

National Open University of Nigeria Stakeholders' Self-Efficacy in the Use of Selected E-Tutoring Tools for Distance Learning in Nigeria

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Abstract

E-tutoring has been viewed as a modern method of accessing high-quality and good value tutoring services at any time anywhere in the world through the use of Information and Communication Technology (ICT). Self-efficacy is an individual's belief or confidence in his/her ability to perform a particular activity or task, which greatly affects ICT use. The objectives of this study were to determine stakeholders' level of self-efficacy in the use of selected e-tutoring tools, particularly based on gender, work experience and area of specialisation in the National Open University of Nigeria (NOUN). A questionnaire was the primary instrument used to gather relevant data. Data were collected from 100 stakeholders. Six research questions were formulated for the study. Means and percentages were used to answer the research questions, while a t-test was used to test the research hypotheses. The results indicated that stakeholders were less proficient in the use of selected e-tutoring tools. A significant difference was found between male and female stakeholders. There was no significant difference between experienced and less experienced stakeholders. Significant differences were found between academic and technical stakeholders' level of self-efficacy in the use of selected e-tutoring tools. Based on these findings, it was recommended that governmental organisations, non-governmental organisations (NGOs), and universities should organise conferences, training, and workshops to educate NOUN stakeholders on the benefits of using e-tutoring tools for instruction.

Keywords: stakeholders, National Open University, self-efficacy, working experience, e-tutoring

Introduction

Background to the Study

E-tutoring has been viewed as a modern method of accessing high-quality and good value tutoring services at any time anywhere in the world through the use of Information and Communication Technology (ICT). The institution of ICT in distance education has improved distance

learning systems that bridge the geographical distance between teachers and students. Yusuf and Balogun (2011) defined ICT as computer-based tools that help individuals to work with information and communication dispensation needs of an organisation. The institution and implementation of Information and Communication Technologies (ICTs) in education, also known as learning technologies, has reduced the difficulties associated with traditional teaching methods. This technology has the potential to increase education, empower people, reinforce authority and encourage human achievement and societal development (Olasedidun, 2014).

ICT has transformed the ways in which tutors teach and students learn. Some tutors have actively shifted the information flow of a face-to-face mode to an entirely online mode; that is, they have designed courses and curricula that are offered entirely online using the Internet and the Web (Gérard et al., 2010), and these offerings could be accessed through the use of ICT teaching and learning tools. These tools provide a suitable platform for the teaching and learning process by providing ways for the migration of learning to occur beyond traditional learning methods or the classroom (Asabere, 2012; Yusuf, 2006). Hence, with the growing expansion, awareness, availability and use of ICT, distance education is becoming increasingly more global in nature. ICT can be used in distance education to improve teaching and learning programs, increase administrative efficiency, share ideas on education and learning, and conduct lessons from a remote location (Selvam, 2012). However, with the integration of modern technologies into distance learning, tutors and learners are provided with flexible learning, higher quality education and greater equity in educational opportunities. These modern technologies include the use of virtual learning, online learning, e-learning or e-tutoring and other educational platforms. However, the availability of e-tutoring tools in schools will not guarantee their actual use among stakeholders, irrespective of the technology available in the school. In most Nigerian universities that offer distance education, such stakeholders include academics (or lecturers) and those in systems management (i.e., technical). Lecturers must understand their roles and their level of competence regarding the use of this technology (Kadel, 2005).

