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Counselling implications of teachers' digital competencies in the use of Social Networking Sites (SNSs) in the teaching-learning process in Calabar, Nigeria

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Abstract: The study investigated teachers' digital competencies in the use of Social Networking Sites (SNSs) in the teaching-learning process. It had five research questions and two hypotheses. Adopting a survey design, it used a sample of 250 teachers from 10 out of 16 secondary schools in Calabar Municipal Local Government. A researcher-developed instrument called Digital Competency Questionnaire (DCQ) was used in data gathering. The DCQ was validated by three experts, and its reliability was established to be 0.86. Findings of the study indicated that the levels of digital competencies of teachers in the use of SNSs and general usage of SNSs by teachers are moderate. It also revealed that the level of application of SNSs in the teaching-learning process is low. Results of the study also indicated significant differences in the level of digital competencies in the use of SNSs based on gender; and in the level of application of SNSs in the teaching-learning process based on age category of teachers. Recommendations were made to the guidance counsellor to improve these levels and bridge the established gaps based on gender and age category of the teachers.

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Mfon Eyo is an educationist, an astute administrator and a service delivery expert. He was a special adviser on General Duties in Mbo LGA before joining Airtel, a telecom service provider, as customer care/service delivery consultant. He rose to a middle management cadre before leaving voluntarily to join the academia. Presently, Mfon Eyo is a lecturer in the Department of Guidance and Counselling, Faculty of Education, University of Calabar. His research interest spans across cyber counselling, ICT in Education, vulnerable group (women, children/youth and the aged) and higher education. Others are peace and conflict resolution, environmental education and general education. In addition to his core academic responsibilities, Mfon Eyo is also the ICT coordinator and chairman of the ICT Committee of the Faculty of Education, University of Calabar, Nigeria. He is also the secretary general of the Cross River State Chapter of Counselling Association of Nigeria (CASSON).

PUBLIC INTEREST STATEMENT

Social Networking Site (SNS) refers to a webpage that allows users to create their profile within the page and form relationships or interact with other users who also have their own profiles within the same site. It is established that SNS has the advantage of attracting and sustaining the interest of learners in the teaching-learning process. This study sought to establish the level of competence of the teachers in the use of SNS in the teaching-learning process in Calabar, Nigeria; and the extent of application of SNS by teachers within and outside the teaching and learning process, amongst others. The findings of the study indicated that the levels of digital competencies of teachers in the use of SNSs and general usage of SNSs by teachers are moderate; and that the level of application of SNSs in the teaching-learning process is low; amongst other findings.

Subjects: Behaviour; Education; I.T. Research; I.T. Teaching; Information Technology; Secondary Education

Keywords: SNS; social; networking; sites; digital; competencies; counselling; Nigeria

1. Introduction

The world has been variously described as being dynamic. This ever changing nature of global affairs and activities has consistently put human beings on their toes, as it renews the need to be updated regularly to catch up with the current trend of events, especially amongst the professionals. The advent of the computer and indeed the application of Information and Communications Technology (ICT) in human dealings have continuously changed the face of human interactions and undertakings; and emphasized the need to be up to speed with the trend.

Advancement in ICT has led to emergence of various internet-based applications including Social Networking Sites (SNSs). SNS refers to a webpage that allows users to create their profile within the page and form relationships or interact with other users who also have their own profiles within the same site. As a result of the ability to establish relationships amongst users, an SNS is seen as a virtual community where users can create individual public profiles, interact with real-life friends, and meet other people based on shared interests (Deepika, 2014; Kuss & Griffiths, 2011; Padhy & Padhi, 2014).

Social networks have been widely acknowledged as gaining popularity and usage; just as their ability to facilitate communication between users and sharing of any type of information real-time is not in doubt (Adedoyin-Olowe, Gaber, & Stahl, n.d.; Deepika, 2014; Granda, Mouriz, & Ruiloba, n.d.). In fact, the use of SNSs has grown astronomically. While only 8% of online adults used SNSs as at 2005, this increased to 67% in 2012 and 72% in 2013 (Brenner & Smith, 2013). Furthermore, the result of a survey that considered the use of the different SNSs including Facebook, LinkedIn, Pinterest, Twitter and Instagram indicated that there was increment across the SNSs on the percentage of online adults that visited the SNSs between 2012 and 2013, and that users access some of these SNSs daily (Duggan & Smith, 2014).

