

ECONOMICS EDUCATOR'S COMPETENCY IN THE USE OF INTERNET TECHNOLOGY IN TEACHING UNDERGRADUATES IN UNIVERSITY OF NIGERIA, NSUKKA

By

**NJIDEKA DORATHY ENEOGU, CHIAMAKA UGWUANYI, PETER KALU
OGBONNA, AND OFUYA OGHENERODE.**

**Department of Social Science Education, University of Nigeria, Nsukka. Enugu
state**

njideka.eneogu@unn.edu.ng

08068121664

Abstract

This paper investigated the Economics Educator's competences level in using internet tools in inculcating undergraduate Economics to enhance economics literacy. The study is a descriptive survey. The study population comprised 50 Economics educators from Economics Education and Economics major, all from University of Nigeria, Nsukka. All the 50 Economics Educators were used for the study. The instrument for data collection was a 23-itemed competency test titled 'Lecturers' Internet Technology Competency Test (LITCT)' developed by the researchers. The areas of competency that were tested using the instrument were knowledge of networks, computer knowledge, ability to use search engine and knowledge of world wide web. The data collected was analyzed using Mean for the research questions and t-test was used to test the hypothesis at 0.05% level of significance. It was revealed that Economics Educators are competent in the use of internet technology also male students were more competent in internet technology than females but the hypothesis that was tested proved that the difference in male and female competence was not significant Hence, the researchers recommended that although the educators are competent, there is need to use the skills they have of internet technology during Economics instructional delivery as a continuity of learning after the classroom which may help to understand more

economic issues and more principles guiding economic activities in the society. This may enhance interest of students in the subject and promote Economic literacy.

KEY WORDS: Internet, Technology, Economics, Economic literacy

Introduction

The advent of internet technology has to a great extent influenced human activities and it is speedily altering the system and procedures of teaching, learning and research which have recently taking new dimensions. Technology as viewed by Agboeze and Agboeze (2012) has improved the methods, means, and mode of learning and teaching in educational institution. Internet technology has provided flexibility in education and has led to increase in information availability. Internet technologies (IT) are collection of technology that permit it users' admittance to information and communication through World Wide Web (Web browsers, file transfer protocol, e-mail, associated hardware, Internet service providers, and so on) (Darbyshire, 2009). Internet Technology is a type of information technology that is communication based. It involves network protocols and communication mechanisms that enable data to be transmitted within and between geographically separated entities in order to support formal business processes across networks (Sharon, 2008). Operationally, Internet technology can be referred to a group of web-based technologies that make communication possible. These Internet technologies include Video and Podcasting, Presentation Tools, Collaboration and Brainstorming Tools, Blogs and Blogging, Wikis, Social networking, instant messaging, among others.

The application of internet technologies in schools and colleges can be applied to perform numerous functions. This functions include; submitting research papers and proposals reports, coordinating research with staff on study leave overseas; making library contacts to discussing issues applicable to provisions of services from other institutions; providing access to e-mail; publicizing educational institutions to seek funds for research projects, applying for further studies overseas and ordering educational facilities from suppliers outside the country (Kamba, 2007). Kamba categorically stated that Internet information resources are rapidly permeating into the common consciousness of Nigerian academic circles. Some lecturers apply Internet technology in different ways like posting course syllabi and readings on the Web, using interactive course design packages such as WebCT and First Class, and using communication tools such as chats software and Web bulletin boards and so on. Some others use social media applications like whatsapp, facebook, instagram, twitter, LinkIn and so on. Educators in the recent times are so enthusiastic in incorporating Web technology in the administration of their courses and this provides with the opportunity for collaboration and interaction with other educators, students and researchers. The use of internet technology for education purposes has numerous benefits for higher

education stakeholders. These merits includes but not limited to the facilitating distant and mobile Education (Wang, 2008), enhancing learning outcomes (Valk, Rashid & Elder, 2010), motivating students in overcoming shortage of skilled and experienced instructors (Bass & Thapa, 2014), facilitating student centered learning, (Ertmer & Ottenbreit-left Wich, 2013), facilitating constructivist learning environment (Howland, Jonassen&Marra 2012), promoting life-long learning (Aspin, Chapman, Hatton & Sawano 2012), promoting a knowledge based economy (Dutta & Mia, 2010), increasing access to a wide range of Education recourses (Khan, Hossain, Hasan & Clement, 2012), enhancing and improving communication between students and instructors and among students (Khan, Hossain, Hasan, & Clement, 2012), and taking account of individual differences (Graf, 2009).

