

FACTORS PREDICTING THE ACCEPTANCE TO USE NEW MEDIA AMONG COLLEGES OF EDUCATION LECTURERS IN NORTH CENTRAL NIGERIA

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Abstract

This study examined factors predicting the acceptance to use new media among colleges of education lecturers in North Central Nigeria. Three research questions were used to guide the study and three corresponding null hypotheses were formulated. A survey research design was adopted for the study. Sample of 410 lecturers from colleges of education in North Central Nigeria were randomly selected, using multi stage random sampling technique. One set of questionnaire was used, named Lecturer Acceptance to Use New Media Questionnaire (LAUNMQ). The instrument was validated by two educational technologist experts. Using Crombach Alpha Reliability Coefficient of the following was obtained from the instrument performance expectancy 0.76, effort expectancy 0.84, self-efficacy 0.79 and acceptance to use 0.93. Data was analyzed using mean and standard deviation and Regression analysis was used to analyzed hypothesis. It was revealed that there is significant relationship between performance expectancy and acceptance to use new media, there is significant relationship between effort expectancy and acceptance to use new media and there is significant relationship between self- efficacy and acceptance to use new media. Based on the findings the researcher recommends among others that stakeholders of colleges of education should as a matter of

urgent importance provides necessary new media devices that can enhance the usage for instructional delivery in the colleges of education and stakeholder as matter of urgent should organize workshop on new media utilization for instructional delivery.

Key words: Performance expectancy, Effort expectancy, Self-efficacy

Introduction

The world today has become globalized as a result of the ingenious stride that has been made in media technology. Greater percentage of the world population today is connected to one form of media technology or the other invariably bringing human interaction much closer than ever. Sadiq (2012) observed that the concept of "Global Village" has engendered new technological innovation for the purposes of information dissemination, sharing and reception referred to as New Media. The new media concept is significantly different from traditional media because it is internet based, digital in nature and fascinating to user with On-line accessibility. New media is an emerging platform that has come to reduced greatly, the cost and troubles of travelling. New media has brought drastic revolution positively in gathering, sending and reception of information. Every aspect of human endeavor is now influenced one way or the other by new media technological advancements to the extent that one of the core aspects of ones life which is education is becoming transformed digitally. The National Policy on Education (NPE) in Nigeria posited that education is the instrument of change per excellence, (Federal Republic of Nigeria (FRN, 2013). Inferring from NPE, education therefore can be used for behaviour modification, intellectual development and skill acquisition. In the area of technology, an innovation in technological development will undeniably affect the education sector to a great extent. Advancement in media technology, that is the emergence of new media in the latter part of 20th century has infiltrated the education sector with expansive information and data sharing (Brenner, 2012). It has widened the

boundaries of learning beyond the four walls of the classroom and creating waves in education sector with its exclusive characteristics like instant messaging, learning at ones' own pace in the form of individualized learning, information sharing among other characteristics (Bakia, 2011). So the infiltration of new media is highly justified in National Policy on Education. It has also been discovered that new media is a significant innovation that has evolved and taking over from traditional media very quickly through its interactive characteristics (Adewale, 2009). Presently, new media has made education sector more competitive by responding to the globalization status of the world. It is allowing students to explore their interests and curiosity on a global scale (Lee, 2006). The factors would be examined along the line of three paradigms that have been established as possible reasons for employing new media for instruction in order to enhance learning outcomes. The paradigms is: Performance-Expectancy in relation to the new media is the degree to which a person perceives that utilizing the new media technology will assist them to achieve or benefit in relation to performance of a task (Venkatesh, Morris, Davis & Davis, 2003). With respect to new media, they found out that Performance Expectancy (PE) is capable of influencing self – efficacy, self regulation, effort expectancy. Also it noted that some other aspect of learning can be influenced by performance expectancy, to mention a few. Performance expectancy can as well facilitate social condition, influence new media acceptance, technology factor, individual factor, implementation factor, self regulation and self-efficacy.