Researchers have also established that SNSs are used by majority of internet users across different demographic groups including age, gender, educational level, socio-economic status, etc. It has also been established that 89% of internet users between 18 and 29 age bracket use SNSs, and that this percentage differs significantly from other age brackets including 30–49, 50–64 and above 64 (Brenner & Smith, 2013). This suggests that a high percentage of youngsters use SNSs. In the same vein, a study by Australian Communications and Media Authority (2008) indicated that social networking takes 64% of young people's total internet time. Young people were taken as those between the ages of 8 and 17. In another study, Li (2007) reported that about 60% of teenagers (12–17 years) and 80% of young adults (18–21 years) use SNSs. To these youngsters, SNSs are more than just another online activity. It is actually their life online, as the central point of their social networking activities revolves around their friends (Li, 2007).

The foregoing establishes the phenomenal appeal of SNSs to the entire population, especially the youngsters. SNSs have been established to have many positive implications. Considering their ability to engage the youngsters who are the school-going population, researchers have therefore posited that the application of SNSs in the teaching-learning process is a potent tool to facilitate the realization of the objectives of education (Padhy & Padhi, 2014; Sachdev, n.d.). But such application of SNSs in the teaching-learning process may not succeed without the teachers, who are a key component of the teaching-learning process, having the digital competence to use the technology. In a study on the use of technology for learning, Poll (2014) reported that most students feel that deployment of ICT can lead to a dramatic change in learning, particularly with regard to improving the level of students' engagement. Very importantly too, the report indicated that most students said they feel that they know more about tablets and other computers than their teachers. More so, the United Nations Educational, Scientific and Cultural Organization (UNESCO) raised the concern that teachers' digital

competence is one area that should be focused on if the introduction of ICT in education is to be successful (UNESCO, 2011). These necessitated a study to establish teachers' digital competencies in the use of SNS in the teaching-learning process in Nigeria, which form the focus of the present study. Additionally, in a study on Teachers' Digital Competence in Upper Secondary Schools in Norway, Krumsvik and Jones (2013) investigated digital competence related to gender and teachers' age. The findings of the study indicated that with respect to gender, the mean score on digital competence of female teachers was higher than that of their male counterparts. More so, though the teachers' age were grouped into 20–31, 32–37, 38–43, 44–49, 50–55, 56–61 and over 61 years, the findings however brought out two basic age groupings. The findings indicated that digital competence was the same for ages 20–49 with mean score of 5.3 for all the groups within this range. The digital competence however dropped for teachers who were more than 49 years of age. The present study also considered demographic variables like gender and age of the teachers, and their effects on the digital competencies and application of SNSs in the teaching-learning process. Relying on the study by Krumsvik and Jones (2013) whose finding brought out two basic age groupings with respect to teachers' digital competencies, this study adopted two age categories, 40 years and below, and 41 years and above; with the view to establishing the level of application of SNSs in the teaching-learning process based on these age categories.

2. Research questions

The study sought to assess teachers' digital competencies in the use of SNSs in the teaching-learning process in Calabar, Nigeria. It was guided by five research questions which were drawn from the specific purposes thus:

(1) What is the level of digital competency of teachers in the use of SNSs?

(2) What is the level of general usage of SNSs by teachers?

(3) What is the level of application of SNSs in the teaching-learning process?

(4) How does the level of digital competencies of teachers in the use of SNSs vary based on gender?

(5) How does the level of application of SNSs in the teaching-learning process vary based on age category of teachers?

3. Research hypotheses

The following two-tailed tests of significance were formulated to guide the study. These non directional hypotheses were derived from the research questions, and were tested at alpha level of 0.05. They included the proposition that:

H_o 1: There is no significant difference in the mean score in the level of digital competencies in the use of SNS between male teachers and their female counterparts.

H_o 2: There is no significant difference in the mean score in the level of application of SNSs in the teaching-learning process based on age category of teachers.

4. Research method

The study adopted a survey design. It was situated in Calabar Municipal Local Government Area of Cross River State, Nigeria. Calabar Municipal Local Government is one of the two Local Government Areas that make up Calabar, the capital of Cross River State. The population of the study involved all the teachers in the 16 public secondary schools in Calabar Municipal Local Government Area. Two hundred and fifty teachers were chosen as the sample of the study using multi-stage approach. Firstly, 10 out of 16 public secondary schools were randomly selected for the study; this implies a sample of 62% of all the public schools in Calabar Municipal Local Government Area; and this was considered manageable. Twenty-five teachers were then randomly selected from each of the 10 randomly selected public secondary schools in Calabar Municipal Local Government Area to constitute the sample of the study.

