

Assessment of Trainee Teachers' Self-Efficacy and Intention Towards the Use of Facebook for Learning in University of Port Harcourt

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Abstract

This study considered trainee teachers' self-efficacy and intention toward the use of Facebook for learning at the University of Port Harcourt with 12 faculties. The research has three (3) Objectives, three research questions, and three null hypotheses. The work implemented a descriptive design. The population was 2,240 trainee teachers, and 350 were drawn as a model using proportional stratified random sampling. Two instruments were used for data collection. Questionnaire on teachers' self-efficacy and intention to use of Facebook for learning. This instrument for data collection was called, self-efficacy and intention of Facebook use (SEIOFU) and had two sections. The instrument was designed on a four-point Likert rating scale. The reliability index for the instruments was achieved through Cronbach alpha, self-efficacy (SE), 0.77, and intention (I) 0.83. Whereas the overall reliability was 0.79. Experts in Educational Technology and Psychology were used to validate the instruments. The statistical tools used in examining the questions were mean and standard deviation, while the hypothesis was tested using Z-test and Pearson Product Moment at 0.05 alpha. The findings revealed that no difference exists between male and female trainee teachers' self-efficacy and their use of the social platform for learning. Also, their intention for using the social platform in learning was satisfactory. Similarly, there was a positive relationship between male and female trainee teachers' self-efficacy and intention for using the social platform in learning. The study recommends that, since there is a positive intention of trainee teachers' self-efficacy towards Facebook use, an enabling environment should be provided in colleges for academic use of this social platform. Trainee teachers should be exposed to more courses on the importance of Facebook for learning and instruction.

Keywords: Facebook, self-efficacy, intention, trainee teacher

Introduction

The debut of web 2.0, applications like blogs, forums, social networks, and their likes, the manner of information collection has been altered. This has also influenced learning and lifestyle greatly. This similarly has impacted the advance of social communities and interpersonal interactions. Advent of web 2.0, sets the foundation for a process and an important part of social activity influencing the growth of students' social life. Fomsi and Nwaizugbe (2016) stated that portable information and communication devices (PICD) such as smartphones, and tablet computers are a catalyst for linking students to social networking sites.

Among the diverse applications of Facebook is Facebook groups. It is a popular and useful platform that allows forum discussions and threads based on common interests. This platform can recruit members and spread messages easily on any group interest. Therefore, online groups can be created to utilize the usefulness and enhancement of groups, which include receiving group information that may not be available elsewhere. Members also have opportunities to grow in their areas of interest. In addition, it can be used as a useful tool by educators to communicate their interests and connect students. This is based on the fact that it provides members the podium to discuss specific topics and also schedule time for study group meetings. It thus, contribute to improving self-efficacy and personal learning by increasing communication with classmates and instructors.

Literature Review

The theories that directed this study are the Engagement theory by Greg, and Ben, (1999). The social cognitive theory by Bandura (1986) and the Constructivism theory (STC), propounded by Vygotsky (1980). Social Constructivism theory (STC), stated that before change comes there must be a public interface, also social setting in learning and discovery influences culture according to Vygotsky. The theory agrees with this study because Facebook is a social platform that encourages lots of discovery virtually. Another theory is the engagement theory promulgated by Greg, and Ben, (1999). This theory Elucidates that technological devices such as laptops, computers, and phones is used to access social media particularly Facebook. While Social cognitive theory presents self-efficacy and expectancy outcome as the determinants of intention and behaviour. This theory also supports this study assessment of trainee teachers' self-efficacy and intention toward Facebook use for learning.

Huang, Yang, Zhang, and Han, (2018) observed that self-efficacy is an individual's expectation of his/her capacity to be in control of ascertained condition. They further state that self-efficacy plays a transitional part between reasoning and behaviour which affects an individual's confidence, assurance, and capacity to complete definite tasks and reach a specific target. Thus, this refers to the trainee teachers' perceived chance of success in using Facebook for learning purposes and how far the trainee teacher is in control of this. Self-efficacy theory has in most cases been used for studies regarding the individual intention to use information technology such as Facebook. An individual's ability to competently use social media is referred to as social media self-efficacy. This competence does not mean that users are perfect in component skills involved in using technology for wider responsibilities. Social media self-efficacy measures users' poise to use, appreciate and apply their technical knowledge and skills freely in all areas such as the use of Facebook in learning.