Purpose of the Study

The general purpose of this study was to examine National Open University of Nigeria (NOUN) stakeholders' self-efficacy in the use of selected e-tutoring tools for distance learning in Nigeria. The specific purposes were to:

1. Investigate the e-tutoring tools that stakeholders have access to
2. Examine what stakeholders use the selected e-tutoring tools for
3. Determine stakeholders' self-efficacy in the use of selected e-tutoring tools
4. Examine the influence of gender on stakeholders' level of self-efficacy in the use of selected e-tutoring tools
5. Examine the influence of stakeholders' working experience on their level of self-efficacy regarding the use of selected e-tutoring tools
6. Determine the influence of stakeholders' area of specialisation on their level of self-efficacy in the use of selected e-tutoring tools

Research Questions

The following research questions were answered in this study:

1. What are the available e-tutoring tools that stakeholders have access to?
2. What do stakeholders use the selected e-tutoring tools for?
3. What is the self-efficacy of stakeholders in the use of selected e-tutoring tools?
4. How does gender influence stakeholders' level of self-efficacy in the use of selected e-tutoring tools?
5. How does stakeholders' working experience influence their level of self-efficacy in the use of selected e-tutoring tools?
6. How does stakeholders' area of specialisation influence their level of self-efficacy in the use of selected e-tutoring tools?

Research Hypotheses

Based on the research questions, the following null hypotheses were tested in this study:

- Ho₁: There is no significant difference between male and female stakeholders' level of self-efficacy in the use of selected e-tutoring tools.
- Ho₂: There is no significant difference between experienced and less-experienced NOUN stakeholders' level of self-efficacy in the use of selected e-tutoring tools.
- Ho₃: There is no significant difference between academic and technical stakeholders' level of self-efficacy in the use of selected e-tutoring tools.

Review of Related Literature

E-Tutoring and Information and Communication Technology (ICT)

As online learning environments continue to change, both tutors and students need to adapt to best utilise the teaching and learning opportunities afforded by these environments. E-tutoring involves online collaboration, such as posting information on websites, using e-mail for communication, and receiving students' responses electronically (Chakuchichi, 2010). Additionally, Brigitte et al. (2004) defined an e-tutor as someone who interacts directly with learners to support their learning process when they are separated from the tutor in time and place for some or all of these direct interactions.

An e-tutor is sometimes referred to as an academic, teacher, faculty, instructor, corporate trainer, animator, facilitator, moderator, subject specialist and learning support staff, which include any person whose role is to support and enable students to effectively learn online (Higgison, 2000). E-tutoring is further classified into two broad areas by Gambari (2012) and Simpson (2002) as: (1) academic (or tutorial) support, assisting students with cognitive, intellectual, and knowledge components of particular courses or sets of courses, including developing general learning skills, numeracy and literacy, and (2) non-academic (or counseling) support, providing assistance to students in affective and organisational aspects of their studies.

In the e-tutoring environment, interaction/communication between tutor and student is facilitated by digital technology through computers, CD-

ROM, internet and/or cell phones. The institution of ICT in distance education has improved distance learning systems that bridge the geographical distance between teachers and students. ICTs are support tools that generate universal educational modification and reform when used correctly. ICTs also help facilitate teaching and learning in the classroom more effectively and efficiently (Tinio, 2002). As noted by Yusuf (2005), ICT provides opportunities for pre-service teachers as well as academic and non-academic staff to communicate with one other more successfully in formal and informal teaching and learning settings. ICT can be used in distance education to improve teaching and learning programs, increase administrative efficiency, share ideas on education and learning, conduct lessons from a remote location and improve the ICT skills of teachers and students (Selvam, 2012).

However, with the integration of modern technologies into distance learning, tutors and learners are provided with flexible learning, higher quality education and equity in educational opportunities. These modern technologies include the use of virtual learning, online learning, e-learning or e-tutoring, and other educational platforms. Therefore, to achieve these goals, the use of online tools for teaching and learning processes (utilising innovations developed in 2004) has transformed the traditional methods of teaching and learning into more modern approaches since the introduction of web 2.0 tools (Med, 2012). These tools include podcasts, blogs, Wikispaces, webcasts, screencasts, Google, Skype, video conferencing and many other modes of communication.