To gather data for the study, the researcher developed an instrument called Digital Competency Questionnaire (DCQ). The DCQ had Sections A and B. Section A sought to gather demographic information about the respondents, while Section B had a total of 17 items which sought to elicit data to answer the research questions. The section B was however grouped into Parts I, II and III. Part I had seven items which sought to establish the level of digital competencies of teachers. Parts II and III had five items each; they sought to establish the level of general usage of SNSs by teachers and the level of application of SNSs in the teaching-learning process by teachers respectively. The Part I had Very Easy, Easy, Difficult and Very Difficult as the response options with scoring 4, 3, 2 and 1 respectively; while Parts II and III had 5 times and above, 3–4 times, 1–2 times and Not at all, as the response options, with scoring 4, 3, 2 and 1 respectively. While part II measured frequency of general usage in the previous one month, part III measured frequency of application in teaching-learning process in the previous three months. The choice of the different duration was due to the consideration that while the general usage may not be influenced by the operating status of the school, the application in teaching-learning process could be affected by the operating status of the school which involves the school being in session or on vacation. The three-month duration covered both cases of in-session or on vacation.

The DCQ was validated by two experts in Measurement and Evaluation, and one Counsellor Educator, all from the University of Calabar, Nigeria. The reliability of the instrument was established by administering the questionnaire to 18 teachers in one of the Secondary Schools in Calabar Municipal Local Government Area, which was not part of the sampled schools chosen for the study. The data generated from this instrument was tested using Cronbach Statistics. The reliability of the questionnaire was established as 0.86.

The method of data collection was by direct delivery/self-administered technique. This involved visiting the sampled schools and administering the questionnaire on the sampled teachers. Those that could fill and return the questionnaire immediately were encouraged to do so, while those that opted to fill it at a later date were encouraged to return them to one of the respondents, while the researcher picked the copies from this contact person on an agreed date. This approach facilitated the attainment of 100% response rate as all the 250 questionnaires administered were retrieved and found useful. The data gathered and collated was analysed using mean, standard deviation and *t*-test. While the mean scores and standard deviation were used in answering the research questions, *t*-test was used in testing the hypotheses. The mean score of each item and the cluster mean were compared with the real limit of numbers in answering the research questions. If the mean scores fell between 0.50 and 1.49, it indicated very low, 1.50–2.49 implied Low, 2.50–3.49 meant moderate while 3.50–4.49 indicated High. In testing the hypotheses, the exact probability was compared with the level of significance, while the calculated *t*-value was compared with the critical *t*-value. If the exact probability was greater than the alpha or the calculated *t*-value was less than the critical *t*-value, the null hypotheses were accepted and retained; otherwise they were rejected.

5. Results and discussion

5.1. Research question one

What is the level of digital competency of teachers in the use of SNSs?

This question sought to find out the level of digital competencies of teachers in the use of SNSs. The result is as presented in Table 1.

It is evident from the presented results in Table 1 that the level of digital competencies of teachers in the use of SNSs is moderate. It is also worth mentioning that in all the items listed to access the level of digital competencies of teachers, it is only the booting and shutting down of the computer system that the competency level is high; all other items have moderate level of competency. More so, in a scale of one to four, the level of digital competency scores three; this cannot be said to be poor. The moderate result indicates that teachers are fairly competent in the use of SNSs. If the

Table 1. The mean and standard deviation of the level of digital competencies of teachers in the use of SNSs

S. No.	Description	*N*	Mean	SD	Decision
1	Boot or shut down a computer system	250	3.60	0.63	High
2	Type a document using the computer	250	3.22	0.84	Moderate
3	Open "internet explorer"	250	3.09	0.86	Moderate
4	Send email without being assisted by anyone	250	2.91	0.97	Moderate
5	Browse the internet without help from anyone	250	3.13	0.93	Moderate
6	Visit a specific website without help from anyone	250	2.81	0.96	Moderate
7	Use phone to explore the internet	250	3.35	0.72	Moderate
Summary of results for the cluster		250	3.16	0.89	Moderate

teachers are fairly competent, their level of digital competency in the use of SNSs cannot be said to be a huge challenge to the application of SNSs in the teaching-learning process. This moderate level of competence agrees with the wide scale acceptability of SNSs (Deepika, 2014; Duggan & Smith, 2014); as such acceptability may have facilitated being digitally competent.

5.2. Research question two

What is the level of general usage of SNSs by teachers?

