational community. Cavusa and Kanbulb (2010) indicated some of the advantages of using ICT platforms such as for sending and receiving works or exercises, providing immediate feedback in tests, communicating with teachers and other colleagues, accessing training information and carrying out collaborative work. Greater percentage of the academic staff secured teaching appointments in the tertiary institutions with inadequate ICT access, and incompetency in using technology (Ezekwe, Onwe and Udu, 2014).

Other challenges are considered like skills and confidence, economic viability and inadequate ICT facilities as some struggle to participate fully in the learning practice may be a nightmare (Ezekwe, Onwe and Udu, 2014). Bridging the digital divide might not be the responsibility of individual academic staff, and the curriculum may not be designed to address these concerns. Could this be the responsibilities of the institutional management and academic staff to fashion out ways of improving the needed ICT facilities for the overall academic performance? The study of Baume (1996) in Ezekwe, Onwe and Udu, (2014) conducted on the field asserted that the social and educational climate is creating a paradoxical situation for many lecturers who need to become lifelong learners themselves in order to facilitate the learning of others. However, resources of digital know-how and expertise are less visible and are less obvious targets for investment (Supporting Learners in a Digital Age, 2011 in Ezekwe, Onwe and Udu, 2014).

Considering the benefits of adopting ICT, it provides new opportunities to explore high cognitive activities such as autonomy, creativity, problem solving and teamwork. It equally provides with the means to take into account individual needs of students especially, while using web-based technology (Aduke 2008). However, considering the Business Educators in Colleges of Education in Delta State, Nigerian environment and the educational curriculum, adopting ICT for teaching, learning, research and community development to a reasonable extent has paved way for digital divide and has affected the academic performance and creative output. Thus, the study seeks to address the issues of bridging the digital divide among Business Educators in Colleges of Education in Delta State, Nigeria.

Purpose of the study

The purpose of the study was to determine the digital divide and strategies of bridging the digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria. Specifically, the study was poised to;

1. Determine the digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria.
2. Determine the strategies of bridging the digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria.

Research Questions

The study was guided with the following research questions;

1. What are the digital divides existing among Business Educators in Colleges of Education in Delta State, Nigeria?
2. What are the strategies of bridging the digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria?

Null Hypotheses

The following null hypotheses were formulated to guide the study;

1. There is no significant difference in the mean ratings of male and female Business Educators on the digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria.

2. There is no significant difference in the mean ratings of male and female Business Educators on the strategies of bridging the digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria.

METHODOLOGY

The survey research design was adopted for the study. The population consisted of 81 male and female Business Educators drawn from the four Colleges of Education in Delta State, Nigeria. A sample size of 60 respondents was used for the study. The instrument for data collection was developed by the researcher and the instrument was tagged “Bridging the Digital Divide among Business Educators in Colleges of Education Questionnaire” (BDDEABECOEQ), which is made up 15 items for each research question. The instrument was validated by three experts in Delta State University, Abraka. Variables for this study included causes and strategies and each of these was measured using a four point Likert-type rating scale to measure the respondents’ general feeling such as Strongly Agreed (4), Agreed (3), Disagreed (2) and Strongly Disagreed (1). Data collected were analyzed using the mean and standard deviation, while t-test was used to test the two formulated null hypotheses. Any mean score of 2.50 and above was termed agreed and mean scores below 2.50 were termed as disagreed.

PRESENTATION OF DATA AND ANALYSIS

Research Question One

What are the digital divides existing among Business Educators in Colleges of Education in Delta State, Nigeria?

Table 1: Mean Ratings of Digital Divides existing among Business Educators in Colleges of Education in Delta State, Nigeria.

S/N	Digital Divide existing among Business Educators in COE	Mean	Standard Deviation	Remark
1	Digital Availability Divide	3.43	1.03	Agreed
2	Digital Affordability Divide	3.55	0.95	Agreed
3	Digital Accessibility Divide	3.55	0.87	Agreed
4	Digital Acceptability Divide	3.51	0.78	Agreed
5	Digital Usability Divide	3.43	0.95	Agreed
6	Digital Social empowerment Divide	3.70	0.85	Agreed
7	Digital Literacy Divide	3.08	0.55	Agreed
8	Digital Fluency Divide	3.43	0.67	Agreed
9	Digital Anxiety Divide	2.79	0.45	Agreed
10	Technology Sustainability Divide	3.15	0.65	Agreed
11	Digital Inequality Divide	3.91	0.77	Agreed
12	Digital Economic Status Divide	3.09	0.71	Agreed
13	Socio-economic Level Divide	3.21	0.66	Agreed
14	Digital Competencies Divide	2.89	0.82	Agreed
15	Digital Phobia Divide	3.83	0.99	Agreed

Source: Field Work (Umoeshiet, 2016)

Out of the fifteen items of digital divide listed, all were considered agreed with mean scores ranged from 2.79 to 3.91 with regard to the decision rule as perceived by the respondents. The implication is that respondents agreed that digital divide exist among Business Educators in Colleges of Education in Delta State, Nigeria and needed to be bridged for better performance.

Research Question Two

What are the strategies for bridging the digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria?

Table 1: Mean Ratings of Strategies for Bridging the Digital Divide existing among Business Educators in Colleges of Education in Delta State, Nigeria.