Effort-Expectancy has been identified as one of the major constructs that could be used to investigate lecturers' intention to adopt and use new media for teaching and learning purposes. Again the researcher would examine the perspective of effort expectancy in school settings in relation to lecturers assess, time and cost based on the Unified Theory of Acceptance and use of Haeng-Nam, Dae-Yul, Yeon-Su and Jae-Ik (2015) who carried out investigation on relationship among self-efficacy, social influence, performance expectancy, effort expectancy, and behavioral intention in mobile learning service. It was revealed in their study

that effort expectancy has positive effects on performance expectancy and behavioral intention to use mobile learning

Isaac (2016) who carried out investigations on Perceived ease of use (PEOU) and perceived usefulness (PU) of e-government services in Ghana. The results indicate that computer self-efficacy does not significantly moderate the relationship between perceived ease of use and perceived usefulness of e-government services. Computer self-efficacy and perceived ease of use were however found to be significant in predicting the perceived usefulness of e-government services. The implications of these findings are discussed.

Calderón, López and Pena (2017) who carried out research on the conditional indirect effect of performance expectancy in the use of facebook, google+, instagram and twitter by youngsters. The result revealed that the effect is mediated by the behavioral intention, but only in some cases moderated by age and gender in consonance with this study in which age and gender were found to occasionally play strong mediating effect on acceptance to use new media.

Omar, Enas, and Mutaz (2014) whose research examining factors affecting college students' behavioral intentions to use m-learning in Saudi Arabia. Results of this research show that performance expectancy is the main factor affecting students' adoption intention to use M-Learning in the future. This is followed by effort expectancy and Social Influences factors respectively.

Shittu, Baffa, Abubakar, Gopep and Abubakar (2016) whose investigate predictor of acceptance of computer mediated instruction among teacher educators in Niger State College of Education Minna. The results revealed that self-efficacy is the only factor that can induce teacher educators to accept use of computers mediated instruction for students' instruction.

Ozdemir and Erdem (2016). Who carried out research study on the relationship between computer self-efficacy and social network usage aims of information technology teacher candidates. The study revealed that it is evident that self-efficacy is an important catalyst that can enhance the effective use of information technology invariably in the form of new media.

Chao and Badrie (2016) The study investigated the relationship between the apparent teacher's self-efficacy and attitudes towards integrating technology into classroom teaching, self-evaluation reports and computer performance results. The study revealed a strong relationship between the perceived self-efficacy towards technology incorporation and teachers' self-evaluation report. Also, the findings of this research revealed that 82.7% of teachers earned high computer technology scores on their active inspire projects and 33.3% received excellent grades on computer performance test.

Aim and Objectives of the Study

The aim of the study was to investigate the factors predicting the acceptance to use new media among colleges of education lecturers in North Central Nigeria.

Specifically the study will;

1. Examined the performance-expectancy on the use of new media for instruction among lecturers in college of education in North Central Nigeria.
2. Determined the effort-expectancy on the use of new media for instruction among lecturers of colleges of education in North Central Nigeria.
3. Find out the self-efficacy of college of education lecturers on the use of new media for instruction in North Central Nigeria.

Research Questions

The following research questions were raised to guide the study:

- 1) What is the performance expectancy of college of education lecturers on acceptance to use new media for teaching in North Central Nigeria?
- 2) How do college of education lecturers perceived their effort expectancy of new media for teaching in North Central Nigeria?
- 3) To what extent do colleges of education lecturers perceived their self-efficacy of new media for teaching in North Central Nigeria?

Research Hypotheses

The following null hypotheses were formulated and were tested in this study:

- HO₁:** There is no significant relationship between performance-expectancy and acceptance to use new media among lecturers of Colleges of Education in North Central Nigeria
- HO₂:** There is no significant relationship between effort-expectancy and acceptance to use new media among lecturers of Colleges of Education in North Central Nigeria.
- HO₃:** There is no significant relationship between self-efficacy and acceptance to use new media among lecturers of Colleges of Education in North Central Nigeria.

Research Questions

(1) What is the performance expectancy of college of education lecturers on acceptance to use new media for instruction in North Central Nigeria?