Competencies as a Requirement for an E-Tutor

The e-learning system requires tutors to have specific competencies. According to the International Board of Standards for Training Performance and Instruction, competence implies a set of knowledge, abilities, and attitudes that indicate an individual's capacity to perform efficiently and meet expected standards.

To define the competencies that a tutor should have, many researchers (Salmon, 2000; Virgil and Varvel, 2007) and authors of professional teacher standards begin from the classification of three functions of the tutor, namely, pedagogical, psycho-social, and managerial. It is interesting to note that in addition to these three competencies, some authors,

including Berge (1995), and Wilson and Stacey (2004), have identified a fourth function of a tutor: technical. Another classification is given by Garrison and Anderson (2003) and Smith (2005), who begin from the idea that an online instructor's competencies should be developed during the three phases of an online course: competencies needed prior to starting a course, competencies needed during the course, and competencies needed after the course. Ryan et al. (2000) added that tutors also need skills for nurturing online collaboration, creating an atmosphere of openness, ensuring that all participants' contributions are valued and welcomed, and building rapport within the group to help members explore ideas, different perspectives, and take ownership of their learning.

However, the availability of e-tutoring tools in schools will not guarantee their actual use among stakeholders, irrespective of the technology available in the school. In most Nigerian universities that offer distance learning, such stakeholders include academics (or lecturers) and individuals in systems management (i.e., technical). Lecturers must understand their roles and their level of competence regarding the use of this technology (Kadel, 2005). As stated by Charles (2012), self-efficacy is one of important variables used to determine the adoption and utilisation of ICT. Bandura (1994) and Kendra (2011) found that an individual's self-efficacy plays a major role in how goals, tasks, and challenges are approached. Self-efficacy is regarded as a factor contributing to why some tutors embrace the use of ICT with classroom learners while others do not. Bandura (1994) noted that self-efficacy is the belief in one's competence to establish and perform the courses of action that are required to manage prospective circumstances. Self-efficacy has also been defined as a person's belief in his or her capability to do well in a specific context. These beliefs are determinants of how an individual reasons, performs, and feels about a specific task. Unlike self-esteem, which reflects how individuals feel about their worth or value, self-efficacy reflects how confident individuals feel about performing specific tasks. However, research has been conducted on tutors' self-efficacy, which was reported to have a greater effect on their use of ICT tools (Del, 2000).

Methodology

Research Type

This study employed descriptive research through a cross-sectional survey method. A researcher-designed questionnaire was used to collect information from the respondents regarding their level of self-efficacy in the use of e-tutoring in NOUN.

Sample and Sampling Technique

A purposive sampling technique was used to collect data from a sample of 100 individuals from the population regarding their level of self-efficacy in the use of selected e-tutoring tools. The researchers made an effort to approach the academic and technical staff at the university for the purpose of obtaining prompt responses.

Research Instrument

A well-structured, researcher-designed questionnaire was used to collect data. Copies of the questionnaire were administered by the researchers in person. The questionnaire was composed of four sections. Section A was for the respondents' bio-data, under which gender, area of specialisation and work experience were categorised. In addition, 'Moderately proficient' (MP, coded 3), 'Less proficient' (LP, coded 2) and 'Non-proficient' (NP, coded 1) were also used.

Section B focused on the available e-tutoring tools to which the stakeholders have access (eight items), Section C focused on what the stakeholders use e-tutoring for (seven items) and Section D focused on stakeholders' level of self-efficacy in the use of e-tutoring (24 items). Likert response modes of 'Highly proficient' (HP, coded 4), 'Moderately proficient' (MP, coded 3), 'Less proficient' (LP, coded 2) and 'Non-proficient' (NP, coded 1) were also used.

Procedure for Data Collection

Data were collected by direct administration. The instrument was administered to respondents and retrieved immediately after the respondents had completed it.

Data Analysis Technique

Data collected for the study were analysed using means and percentages to answer research questions one to three, while hypotheses one, two and three were analysed using an independent *t*-test. All of the hypotheses were tested at a 0.05 level of significance.