Internet technology provides interactive learning, teaching and research, either with students, teachers, the environment, or the learning material (Kamba, 2007). Nwagbo and Ugwuanyi (2012) opined that an effective e-learning system motivates students to investigate relevant areas of their study rather than fully depending on the manual resources. When students use the library to clarify issues from the internet, it makes learning more permanent and concrete and in other words encourages students to go into research. The internet resources allow the students and the teachers to understand ideas as they emerge (Kamba, 2007). Internet resources are needed in all disciplines including Economics. The natures and scope of Economics cannot be easily assimilated without the use of internet resources. This is because information is endless and not limited to text books. Internet resources make available the resources not articulated in the text book and allow students to probe further to understand the ones articulated in the text book. Economics is a discipline that concerns every field of life. Economics helps people comprehend how a range of factors work with and against each other to control how labour and capital resources get used and how other factors like inflation, supply, demand, interest rates and others determine how much an individual compensate for goods and services (Gaffney, 2018). From the view of Gaffney, one can say that Economics is a complex discipline and cannot be limited to a textbook material hence, the need for internet resources to boost the knowledge of Economics among students. The importance of Economics will be understood more when conceptualized.

Economics has been defined by many researches from deferent perspective. Economics according to Newman (2015) is the social science that studies the choices individuals, businesses, governments, and entire societies make to manage scarcity and the incentives that influence and reconcile the choices. Economics is a social science that deals with production, distribution and consumption of goods and services. It studies how individual, businesses government and nations make choices in the allocation of resources to satisfy their wants and needs to achieve maximum output

(Chappelow, 2019). Agu (2009), in relation to the definitions above, referred Economics to a social science concerned with the means through which the society chooses to utilize its limited resources which have alternative uses to produce goods and services for the present and future consumption. Operationally, Economics is defined as a study of how individuals make choices to maximize the use of limited resources to satisfy unlimited wants. The knowledge of Economics is an eye opener into the future. It makes an individual a rational being thereby giving the individual the opportunity to predict the present and the future economically. Despite those importance, the subject is perceived to be difficulty and abstract by student (Adu, 2014). This result to students' loss of interest to learn it, thus resulting to low performance ((Attah, 2016; Sunday, 2016; Kalu, 2013). Hence, the knowledge of this subject is inevitable for every person. This perception can be averted if the internet technologies are applied in Economics instruction. This can only be possible if Economics educators apply it. The importance of Economics necessitated the need for individuals to become Economic literate. Hence, this study investigated the Economic Educators competency in the use of internet technology.

Economic literacy is the ability to use the knowledge of basic economic principles to make decisions concerning earning, saving, spending, and allocation of fund to daily needs. These basic concepts include Demand and supply, Opportunity Cost, Economics efficiency, cost benefits, utility and scarcity and so on (Norrish, 2017). Economic literacy involves the ability to understand and apply primary economic ideas to make balanced decisions about the use of limited resource. Economic literacy is the basic understanding of Economics that enables people to understand and explain cause and relationship in their economic activities which help them in solving their economic problems in their everyday life (Rivlin in Cakmak, Benk, Budak & Yucedogru, 2015). Additionally, NCREL (2003) added that the level of economic literacy determines an individual's ability to interpret the economic problems, evaluate the possible alternative solutions, calculate the cost and profit, and observe economic situation. Gerek and Kurt in Cakmak et'al (2015) stressed that Economics literacy is fundamental for everyone. The reason according to the author is that it is helpful for understanding the economy and directs people to be more rational in decision making. Based on these explanations, it can be seen that economic literacy has individual and social impacts. From the individual's perspective, an economic actor, solve a range of economic problems from the simplest trade activity to more complex investment decisions. Consequently, decision making in the economic world requires assessing the causality of relationships within economic activities properly. When considered from this point, it is fair to claim that there is a direct relationship between the level of economic literacy and economic efficiency. In other words, existence of the economic rationality depends on the existence of the economic literacy. The need for economic literacy is necessary to enhance peoples understanding of daily

economic activities and become able to explain and apply causes and relationships in solving economic problems. Economic literacy is what an individual needs to move beyond the present state of the challenging economy and become able to compete in this competitive world. However, the knowledge Economics that will make an individual Economic literate cannot be restricted to the classroom. To be economically literate, there is need to go beyond the textbook into internet technological resources in order to be informed of economic issues necessary for survival in the economy and what is happening in other economies that can be learnt from

There are two merits of using Internet resources to enhance student's economic courses. Firstly, internet resources offer a new medium of interaction that complements classroom instruction and facilitates learning. Secondly, internet resources offer students the opportunity to learn and use Internet tools which yields positive externalities for future academic and career paths. Hence, there is need for teacher competency such that will enable the teacher to direct Economics students to source for economics information that will build their Economics knowledge and literacy. But the question is, are teachers competent in internet technology such that will enhance Economic literacy.