Table 1: Mean and Standard Deviation of performance expectancy responses of lecturers on use of new media for instruction.

| S/N | ITEM | \bar{X} | SD | DECISION |
|-----|--|-----------|------|----------|
| PE1 | Using new media in doing my job would enable me to accomplish academic tasks more quickly. | 4.28 | 2.65 | AGREE |
| PE2 | My whole body becomes ready when am to use new media | 4.17 | 0.79 | AGREE |
| PE3 | Using new media would improve my job performance greatly. | 3.94 | 0.97 | AGREE |

| | | | | |
|------|---|-------------|------|-------|
| PE4 | Using new media help me to teach difficult concepts | 3.93 | 2.68 | AGREE |
| PE5 | I would find new media useful in my job | 3.92 | 0.87 | AGREE |
| PE6 | Other lecturers commend me for using new media for instructional delivery | 3.84 | 2.17 | AGREE |
| PE7 | My co-lecturers like to work with me when using (new media) | 3.83 | 2.19 | AGREE |
| PE8 | I get motivated when I think about using new media in teaching | 3.81 | 0.94 | AGREE |
| PE9 | Using new media would enhance my effectiveness in the job | 3.72 | 1.06 | AGREE |
| PE10 | Using new media in my work would enhance my productivity positively. | 3.68 | 1.84 | AGREE |
| | | 3.91 | | |

Grand Mean

Decision Mean = 3.00
 Table 1: shows the mean and standard deviation of performance expectancy responses of lecturers' on use of new media for instruction. It indicates that lecturer acceptance to use new media is favorable. The respondent are in agreement to use items stated in the research instrument on performance expectancy. Also the items mean rating which ranged between

3.68 and 4.28 are all considered accepted based on the decision mean of 3.0. The implication is that, the performance expectancy of lecturers on acceptance to use new media is favourable since all the items on performance expectancy show agreed based on decision mean.

(2). How do colleges of education lecturers perceived their effort expectancy on acceptance of new media for instruction in North Central Nigeria?

Table 2: Mean and Standard Deviation of effort expectancy responses of lecturers on use of new media for instruction

| S/N | ITEMS | \bar{X} | SD | DECISION |
|-----|--|-----------|------|----------|
| EE1 | It will be easy for me to become skilled in instructional delivery when using new media. | 4.33 | 2.18 | AGREE |
| EE2 | I do well in using new media to pass instruction | 4.22 | 2.57 | AGREE |
| EE3 | I would find new media flexible to interact with. | 4.05 | 3.46 | AGREE |
| EE4 | My new media operation skill makes it easy for me to deliver lectures. | 4.00 | 0.88 | AGREE |
| EE5 | I find the new media easy to use for instructional delivery. | 3.98 | 2.20 | AGREE |

| | | | | |
|------|--|-------------|------|-------|
| EE6 | I find it easy to use new media to do what I want to do as an academics | 3.96 | 2.57 | AGREE |
| EE7 | Seeing students doing well in my course using new media encourages me to do better. | 3.87 | 2.24 | AGREE |
| EE8 | Evaluating students performance online using new media is more convenient for me | 3.83 | 1.05 | AGREE |
| EE9 | I can use new media to enable students to developed problem solving skills. | 3.81 | 0.90 | AGREE |
| EE10 | My interaction with students using new media would make my lesson easy for them to understand and comprehend instruction | 3.67 | 1.00 | AGREE |
| | | 3.97 | | |

Grand Mean

Decision Mean = 3.00

Table 2 shows the mean and standard deviation of effort expectancy of lecturers on use of new media for instruction. It indicates that lecturer's acceptance to use new media is favorable. This indicates that all the items scores more than 3.0 decision mean, which imply that all the items were accepted, an indication that the lecturers' effort expectancy enhances the acceptance to use new media for instructional delivery in colleges of education in North Central Nigeria. The implication is that, the effort expectancy of lecturers on acceptance to use new media is favourable since all

the items on effort expectancy show agreed based on decision mean.

(3) To what extent does college of education lecturers perceive their self efficacy on acceptance of new media for instruction in North central Nigeria?