Data Analysis and Results

Data Analysis

This part of the paper presents the result of the analysis regarding NOUN stakeholders’ level of self-efficacy in the use of e-tutoring.

Demographic Table

The respondents’ demographic data are presented in Table 1.

Table 1 Percentage distribution of respondents by gender, working experience and area of specialisation

Name of institution	Gender		Working experience		Area of specialisation	
	Male	Female	5 years and above	Below 5 years	Academic staff	Technical staff
NOUN	%	%	%	%	%	%
	55	45	50	50	70	30

Analysis of Research Questions

This part of the paper presents the results of the analysis regarding stakeholders’ self-efficacy in the use of e-tutoring.

Research Question 1:

What are the available e-tutoring tools that stakeholders have access to?

Table 2 reveals that Google Plus had a mean score of 80 (80.0%), thus reflecting its wide acceptance. This was followed sequentially by mean scores of 56 (56.0%) for Skype, 43 (43.0%) for discussion boards, 43 (43.0%) for blogs, 41 (41.0%) for wikis, 29 (29.0%) for Slide Share, 28 (28.0%) for screen cast, and 26 (26.0%) for podcasts for the e-tutoring tools that respondents had access to.

Table 2 The e-tutoring tools respondents have access to

S/N	Access/use of E-tutoring tools	Frequency	%
1.	Blog	43	43.0
2.	Wikis	41	41.0
3.	Screen casting	28	28.0
4.	Skype	56	56.0
5.	Slide share	29	29.0
6.	Discussion board	43	43.0
7.	Podcast	26	26.0
8.	Google plus	80	80.0

Research Question 2:

What do stakeholders use the selected e-tutoring tools for?

Table 3 reveals that teaching/instruction had a mean score of 69 (69.0%), thus reflecting wider usage among the respondents. This was followed sequentially by mean scores of 67 (67.0%) for assignments, 65 (65.0%) for course reviews, 60 (60.0%) for moderating, 43 (43.0%) for lesson plans, 36 (36.0%) for counselling, and 30 (30.0%) for outlines among the respondents in relation to the use of selected e-tutoring tools.

Table 3 What respondents use the selected e-tutoring tools for

S/N	Use of e-tutoring	Frequency	%
1.	Schemes of work	30	30.0
2.	Lesson plans	43	43.0
3.	Assignments	67	67.0
4.	Course reviews	65	65.0
5.	Counselling	36	36.0
6.	Moderating	60	60.0
7.	Teaching / Instruction	69	69.0

Research Question 3:

What is the level of self-efficacy among stakeholders in the use of selected e-tutoring tools?

The results in Table 4 reveal that 56.0% of the stakeholders were highly proficient in creating a blog account for e-tutoring, while 34.0% were less proficient. A total of 49.0% of the stakeholders were highly proficient in communicating with students using blogs, while 51.0% were less proficient. A total of 49.0% of the stakeholders were highly proficient in posting on internet blog applications, while 51.0% were less proficient. A total of 51.0% of the stakeholders were highly proficient in uploading course content into wikis, while 49.0% were less proficient. A total of 46.0% of the stakeholders were highly proficient in using wikis for activities involving collaboration, while 54.0% were less proficient.

A total of 45.0% of the stakeholders were highly proficient in sharing online lessons, media and other materials with their students through wikis, while 55.0% were less proficient. A total of 52.0% of the stakeholders were highly proficient in starting a discussion board presentation, while 48.0% were less proficient. A total of 48.0% of the stakeholders were highly proficient in using common icons on discussion boards, while 52.0% were less proficient. A total of 49.0% of the stakeholders were highly proficient in using discussion boards to teach students in asynchronous classes, while 51.0% were less proficient. A total of 74.0% of the stakeholders were highly proficient in logging into and operating Skype accounts, while 26.0% were less proficient.