Facebook is a Social Network Service SNS that is free and permits registered users to make profiles, upload photos and videos, send messages, and relate with friends, colleagues, and families. Bellis (2019) stated that Mark Zuckerberg developed Facebook as a student of

psychology at Harvard University. Minakshi and Moseley (2015) stated that Facebook is the most popular social media and has mainly been used for communication and entertainment by users worldwide. Users operate Facebook with mobile numbers as stated Philip, 2007. He also, stressed that the number of registered users had reached 30 million, in 2007 making it the biggest social-networking site with a wide focus. Over ten (10) Features can be identified in Facebook that have made it the most used social site. Like photos, newsfeeds, buttons, messenger, relationship statuses, events embed-in-post, timelines, walls, social plug-ins, and Facebook groups. To Cunha (2014) Facebook groups could also be used to introduce new topics thereby breaking down communication between educators and learners as a way of flipping the classroom. Instructors can upload and share learning materials in the group platform for scholars to read. A community of scholars can be formed using this platform for collaboration on educational activities. Link to texts, videos, and pictures of what was discussed at school could be posted and every student is free to share their experience. Teamwork is practiced as students share photos, articles, e-books, and videos relating to courses learned in class. Teams can further create out-of-class group platforms for group assignments as they brainstorm. Shy students could improve their communication skills and thus self-efficacy using this platform.

In reviewing some empirical works, Admire, Msuazi, and Mncedisi (2021) observed that the confidence of teachers is not affected by gender or external factors. This they defined as technology self-efficacy, which denote the decision to apply skills to wider task such as using Facebook to promote education. Arnab, Tripti, and Kedar, (2021) observed that acuity of self-efficacy and organization were obvious predictors of teachers' use of gadgets for wider tasks because they believe that technology though difficult to navigate will help reach a greater number of students online. In extension, Facebook self-efficacy is the measure of a user's confidence to understand, use and apply their Facebook knowledge and skills in wider tasks. Shazama and Sadiq (2016) observed that male and female trainee teachers' intention to use gadgets is impacted by human-assisted self-efficacy which could play a vital role in accepting Facebook as an educational platform. Marina and Christos (2021) discoursed that teachers' skills, principles, and necessary infrastructure are important factors needed by teachers to use technological devices in the teaching space. In another study by Hida, Yeo, and Azlina (2022) it was disclosed that gender was not a feature in the self-efficacy of teachers towards the use of technological devices. Josip and Branislava (2019) in their survey established that older teachers both male and female lack ICT. self-efficacy while the younger teacher exhibits ICT. Self-efficacy in the classroom.

Statement of Problem

Though, Facebook is popularly accepted for communication and entertainment, it has been observed that Facebook like other social media is mistrusted for use in an educational setting. Perhaps this may be the reason why Facebook is overtaken by frivolous activities. This present situation compels the need for this study to assess trainee teachers' self-efficacy and intention toward the use of Facebook for Learning with gender focus.

Aim and Objective of the Study

To survey teachers' self-efficacy and intention toward the use of Facebook for learning at the University of Port Harcourt. The objectives were to:

1. evaluate male and female teachers' self-efficacy towards the use of Facebook.
2. assess male and female teachers' intention to use Facebook.
3. examine the relationship between male and female teachers' self-efficacy and their intention toward the use of Facebook.

Research Questions

The following research questions are formulated to guide this study;

1. Does gender influence trainee teachers' self-efficacy regarding the use of Facebook for learning?
2. To what extent does gender influence the intention of trainee teacher's use Facebook for learning?
3. What is the relationship between male and female trainee teachers' self-efficacy and their intention toward the use of Facebook in learning?

Research Hypotheses

These null hypotheses articulated to guide the study will be tested at 0.05 level of significance.

Ho1 There is no significant difference between male and female teachers' self-efficacy and their use of Facebook for learning.

Ho2 There is no significant difference between male and female teachers' intention and their use of Facebook for learning

Ho3 There is no significant relationship between male and female teachers' self-efficacy and their intention toward the use of Facebook for learning.