A study carried out by Ugwuanyi and Nwagbo (2012) on the level of lecturers' information and communication Technology (ICT) competence for the adoption of E-learning in the Nigeria Universities indicated that most lecturers' possess the necessary ICT competence needed for the adoption of E-learning in teaching and learning. The result also revealed that gender is not a significant factor in ICT competence of lecturers. The study recommended professional development programs with emphasis on E-learning pedagogies as well as the establishment of E-learning support structures for lecturers. Kamba (2007) also carried out related study on the internet as a tool for interactive learning, teaching and research: Nigeria experience. It further exhibited the impact of the Internet in advancing research, teaching and learning abilities and techniques of the researchers, teachers and students respectively. The findings of the study exhibits that a number of teachers and students are aware of the benefit of the Internet as a tool for interactive learning, teaching and research; the findings revealed that the respondents lacked access to internet in their schools and colleges and therefore, none of the teachers used it for interactive teaching. Sarfo, Amankwah, Oti-Agyen and Yidana (2016) carried out another study on the Information and communication technology access and use and competency level among second-cycle school teachers in Ghana. The findings of the study showed that majority of the teachers have access to ICT tools such as computers, mobile phones, the Internet and personal digital assistants but have low competency in database and multimedia

application software required for the design of activities related to classroom management and assessment.

The studies reviewed above revealed that teacher possesses' competencies in ICT. These studies were not subject focused and not in the area of the present study. More so, if teacher possesses the competencies in ICT, why is it still difficult to cope with the technological global development and imbalance with other economics? Why is it still difficult for our students to compete with the others in the global market? Why are people not gaining from the verse information on the internet technologies that can change their lives in the economy? Why is it still difficulty to apply rationality in making choices if information is a bound on the internet on how to apply the principles of economics to do so? Could it be that teachers don't apply the skills in instructional delivery? The answer to these questions informed the researchers to find out the competency possessed by Economics educators in the use of internet technology.

The justification for this study is that the perception of students about Economics is that it is abstract and difficult. These perception influences their interest negatively in studying the subject thus leading to poor performance (Kalu, 2013). If this problem is not mitigated, the ability to survive in the dynamic and uncertain economy after school may be impossible and consequences abound. A way to mitigate this challenge is to educate students on diverse internet technological means of sourcing economic information where they can lean on their own outside the classroom. This will not only improve their interest in Economics but change their perception towards the subject which may enhance their performance. To achieve this, Economics educators need to be competent in using internet technology for them to be able to encourage continuity of learning by directing students to various internet means where Economics material can be sourced, this may enhance Economic literacy but dependent of competency level to use the internet technology.

Purpose of the study

The study assessed Economics Educators competence in the use of internet technology in the teaching and learning of Economics. Specifically, the study sought to determine;

1. the competency level of Economics Educators in the use of internet technology in teaching Economics
2. the competency level of male and female Economics Educators in the use of internet technology in teaching Economics.

Research Questions

The following research questions guided the study.

1. What is the competency level of Economics Educators' in the use of internet technology in teaching Economics?
2. What is the competency level of male and female Economics Educators in the use of internet technology in teaching of Economics?

Hypothesis

A null hypothesis was formulated and tested at 0.05 level of significance

H₀₁: There is no significant difference in the mean score of male and female Economics Educators on internet Technology competency test.

Methodology

A descriptive survey design was used for the study. The population consisted of fifty Economics educators from Economics Education and major Economics all from University of Nigeria, Nsukka. All the fifty Economics Educators were used as the number was manageable. The instrument for data collection was a 23-item questionnaire constructed by the researchers. A competency test titled Lecturers' Internet Technology Competency Test (IITCT) consisted of two sections, A and B. Section A sought information on personal data of respondents while the section B on the other hand sought the information on internet competency levels of the Economics Educators in four areas namely; knowledge of networks, computer knowledge, ability to use search engine and knowledge of www. The instrument was validated using three experts from the department of Computer Science and Management Information System (MIS) unit of the University of Nigeria, Nsukka. The data was collected by administering the test to the Economics Educators. 15 minutes was given to them to attempt the questioned. Data collected were analyzed using percentages, mean and standard deviation for answering the research questions and t-test statistics for testing the null hypothesis. The bench mark for acceptance of mean is 2.50 and above. The bench mark for acceptance of the percentages is 50% and above.