Table 4 Respondents' level of self-efficacy in the use of selected e-tutoring tools

Proficient level of stakeholders in the following items	Highly proficient %	Moderately proficient %	Less proficient %	Non-proficient %	Mean
1 Creating a blog account for e-tutoring	16.0	30.0	25.0	29.0	2.33
2 Communicating with students using blog	14.0	35.0	27.0	24.0	2.39
3 Posting into a blog application on the internet	12.0	37.0	24.0	27.0	2.34
4 Uploading course content into wiki	10.0	41.0	23.0	26.0	2.35
5 Using wiki for collaborating activities	10.0	36.0	26.0	28.0	2.28
6 Share lessons, media, and other materials online with their students through wiki	7.0	38.0	27.0	28.0	2.24
7 Starting a Discussion Boards presentation	14.0	38.0	22.0	26.0	2.40
8 Using common icons on Discussion Boards	10.0	38.0	24.0	28.0	2.30
9 Using Discussion Boards to teach students in asynchronous classes	9.0	40.0	23.0	28.0	2.30
10 Logging into and operate your Skype account	24.0	50.0	15.0	11.0	2.87
11 Using Skype to communicate in real time with your students	19.0	51.0	17.0	13.0	2.76
12 Using Skype to involve resources person into the virtual learning environment	22.0	41.0	21.0	16.0	2.69
13 Creating an e-mail account	64.0	31.0	3.0	2.0	3.57
14 Sending e-mails to students using Google plus account	60.0	26.0	9.0	9.0	3.41
15 Using Google plus to chart in real time with student	47.0	36.0	11.0	6.0	3.24
16 Identifying common icons on slide share	18.0	36.0	16.0	30.0	2.42
17 Using common icons on slide share?	19.0	33.0	19.0	29.0	2.42
18 Downloading and uploading presentations on slide share	16.0	33.0	21.0	30.0	2.35
19 Creating a video or audio podcast	8.0	34.0	24.0	34.0	2.16
20 Downloading file from a podcast	10.0	31.0	23.0	36.0	2.15
21 Using podcast to deliver content to student through podcast	6.0	31.0	28.0	35.0	2.08
22 Recording presentation using Camstudio/Video Movie Maker	12.0	27.0	27.0	34.0	2.17
23 Using common icons on Camstudio	8.0	25.0	29.0	38.0	2.03
24 Burning screen casting video into DVD or CD to teach students	19.0	33.0	21.0	27.0	2.44

A total of 70.0% of the stakeholders were highly proficient in using Skype to communicate in real time with their students, while 30.0% were less proficient. A total of 63.0% of the stakeholders were highly proficient in using Skype to include resource staff into the virtual learning environment, while 37.0% were less proficient. A total of 95.0% of the stakeholders were highly proficient in creating an e-mail account, while 5.0% were less proficient. A total of 86.0% of the stakeholders were highly proficient in sending e-mail to students using a Google Plus account, while 14.0% were less proficient.

Furthermore, 83.0% of the stakeholders were highly proficient in using Google Plus to chat in real time with students, while 17.0% were less proficient. A total of 54.0% of the stakeholders were highly proficient in identifying common icons on Slide Share, while 46.0% were less proficient. A total of 52.0% of the stakeholders were highly proficient in using common icons on Slide Share, while 48.0% were less proficient. A total of 49.0% of the stakeholders were highly proficient in downloading and uploading presentations on Slide Share, while 51.0% were less proficient. A total of 42.0% of the stakeholders were highly proficient in creating a video or audio podcast, while 58.0% were less proficient. A total of 41.0% of the stakeholders were highly proficient in downloading files from podcast, while 59.0% were less proficient. A total of 37.0% of the stakeholders were highly proficient in using podcasts to deliver content to students and 63.0% were less proficient. A total of 39.0% of the stakeholders were highly proficient in recording presentations using Camstudio/video movie makers, while 61.0% were less proficient; similarly, 33.0% of the stakeholders were highly proficient in using common icons on Camstudio, while 67.0% were less proficient. A total of 52.0% of the stakeholders were highly proficient in burning screen casting videos onto DVD or CD to teach students, while 48.0% were less proficient.