Methodology

A descriptive cross-sectional survey design was adopted for the research. The instrument was used to gather data from trainee teachers on their self-efficacy and intention to use Facebook for learning as a researcher-designed questionnaire. The total population was 2,220 trainee teachers at the University of Port Harcourt (Source: Student Affair Record Admission office). Nine hundred trainee teachers were drawn using a random sampling technique in the first stage. While a stratified random sampling technique was used to draw gender. Taro Yamen's formula was used to sample a total of 350 teachers, 180 male teachers and 170 female teachers in all.

The instrument used were adopted from two (2) standardized instruments and modified by the researcher.

1. Computer self-efficacy: development of a measure and initial test by Compeau, D.R., and Higgins C.A (1995);
2. Facebook Intensity (FBI) was originally designed by Ellison, Steinfield, and Lampe (2007).

The reliability of the Instrument was obtained by administering the instrument to 30 teachers which are part of the population but not part of the study sample. The instrument was re-

administered after a space of two weeks to the same respondents. Their response was correlated and used to calculate the coefficient of the internal consistency of the instrument where 0 to 1 was accepted to be reliable using Cronbach's Alpha. The value obtained was 0.71.

Result and Discussion

Research question 1

Does gender influence trainee teacher's self-efficacy regarding the use of Facebook for learning?

Table 1: Male and Female Trainee Teachers' Self-Efficacy Towards the use of Facebook

S/N	ITEMS	Male n	\bar{x}	SD	Female n	\bar{x}	SD	REMARK
1	I can create a Facebook account successively	180	3.38	0.85	170	2.58	0.86	Accept
2	I can log into my Facebook account easily	180	3.14	0.84	170	3.73	0.80	Accept
3	I can easily identify common features on Facebook.	180	3.15	0.77	170	3.30	0.70	Accept
4	I can create a Facebook group account for class work	180	3.21	0.73	170	3.18	0.72	Accept
5	I can upload course update using Facebook group	180	3.17	0.68	170	3.10	0.69	Accept
6	I can update my class using Facebook group	180	3.12	0.92	170	3.10	0.90	Accept
7	I can send messages to my students using Facebook group	180	3.10	0.78	170	3.09	0.80	Accept
8	I can sign out of Facebook when not in use	180	3.10	0.87	170	3.13	0.83	Accept
9	I can use common features on Facebook effectively	180	3.25	0.90	170	3.10	0.94	Accept
10	I can share information on my study group platform	180	3.42	0.70	170	3.16	0.67	Accept

Average Mean

3.20 0.80

3.15 0.77

Table 1 shows a grand mean of 3.20 for male teachers' self-efficacy and a grand mean of 3.15 for female teachers' self-efficacy. Both are greater than 2.50 acceptable benchmark for the survey. The above revealed that both male and female teachers' self-efficacy in the use of Facebook for teaching is highly positive.

Ho1 There is no significant difference between male and female teachers' self-efficacy and their use of Facebook for learning.

Table 2: Z-test on Male and Female Teachers' Self-Efficacy Towards the use of Facebook for learning.

Group	n	Mean	sd	df	z-cal	z-crt	Decision
Male	180	3.20	0.80	348	2.06	1.96	Accept Ho
Female	170	3.15	0.77				

Table 2 revealed the Z-cal. value (2.06) greater than the Z-crt. (1.96), the null hypothesis is accepted. This shows that there is no significant difference between male and female teachers' self-efficacy and their use of Facebook for learning. This agreed with the study by Hida, Yeo, and Azlina, (2022) which disclosed that gender was not a factor in the self-efficacy of teachers toward the use of technology. While the findings disagree with Arnab, Tripti, and Kedar, (2021) who observe that acuity of self-efficacy and group were obvious predictors of teachers' use of gadgets for wider tasks.

Research question 2

To what extent does gender influence the intention of trainee teacher's use of Facebook for learning?

Table 3: Male and Female Teachers' Intention Towards the use of Facebook.