S/N	Strategies for Bridging Digital Divide Existing among Business Educators in COE	Mean	Standard Deviation	Remark
1	Business educators should understand the context of digital divide itself	3.21	0.66	Agreed
2	Utilization of mediated use of open educational resources between Business Educators and learners	2.76	1.07	Agreed
3	Practice of open access for Business Educators where no prior qualifications are needed to register	3.66	0.85	Agreed
4	Substituting digital resources and digital environments for physical resources and physical environments	3.08	1.16	Agreed
5	Policy for digital environment that is pragmatic and implementable	3.47	0.91	Agreed
6	Manpower development and curriculum redesigning	3.85	1.01	Agreed
7	Approval and implementation of extra-curricular activities for Business Educators to continue practice and training in ICTs from service providers	3.09	0.86	Agreed
8	Acquiring ICT skills and competencies by Business Educators	3.13	1.09	Agreed
9	Constant upgrade of ICT to avoid obscure information by Business Educators	3.89	0.78	Agreed
10	Setting up public internet windows or terminals with easy access at strategic places in the school environment for	3.08	0.73	Agreed
11	Provision of more fund to create ideal learning digital environment in the school	3.11	1.03	Agreed
12	Adequate procurement of ICT facilities for the continued practice within the learning environment	3.54	0.84	Agreed
13	School management should be ready for the affordability of ICT infrastructure for high quality of pedagogy	2.63	0.99	Agreed
14	Lifelong learning practices should be encouraged among business educators	3.81	0.69	Agreed
15	Collaboration among Business Educators on the need to embrace ICT as an innovation in order to bridge the digital divide	2.70	0.97	Agreed

Source: Field Work (Umoeshiet, 2016)

Test of Hypotheses

Hypothesis One

There is no significant difference in the mean ratings of male and female Business Educators on digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria.

Table 3: t-test Analysis of Male and Female Business Educators on Digital Divide existing among Business Educators in Colleges of Education in Delta State, Nigeria

Respondents	N	Mean	STD	DF	P	t-Cal.	t-Crit.	Decision
Male	33	3.39	0.80					
				58	0.05	0.27	2.00	Accepted
Female	27	3.33	0.88					

Table 3 presents the t-test analysis of male and female Business Educators on digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria. The table shows that the calculated t-value of 0.27 is less than the t-critical value of 2.00. Therefore, the null hypothesis was upheld and that means that there was no significant difference in the mean responses of male and female Business Educators on digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria.

Hypothesis Two

There is no significant difference in the mean ratings of male and female Business Educators on the strategies of bridging the digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria.

Table 4: t-test Analysis of Male and Female Business Educators on the Strategies of Bridging the Digital Divide existing among Business Educators in Colleges of Education in Delta State, Nigeria

Respondents	N	Mean	STD	DF	P	t-Cal.	t-Crit.	Decision
Male	33	3.70	0.64					
				58	0.05	0.13	2.00	Accepted
Female	27	3.50	0.76					

Table 4 presents the t-test analysis of male and female Business Educators on the strategies of bridging the digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria. The table shows that the calculated t-value of 0.13 is less than the t-critical value of 2.00. Therefore, the null hypothesis was upheld implying that there was no significant difference in the mean responses of male and female Business Educators on the strategies of bridging the digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria.

DISCUSSION OF FINDINGS

The findings of this study acknowledge that the concept digital divide exist among Business Educators in College of Education in Delta State, Nigeria. Thus, greater percentage of the Business Educators secured teaching appointments in the Colleges with inadequate ICT access/competencies of using technology, skills and confidence economic viability and inadequate ICT facilities. This finding is in line with the view of Osunkunle (2010), who pointed out that digital divide exist in the developing and most especially under-developed countries as most people still do not have access to ICTs and this is probably due to the fact that ICT facilities are not available in the area where they reside or because they cannot afford the use of such ICTs.

Another major finding from this study is the total agreements by respondents that the strategies listed in Table 2 can contribute immensely and are very beneficial to the bridging of the digital divide existing among Business Educators in College of Education in Delta State, Nigeria. This finding is consistent with earlier view of Osunkunle, (2008) stating that, it is interesting to note that developed countries have become knowledge societies because of this technological revolution and most developing countries are also putting strategies in place to bridge the digital divide by encouraging the use of ICTs. Also, according to Planting (2002), we need policy that is pragmatic and that can be implemented for practically achievable. It was also said in the study of Herselman and Britton (2002), in tackling the digital divide the first step of strategy toward bridging the digital divide is to understand the divide itself.

CONCLUSION

The digital divide not only affects Business Educators’ access to technology resources, but also affects their opportunities to use ICT facilities. The basic problem of digital divide is that, technology has been too expensive and complicated for most Business Educators to access and afford, and this technology had influence the educational systems, which in turn now has adverse effect on who are the ‘haves and have-nots’ of this new Technology Information Age. Therefore, it is imperative that new strategies, application and standards should be set to construct at least a rope bridge over the digital divide. Knowing well that, the digital divide problem is complex and lacks an easy solution because of its significant difference in

the access to and equity of technology experience based on categories of users such income, race, gender, location and education, there is every need for more funding and creation of ideal learning environments for finding practical and workable solution for classroom teachers. Thus, to a great extent extra-curriculum activities are also needed for Business Educators for continuous practice and training in these new technology activities to encourage high level of competence using of the ICT's facilities. These on their own may not immediately bring everyone all the way up to speed in technology access, but each will be a surefooted step in that direction to bridge the digital divide existing among Business Educators in Colleges of Education in Delta State, Nigeria.

RECOMMENDATIONS

Based on the findings and conclusion of the study, the following recommendations were made:

1. The digital divide is a very complex problem that manifests itself in different ways in different social backgrounds and different cultures. Therefore, the solutions to bridge divide must based on an understanding of local needs and conditions, and integrating technology into society in an effective and sustainable way.
2. Government should make policy for digital environment that will be pragmatic and implementable.
3. Policy maker should approve policies aimed at bridging the digital divide existing among academic staff.
4. Government and school management should be also ready for affordability of ICT infrastructure for academic staff to bridge the digital divide existing among academic staff.
5. There should be collaboration among Business Educators on the need to embrace ICT as an innovation in order to bridge the digital divide.

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