In total, the grand mean score for stakeholders' level of self-efficacy in the use of selected e-tutoring tools was 2.48.

Hypotheses Testing

Based on research questions four to six, research hypotheses one to three were formulated. The results related to hypotheses one to three formulated

in this study are shown in subsequent tables. All hypotheses were tested at a 0.05 level of significance.

Hypothesis One

Ho₁: There is no significant difference between male and female stakeholders' level of self-efficacy in the use selected of e-tutoring tools

To determine whether there was any significant difference between male and female stakeholders' level of self-efficacy in the use of selected e-tutoring tools, an independent t-test was used for the null hypothesis, as shown in Table 5.

Table 5 *t*-Test of male and female stakeholders on their level of self-efficacy in the use of selected e-tutoring tools

Gender	No	\bar{X}	SD	df	<i>t</i>	Sig. (2-tailed)	Remarks
Male	55	63.00	13.81	98	2.30	.02	Rejected
Female	45	55.64	18.06				
Total	100						

From Table 5, it can be deduced that there was a significant difference between male and female stakeholders' level of self-efficacy in the use of selected e-tutoring tools. This difference is reflected in the result: df (98), $t = 2.30$, $p < .05$. Thus, the hypothesis is rejected. This outcome shows that there was a significant difference between the mean scores of male and female stakeholders' level of self-efficacy in the use of selected e-tutoring tools at a 0.05 alpha level. The male stakeholders' mean score (63.00) differed significantly from that of the female stakeholders (55.64). The male stakeholders were more proficient in the use of selected e-tutoring tools.

Hypothesis Two

Ho₂: There is no significant difference between experienced and less-experienced stakeholders' level of self-efficacy in the use of selected e-tutoring tools

To determine whether there was any significant difference between experienced and less-experienced stakeholders' level of self-efficacy in the use of selected e-tutoring tools, an independent *t*-test was used for the null hypothesis, as shown in Table 6.

From Table 6, it can be deduced that there was no significant difference between the experienced and less-experienced stakeholders' level of self-efficacy in the use of selected e-tutoring tools. The lack of a difference is reflected in the result: *df* (98), *t* = .53, *p* > .05. That is, the *t*-value of .53 resulted in a .59 significance value, which was greater than the 0.05 alpha value. Thus, the hypothesis is accepted. This outcome shows that there was no significant difference between experienced and less-experienced stakeholders' level of self-efficacy in the use of selected e-tutoring tools.

Table 6 *t*-Test of experienced and less-experienced stakeholder level of self-efficacy in the use of selected-tutoring tools

Experience	No	\bar{X}	SD	df	<i>t</i>	Sig. (2-tailed)	Remark
5 years and above	50	60.56	15.23	98	.53	.59	Accepted
Below 5 years	50	58.82	17.23				
Total	100						

Hypothesis Three

Ho₃: There is no significant difference between academic and technical stakeholders' level of self-efficacy in the use of selected e-tutoring tools

In determining whether there was any significant difference between academic and technical stakeholders' level of self-efficacy in the use of

selected e-tutoring tools, an independent *t*-test was used for the null hypothesis, as shown in Table 7.

From Table 7, it can be deduced that there was a significant difference between academic and technical stakeholders' level of self-efficacy in the use of selected e-tutoring tools. This difference is reflected in the result: *df* (98), *t* = 2.11, *p* < .05. Thus, the hypothesis is rejected. This outcome implies that there was a significant difference between the mean scores of academic and technical stakeholders' level of self-efficacy in the use of selected e-tutoring tools at a 0.05 alpha level. The academic staff mean score (61.00) differed significantly from that of the technical staff (54.53). The academic staff were more proficient in the use of selected e-tutoring tools.