The part II of the DCQ with five items sought to provide answer to this research question. The summary of results is as presented in Table 2.

The results presented in Table 2 indicate that the level of general usage of SNSs by teachers is moderate. This implies that the level of general usage of SNSs by teachers is not poor as moderate is a score of three on a four point scale. The moderate result can also be understood as being fair. Teachers are therefore making fair use of SNSs considering the usage from a general perspective, not particularly restricted to usage in teaching and learning. This agrees with earlier reports that SNSs have great appeal to users across divides (Adedoyin-Olowe et al., n.d.; Granda et al., n.d.). Such great appeal may have been responsible for teachers making a fair use of SNSs generally.

5.3. Research question three

What is the level of application of SNSs in the teaching-learning process?

The part III of the questionnaire which had five items was targeted at answering the third research question. The result is as presented in Table 3.

It is shown clearly in Table 3 that the level of application of SNSs in the teaching-learning process is low. It is also instructive to note that it is not only the summary of results for the entire cluster that indicates low application, but all the items in the cluster that sought to find out the level of

Table 2. The mean and standard deviation of the level of general usage of SNSs by teachers

S. No.	Description	*N*	Mean	SD	Decision
1	Navigate or explore the internet	250	2.92	1.07	Moderate
2	Access Social Networking Sites account/page	250	2.70	1.09	Moderate
3	Interact with friends through Social Networking Sites	250	2.81	1.17	Moderate
4	Post contents (picture, status, update, video etc.) on Social Networking Sites	250	2.71	1.19	Moderate
5	Use phone to access Social Networking Sites account/page	250	2.76	1.17	Moderate
Summary of results for the cluster		250	2.78	1.14	Moderate

Table 3. The mean and standard deviation of the level of application of SNSs in the teaching-learning process

S. No.	Description	*N*	Mean	SD	Decision
1	Interact generally with students through Social Networking Sites	250	1.90	1.09	Low
2	Interact with students on general school matters through Social Networking Sites	250	1.76	0.99	Low
3	Interact with students on teaching-learning matters through Social Networking Sites	250	1.83	1.02	Low
4	Give homework to students through Social Networking Sites	250	1.51	0.88	Low
5	Give feedback to students through Social Networking Sites	250	1.57	0.99	Low
Summary of results for the cluster		250	1.72	1.01	Low

application of SNSs in the different activities of the teaching-learning process also turn up with low results. Quantitatively, the low result is derived from a score of 2 in a scale of 1–4. This indicates that despite the wide acceptability of SNSs amongst the students and teachers, SNS is not optimally utilized in the teaching-learning process. It should also be clarified that though the results reported in research question II indicated moderate level of general usage of SNSs, this research question is particularly on the usage of SNSs in teaching and learning; and the result indicates low level of usage of SNSs in the teaching-learning process.

5.4. Research question four

How does the level of digital competencies of teachers in the use of SNSs vary based on gender?

Table 4 presents summary of results for the research question four.

The fourth research question sought to identify if there is any difference between male and female teachers in their level of digital competencies in the use of SNSs. The summary in Table 4 indicates a mean difference of 0.28 in favour of the females. This shows that there is a seeming disparity based on gender in the level of digital competencies of teachers in the use of SNSs. This seeming disparity cannot however be taken at its face value as it may be due to chance. The hypothesis I below was therefore tested to establish the statistical significance of this difference.

Hypothesis I: There is no significant difference in the mean score in the level of digital competencies in the use of SNSs between male teachers and their female counterparts.

Table 5 gives a summary of results and the decision on the hypothesis.

It can be seen from the results of the statistical analysis presented in Table 5 that the exact probability is less than alpha. Additionally, the calculated *t*-value is greater than the critical value of *t*. These premises led to the decision of rejecting the null hypothesis. It therefore implies that the difference existing between male and female teachers in the level of digital competencies in the use of SNSs is statistically significant. Reconciling this finding with the finding of research question four, it can be concluded that female teachers have higher digital competencies in the use of SNSs when

Table 4. The mean and standard deviation of level of digital competencies of teachers in the use of SNSs based on gender

Groups	*N*	Mean	SD	Mean difference
Males	99	2.99	0.94	0.28
Females	151	3.27	0.83	

Table 5. *t*-Test of significance of difference in the mean score on the level of digital competencies in the use of SNSs between male teachers and their female counterparts

Groups	*N*	Mean	SD	df	*t*	$t_{critical}$	*p*	α	Decision	Inference
Male	99	2.99	0.94	248	6.57	1.96	0.00	.05	Reject H_o	Difference is significant
Female	151	3.27	0.83							

compared with their male counterparts. This finding agrees with the finding of Krumsvik and Jones (2013). They investigated digital competence related to gender and reported that the mean score of digital competence of female teachers was higher than that of the male teachers.