Result

Table 1: The competency level of Economics Educators in the use of internet technology in teaching Economics

s.no	ITEMS	%RIGHT	% WRONG
1	Knowledge of World Wide Web	77.78%	19.56%
2	Ability to Use Search Engine	66.63%	33.37%
3	Network Knowledge	56%	44%
4	Computer Knowledge	50.02%	49.98%
	Total average for the 23 items	62.22%	37.18%

From table one above on the competency level of Economics Educators in the use of internet technology in teaching Economics, findings revealed that they are competent considering the percentage of correct answer which is 62.22% above the mean bench mark compared with the percentage of wrong answers of 37.18% which is below the mean bench mark.

Table 2: Percentage of correct answers on the competency level of male and female Economics Educators in the use of internet technology in teaching of Economics

ITEMS	% of (Male)	% of (female)
1.Knowledge of World Wide Web	77	77.2
2. Ability to Use Search Engine	55.2	58
3.Network Knowledge	60.2	49.2
4.Computer Knowledge	51	45.5
Total average	60.85%	57.48%

The table above shows the percentage competency level of male and female Economics Educators in the use of internet technology in teaching of Economics. the result revealed that male Economics educator perform better by 60. 85% in the competency test than female whose average percentage is 57.48%.

Ho: There is no significant difference in the mean score of male and female Economics Educators on internet Technology competency test.

Table 3: t-test analysis of the gender and competence level on technological literacy

Group Statistics						
	GENDE R	N	Mean	Std. Deviation	Std. Mean	Error
TECHCOMPETE	MALE	22	13.9091	3.57117	.76138	
NCY	FEMALE	15	13.4000	1.72378	.44508	

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
TECH COMP ETEN CY	Equal variances assumed	5.455	.025	.511	35	.612	.50909	.99560	7	2.53026
	Equal variances not assumed			.577	32.170	.568	.50909	.88192	-1.28696	2.30514

From the table above, the number of male is 22 and 15 females. There is no significance difference in the mean of the two groups. There no significance different difference in the mean score of male and female Economics educators in internet technological competency since the significance value .61 is greater than the 0.05 level of significance. Hence the null hypothesis was accepted.

Discussion

The findings from research question one in tables one on the internet technology competency of Economics Educators revealed that the Economic educators are competent in the use of internet technology considering the high percentage level of correct answers in the competency test. This finding is in consonance with Ugwuanyi and Nwagbo (2012), that lecturers posses ICT competency. In line with the findings, Kamba, (2007) posited categorically that Internet resources are rapidly permeating into the common consciousness of Nigerian academic circles. This could be because they

are aware of the benefits accrued from it as stated Kamba (2007). In line with the finding, Sarfor, Amankwah, Oti-Agyen and Yidara (2016) revealed in their study that teachers possess high competency level in ICT applications. However, the competency possessed by Economic educators in internet technology is more on the competency of world wide web than networks and computer application. This may imply that lecturers may be using www for their research purposes for material search but may not have adequate skill to use computer or use networks to access Economics related material for instruction.

The result from table two for research question two on competency possessed by male and female Economics educators revealed that male educators performed better in the competency test than their female counterpart. However, that difference in the competency possessed is not significant. This finding is in consonance with the findings of Ugwuanyi and Nwagbo (2012) that also revealed that gender is not a significant factor in ICT competence of lecturers. The implication of these findings put in a question form is, since the educators are competent, why then should students still fear Economics and have negative attitude towards it and consequent to poor performance? It could imply that the educators do not apply the skills in internet technology in Economics instruction for students to know about and access. It could also imply non accessibility of internet technology for them to use for Economics instructions. Based on these implications, recommendations were made.

Recommendations

Based on the findings of the study, the following recommendations were made;

1. The school administration of the University should take center stage in promoting the educational use of internet technology in teaching and learning of Economics to enhance Economic literacy among the students.
2. Training and re-training programmes, from time to time should be organized for both Economics Educators and students on the application of the internet in teaching and learning of Economics, even as a discipline
3. The government in collaboration with University Administrators should make concerted efforts to ensure that there is availability of high speed internet technology equipment, connectivity and steady electricity supply within the University environment, as this will go a long way to improve the competency level of Economics Educators for quality teaching and learning of Economics in our institutions of higher learning.

Conclusion

It was revealed that Economics educators are competent in internet technology, however, it is expected that this competency be applied in Economics instructional

delivery such that students will be opportune and encourages to continue learning after the classroom. This will not only encourage them source for internet application that will make them understand the subject and enhance their interest but also may to change their negative perception towards Economics and also enhance their Economics literacy level for survival in the society.