Table 7 *t*-Test of academic and technical stakeholder on their attitude towards the use of e-tutoring

Experience	No	\bar{X}	SD	df	<i>t</i>	Sig. (2-tailed)	Remarks
Academic staff	70	61.90	15.28	98	2.11	.03	Rejected
Technical staff	30	54.53	517.37				
Total	100						

Summary of Findings

The findings of this study based on the research questions and the formulated hypotheses are summarised as follows:

1. Regarding the available e-tutoring tools that stakeholders had access to, Google Plus had the highest frequency of use with a mean score of 80, and podcasts had the lowest frequency of use with a mean score of 26
2. It was found that stakeholders' use of e-tutoring primarily for teaching/instruction had the highest mean score, while the use of e-tutoring for creating outlines had the lowest mean score

3. However, the grand mean score for stakeholders' level of self-efficacy in the use of selected e-tutoring tools was 2.48, which shows that stakeholders were less proficient in the use of these tools
4. A significant difference was established between male and female stakeholders' level of self-efficacy in the use of selected e-tutoring tools
5. There was no significant difference between experienced and less-experienced stakeholders' level of self-efficacy in the use of selected e-tutoring tools
6. A significant difference was established between experienced and less-experienced stakeholders' level of self-efficacy in the use of selected e-tutoring tools

Conclusions

This research examined NOUN stakeholders' self-efficacy in the use of selected e-tutoring tools for distance learning in Nigeria. The results obtained from the data gathered and analysed in this study indicated that stakeholders used Google Plus to communicate with their students outside of the university Moodle (Learning Management System), where assignments had wider participation among the respondents. The findings of this research also established that NOUN stakeholders were proficient/competent in the use of selected e-tutoring tools. A significant difference was established between male and female stakeholders' level of self-efficacy in the use of selected e-tutoring tools. This result implies that more attention should be given to positively improving the proficiency level of female stakeholders in distance learning.

Furthermore, there was no significant difference between experienced and less-experienced stakeholders' level of self-efficacy in the use of selected e-tutoring tools. Finally, a significant difference was established between academic and technical stakeholders' level of self-efficacy in the use of selected e-tutoring tools.

Recommendations

Based on the findings and conclusions of this study, it was recommended that stakeholders should exhibit high competencies in the utilisation of e-tutoring tools, and this is especially relevant for female stakeholders.

Additionally, universities as well as governmental and non-governmental organisations (NGOs) should organise conferences, training and workshops to educate stakeholders on the benefits of using e-tutoring tools and of using ICT generally for instruction. Moreover, if online teaching tools become more relevant within the educational setting, stakeholders—whether male or female, experienced or less experienced—will require professional or expert knowledge and skills in computer literacy.