5.5. Research question five

How does the level of application of SNSs in the teaching-learning process vary based on age category of teachers?

The result for research question five is as presented in Table 6.

This research question looked at age range as a probable factor influencing the level of application of SNSs in the teaching-learning process. It categorized teachers into two age groups of 40 years and below, and 41 years and above. Table 6 shows a mean difference of 0.14 in favour of the "40 years and below" age category. However, in order to find out the statistical significance of this difference, hypothesis II below was tested.

Hypothesis II: There is no significant difference in the mean score in the level of application of SNSs in the teaching-learning process based on age category of teachers.

The summary of statistical analysis for the testing of hypothesis II is presented in Table 7.

The exact probability of 0.01 is less than the 0.05 alpha, and the calculated *t*-value of 2.50 is greater than the 1.96 critical *t*-value; thus the null hypothesis was rejected. The difference in mean scores in the level of application of SNSs in the teaching-learning process is therefore statistically significant. This means that the level of application of SNSs in the teaching-learning process varies significantly based on age category of teachers; and this is in favour of the "40 years and below" category. The level of application of SNSs in the teaching-learning process by teachers whose ages

Table 6. The mean and standard deviation on the level of application of SNSs in the teaching-learning process based on age category of teachers

Groups	*N*	Mean	SD	Mean difference
40 years and below	133	1.78	1.06	0.14
41 years and above	117	1.64	0.94	

Table 7. *t*-Test of significance of difference in the mean score in the level of application of SNSs in the teaching-learning process based on age category of teachers

Groups	*N*	Mean	SD	df	*t*	$t_{critical}$	*p*	α	Decision	Inference
40 years and below	133	1.78	1.06	248	2.50	1.96	0.01	.05	Reject H_o	Difference is significant
41 years and above	117	1.64	0.94							

are "40 years and below" is higher than those who are from 41 years and above. This finding is in agreement with the finding of Krumsvik and Jones (2013). The researchers adopted seven age categories (20–31, 32–37, 38–43, 44–49, 50–55, 56–61 and over 61 years) with a view to establishing the relevance of these age categories on digital competencies of teachers. Their findings however brought out two basic age groupings. The findings of their study indicated that digital competence was the same for ages 20–49 with mean score of 5.3 for all the groups within this range, while the digital competence dropped for teachers who were more than 49 years of age.

6. Summary of findings

The summary of findings of the study is as follows:

(1) The level of digital competencies of teachers in the use of SNSs is moderate.

(2) The level of general usage of SNSs by teachers is moderate.

(3) The level of application of SNSs in the teaching-learning process is low.

(4) There is a significant difference in the mean score of the level of digital competencies in the use of SNSs between male teachers and their female counterparts.

(5) There is a significant difference in the mean score of the level of application of SNSs in the teaching-learning process based on age category of teachers.

7. Implications and recommendations

The findings of this study have implications for the counsellor and other stakeholders in the teaching-learning process. Findings of the study show that both the level of digital competencies of teachers in the use of SNSs and the level of general usage of SNSs by teachers are moderate. Moderate level of competence and usage of SNSs is not the best and can be improved upon in order to facilitate effective application of SNSs in teaching; little wonder that the study also revealed that the level of application of SNSs in the teaching-learning process is low. Since it is the responsibility of the counsellor to facilitate the overall success of the teaching-learning process, the counsellor should work towards enhancing the level of digital competencies of teachers in the use of SNSs and the level of general usage of SNSs by teachers. The counsellor should liaise with the school authority to organize guidance programmes that would raise awareness of teachers in the use of SNSs, the digital competencies of teachers in the use of SNSs, the general applications of SNSs and the application of SNSs in the teaching-learning process.

The study has also revealed that the use of SNSs between male teachers and their female counterparts varies significantly; and that the level of application of SNSs in the teaching-learning process varies significantly amongst the age categories of teachers. The counsellor should therefore be conscious of this inequity and devise strategies to close the gap. Some of the strategies may include hosting workshop, enlightenment programmes and seminars on application of SNSs in the teaching-learning process, amongst others. It is also recommended that further studies should be carried out to find out the specific causes of the low application of SNSs in the teaching-learning process and specific strategies for remedying the situation.

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