S/N	Items	Male	\bar{x}	sd	Female	\bar{x}	sd	Remark
1	I intend to use Facebook for entertainment.	180	3.56	0.86	170	2.71	0.84	Accept
2	Facebook is only meant for making friends: I don't have the intention to use it for academic purposes.	180	3.53	0.75	170	2.93	0.72	Accept
3	I can learn to use Facebook for academic purposes if motivated	180	3.25	0.72	170	3.53	0.81	Accept
4	I intend to using Facebook group if motivated.	180	2.93	0.75	170	3.25	0.76	Accept
5	I intend using Facebook group to enhance my learning and teacher	180	3.78	0.64	170	3.40	0.67	Accept
6	I intend using Facebook in teacher and learning to increase my career prospects.	180	3.21	0.92	170	2.78	0.89	Accept
7	I intend using Facebook for learning and teaching to increase my awareness of its use	180	3.40	0.83	170	3.20	0.84	Accept
8	I intend to use Facebook group to enhance my students' collaboration ability.	180	3.21	0.84	170	3.50	0.88	Accept
9	I intend using Facebook to engage students.	180	2.40	0.93	170	2.45	0.96	Accept
10	I intend following government policies on ensuring safety in use technology in teaching.	180	3.55	0.67	170	3.22	0.69	Accept
Average mean			3.28	0.79		3.10	0.81	

The result in table 3 shows that the intention levels of Male and female teachers on the use of Facebook for instruction are satisfactory above the criterion mean of 2.50: Male 3.28 (SD = 0.79) and Female 3.10 (SD = 0.81) respectively.

Ho2: There is no significant difference between male and female teachers' intention and their use of Facebook for learning

This null hypothesis was tested using Z-test analysis on male and female teachers' intentions regarding their use of Facebook. The result obtained is displayed in table 4.9.

Table 4: Z-test on Male and female teachers' intention on their use of Facebook.

Group	n	mean	sd	df	z-cal	z-crt	Decision
Lecturers	180	3.28	0.79	348	2.06	1.96	Accept Ho
Students	170	3.10	0.81				

Table 4 revealed the Z-cal. value (2.06) greater than the Z-crt (1.96), the null hypothesis is accepted. This shows that the male and female teachers did not differ significantly in their intention toward the use of Facebook for learning. This agrees with Shazama and Sadiq (2016) who observed that male and female trainee teachers' intention to use gadgets is impacted by human-assisted self-efficacy.

Research question 3

What is the relationship between male and female trainee teachers' self-efficacy and their intention toward the use of Facebook?

Table 5 Correlational Analysis between Male and Female teachers on the use of Facebook for instruction

Variables	n	r	Remarks
Male			
	350	0.400	Positive moderate relationship
Female			

Table 5 showed that the Pearson Product Moment correlation coefficient was 0.400. this showed that there was a positive moderate relationship between male and female teachers on their use of Facebook for instruction.

Ho3: There is no significant relationship between male and female trainee teachers' self-efficacy and their intention toward the use of Facebook for learning.

Table 6 Correlational Analysis between Male and Female Teachers' Self-efficacy and their intention toward the use of Facebook for learning.

Variables	n	df	R-value	p-value	Alpha	Decision
Male						Rejected Ho P < 0.05
Female	350	348	0.400	0.002	0.05	

Table 6 showed that the relationship between male and female trainee teachers was significant ($p = 0.002$, $p < 0.05$). Therefore, the hypothesis was rejected, meaning there is a significant relationship between male and female trainee teachers' self-efficacy and their intention toward the use of Facebook for learning. This agreed with Shazama and Sadiq (2016) who observed that trainee teachers' intention to use technology is impacted by human-assisted self-efficacy which could play a vital role in accepting Facebook as a learning platform.

Conclusion

There is currently an increase in the use of mobile devices coupled with internet accessibility; this should be harnessed for learning and not only for communication. The portable nature of smartphone and tablet devices makes Facebook a valuable platform to access learning resources on the internet anywhere time. This study reveals no difference between male and female teachers' intention and self-efficacy in their use of Facebook for learning. While there is a relationship between male and female trainee teachers' self-efficacy and intention toward the use of Facebook for learning.

Recommendation

Arising from the finding the researcher recommends the following:

1. The positive intention of trainee teachers and their self-efficacy towards the use of Facebook should be spread in colleges.
2. An enabling environment should be provided for trainee teachers to encourage the use of Facebook for learning.
3. Courses should be designed to educate trainee teachers more on the importance of Facebook for learning and after their graduation use it with instruction.

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