References

- Asabere, N. Y. 2012. Towards a perspective of information and communication technology (ICT) in education: Migrating from electronic learning (e-learning) to mobile learning (m-learning). *International Journal of Information and Communication Technology Research* 2(8): 646–649.
- Bandura, A. 1994. Self-efficacy. In *Encyclopedia of human behavior*, ed. V. S. Ramachaudran, 71–81. New York: Academic Press. <http://goo.gl/BBUpq3>.
- Berge, Z. L. 1995. Facilitating computer conferencing: Recommendations from the field. *Educational Technology* 35(1): 22–30. <http://goo.gl/VPkdla>.
- Brigitte, D., W. Philip, P. Sébastien and V. Nathalie. 2004. Roles and competencies of the e-tutor. <http://goo.gl/v46IXm>.
- Chakuchichi, D. C. 2010. Assessment of e-tutoring preparedness for asynchronous classes in open and distance learning at the Zimbabwe Open University. In *Distance Education Association of Southern Africa (DEASA) Conferences*. <http://researchdatabase.ac.zw/id/eprint/56>.
- Charles, B. 2012. Factors influencing teachers' adoption and integration of information and communication technology into teaching: A review of the literature. *International Journal of Education and Development Using Information and Communication Technology* 8(1): 136–155.
- Del, S. 2000. What influences self-efficacy? <http://goo.gl/1PK1n>.
- Gambari, A. I. 2012. *Training manual for open, distance and e-learning*. Minna: Okezyy Production.com.
- Garrison, R. and J. Anderson. 2003. *New technologies for learning: Contributions of virtual learning to innovation in education*. Leuven: Leuven University Press.
- Gérard, F., L. Moez, L. Thérèse and M. Robert. 2010. Onsite and online students' and professors' perceptions of ICT use in higher education. In *Novel developments in web-based learning technologies: Tools for modern teaching*, 63–117. <http://goo.gl/aTZJPf>.
- Higgison, C. 2000. Online tutoring e-book: The tutor's role and effective strategies for online tutoring. <http://www.fredriley.org.uk/callhull/otis/t2-06.pdf>.
- Kadel, R. 2005. How teacher attitude affect technology. *Learning and Leading with Technology* 39(5): 34–47.
- Kendra, C. 2011. Self-efficacy psychology definition of the week. <http://psychology.about.com/b/2011/09/02/self-efficacy-psychology-definition-of-the-week.htm>.

- Med, K. 2012. *Educational technology and mobile learning*. <http://www.educatorstechnology.com/2012/05/teachers-comprehensive-guide-to-use-of.html>.
- Olasedidun, O. K. 2014. Relationship among lecturers' perceived usefulness, ease of use, attitude, and intention toward social media in South-West, Nigeria. PhD diss., University of Ilorin.
- Ryan, S., B. Scott, H. Freeman and D. Patel. 2000. *The virtual university: The Internet and resource-based learning*. London: Kogan Page Limited.
- Salman, M. F., O. O. Ogunlade, A. A. Ogunlade and O. A. Adegbam. 2013. Assessment of secondary school teachers' professional development in the use of information communication technology for teaching mathematics in Ejjigbo, Nigeria. *IOSR Journal of Research & Method in Education (IOSR-JRME)* 2(1): 48–55.
- Salmon, G. 2000. *E-moderating: The key to teaching and learning online*. London: Taylor & Francis.
- Selvam, S. K. 2012. *Distance education as dynamic role*. India: S. K. Mehra for Random Publications.
- Simpson, O. 2002. *Supporting students in Open and Distance Learning*. 2nd ed. London: Kogan.
- Smith, T. 2005. Fifty-one competencies for online instruction. *The Journal of Educators Online* 2(2). <http://www.thejeo.com/Ted%20Smith%20Final.pdf>.
- Tinio, V. 2002. ICT in education. <http://2002.bilisimsurasi.org.tr/egitim/eprimer-edu.pdf>.
- Virgil, E. and J. Varvel. 2007. Master online teacher competencies. <http://www.westga.edu/~distance/ojdla/spring101/varvel101.htm>.
- Wilson, G. and E. Stacey. 2004. Online interaction impacts on learning: Teaching the teacher to teach online. *Australasian Journal of Educational Technology* 20(1): 33–48. <http://www.ascilite.org.au/ajet/ajet20/wilson.html>.
- Yusuf, M. O. and M. R. Balogun. 2011. Student-teachers' competence and attitude towards information and communication technology: A case study in a Nigerian University. *Contemporary Educational Technology* 2(1): 18–36.
- Yusuf, M. O. 2006. Using the Internet for teaching, learning and research in tertiary institutions. *The Journal of Nigerian Association of Teachers of Technology, JONNAT* 6(1): 163–171.
- . 2005. An investigation into teachers' self-efficacy in implementing computer education in Nigerian secondary schools. *Meridian: A Middle School Computer Technologies Journal* 8(2): 1–4.