References

- Agboeze, M. U. & Agboeze, M. N (2012) E- learning as a strategy for effective implementation of Adult Education programmes in Nigeria. *Institute of Education Journal* 23(1) 40-49.
- Agu, C. (2009). *Principles of Economics*. University Press. Nsukka, Enugu Nigeria.
- Aspin, D. N., Chapman, J. D., Hatton, M., & Sawano, Y. (Eds.). (2012). *International handbook of lifelong learning* (Vol. 6). Springer Science & Business Media. <https://doi.org/10.1007/978-94-007-2360-3>
- Attah, R. C. (2016). Factors militating against effective teaching and learning of Economics in secondary school. www.nairastudent.com
- Bass, J. M., & Thapa, D. (2014, January). Multi-casting in mountainous regions of developing countries: Analysis through ICT, institutions, and capabilities perspectives. In *System Sciences (HICSS), 2014 47th Hawaii International Conference on* (pp. 3327-3336). IEEE.
- Bulman, G. & Fairlie, R.W (2015) *Technology and Education: Computers, Software, and the Internet*.
- Cakmak, A. F, Benk, S, Budak, T. & Yucedogru R. (2015). A Study on Economic Literacy Levels of Primary Prospective Teachers. *The International Journal of Early Childhood Learning*.
- Chappelow, J. (2019). Economics: overview, types and Economic indicators. Investopedia.com/terms/e/economics.asp
- Dutta, S., & Mia, I. (2010). *The global information technology report 2009–2010*. In World Economic Forum and INSEAD, SRO-Kundig Geneva, Switzerland.
- Ertmer, P. A., & Ottenbreit-Leftwich, A. (2013). Removing obstacles to the pedagogical changes required by Jonassen's vision of authentic technology-

- enabled learning. *Computers & Education*, 64, 175-182.
<https://doi.org/10.1016/j.compedu.2012.10.008>
- Gaffney, C. (2018). Definition and importance of Economics. Bizfluent.com
- Ghavifekr, S. & Rosdy, W.A.W. (2015). Teaching and learning with technology: Effectiveness of ICT integration in schools. *International Journal of Research in Education and Science (IJRES)*, 1(2), 175-191.
- Graf, S. (2009, September). Advanced adaptivity in learning management systems by considering learning styles. In *Proceedings of the 2009 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology-Volume 03* (pp. 235-238). IEEE Computer Society.
<https://doi.org/10.1109/WI-IAT.2009.271>
- Howland, J. L., Jonassen, D. H., & Marra, R. M. (2012). *Meaningful learning with technology*. Upper Saddle River, NJ: Pearson.
<https://mises.org/wire/textbook-definitions-economics-informal-survey>.
- Kalu, L. M. (2013). Teaching of Economics in schools and universities. *Economics Journal*. 65, 260 – 205.
- Kamba, M. A. (2007). The internet as a tool for interactive learning, *Teaching and Research: Nigeria Experience*. *International Journal of Emerging Technologies in learning (iJET)*. Amman, Jordan
- Khan, M., Hossain, S., Hasan, M., & Clement, C. K. (2012). Barriers to the introduction of ICT into education in developing countries: The example of Bangladesh. *Online Submission*, 5(2), 61-80.
- Narrish, A (2017). What is 'economic literacy'? <https://blog.ecnmy.org/what-is-economic-literacy-577e05c378b6>
- North Central Regional Education Laboratory(NCREL) (2003). enGauge 21st Century Skills :Literacy in digital age. www.engage.com/ncrel. retrieved 12 August, 2019.
- Newman, J. (2015). Textbook definitions of Economics Informal survey.

- Sarfo, F. K, Amankwah S. K, Oti-Agyen. P &Yidara, .I. (2016) Information and communication technology access and use and competency level among second-cycle school teachers in Ghana. *Journal of media and communication Studies*
- Sunday, P. (2016). Factors militating against effective teaching and learning of Economics in secondary schools. www.academia.edu
- Ugwuanyi, C.S & Nwagbo, C.R. (2012). Level of Lecturers' information and communication Technology (ICT) competence for the Adoption of E-learning in Nigeria Universities. *Institute of Education journal*. 23(1). 29-39
- Valentín, A., Mateos, P. M., González-Tablas, M. M., Pérez, L., López, E., & García, I. (2013). Motivation and learning strategies in the use of ICTs among university students. *Computers & Education*, 61, 52-58.
- Valk, J. H., Rashid, A. T., & Elder, L. (2010). Using mobile phones to improve educational outcomes: An analysis of evidence from Asia. *The International Review of Research in Open and Distributed Learning*, 11(1), 117-140.
- Wang, Q. (2008). A generic model for guiding the integration of ICT into teaching and learning. *Innovations in Education and Teaching International*, 45(4), 411-419.