Table 3: Mean and Standard Deviation of self efficacy reponses of lecturers on use of new media for instruction

| S/N | ITEMS | \bar{X} | SD | DECISION |
|-----|--|-----------|------|----------|
| SE1 | If I practiced every day, I could develop just about any skill in my pedagogy through new media. | 4.21 | 2.21 | AGREE |
| SE2 | I can change my basic level of academic abilities considerably through the use of new media. | 4.08 | 3.56 | AGREE |
| SE3 | I am confident that I will achieve the instructional goals that I set, when I use new media for instruction. | 4.03 | 1.28 | AGREE |
| SE4 | When I am confronted with academic problems, I can find several solutions through new media always. | 4.01 | 2.11 | AGREE |
| SE5 | I think that no matter the level of subject mastery I have acquired, I significantly develop instructional delivery skill with new media | 3.92 | 2.14 | AGREE |

| | | | | |
|-------------------|--|-------------|------|-------|
| SE6 | Evaluating students' performance online using new media is more convenient for me. | 3.91 | 2.65 | AGREE |
| SE7 | I can use new media to enable students to developed problem solving skills. | 3.88 | 2.21 | AGREE |
| SE8 | I can solve most problems if I invest effort in employing the appropriate new media | 3.83 | 0.95 | AGREE |
| SE9 | I manage time effectively when I use new media for instruction. | 3.83 | 0.90 | AGREE |
| SE10 | I can succeed in whatever discipline of academic pursuit if am assign to deliver content to students through new media | 3.68 | 1.00 | AGREE |
| | | 3.94 | | |
| Grand Mean | | | | |

Decision Mean =3.00

Table 3: Indicate self efficacy of lecturers on use of new media for instruction. It was agreed with the mean values ranging from 3.68 to 4.21. From the analysis, it was reveals that lecturers self-efficacy promote proficiency of lecturers in the use of new media for instructional delivery in colleges of education in the North Central Nigeria. The implication is that, the self-efficacy of lecturers on acceptance to use new media is favourable since all the items on self-efficacy show agreed based on decision mean.

Hypotheses one, two and three

- HO₁:** There is no significant relationship between performance-expectancy and acceptance to use new media among lecturers of colleges of education in North Central Nigeria
- HO₂:** There is no significant relationship between effort-expectancy and acceptance to use new media among lecturers of colleges of education in North Central Nigeria.
- HO₃:** There is no significant relationship between self-efficacy and acceptance to use new media among lecturers of colleges of education in North Central Nigeria.

Methodology

Descriptive survey was employed to elicit information from the lectures on factors predicting the acceptance to use new media among colleges of education lecturers in North Central Nigeria. The population of the study comprises 1520 lecturers of all colleges of education in North Central Nigeria. 410 lecturers were randomly selected from four colleges of education using random sampling technique. One set of questionnaire was used for data collection, Lecturer Acceptance to Use New Media Questionnaire (LAUNMQ). The instrument contains two sections. Section A is the demographic data of the respondent. Section B contains the items on self-efficacy. The instrument was validated by two educational technologist experts. To determine the reliability of the instrument, 100 questionnaires was administered on pilot sample, Crombach Alpha was used to obtained reliability co-efficient of 0.79 on lecturers' respondent. The instrument was administered to 400 lecturers. All 400 copies were duly completed, collected and analyzed. The data were analyzed using 5 - point Likert scales in which strongly agree (SA) was awarded 5 points, Agree (A) awarded 4 points, Undecided (U) awarded 3 points, Disagree (D) awarded 2 points and Strongly Disagree (SD) awarded 1 point. A mean of 3.0 was used as acceptable mean agreement for 5 point likert scale. While the value of 2.49 and below was rejected. The research questions were answered by computing the questionnaire responses of the respondents using mean and standard deviation and hypotheses was analyzed using regression analysis.

Table 4: Correlation analysis of effort expectancy, performance expectancy, self- efficacy and acceptance to use new media among lecturers in college of education in North Central Nigeria

| | | Effort- Expectancy | Performanc e Expectancy | Self Efficacy | Acceptan ce to Use |
|----------------------------|---|-----------------------|-------------------------------|------------------|-----------------------|
| Effort- Expectancy | Pearson Correlation | 1 | .355** | .293** | .376** |
| | Sig. (2-tailed) | | .000 | .000 | .000 |
| | Sum of Squares and Cross- products | 25704.449 | 7834.037 | 7576.12 2 | 8029.444 |
| | Covariance | 62.847 | 19.201 | 18.524 | 19.632 |
| | N | 410 | 409 | 410 | 410 |
| Performance -Expectancy | Pearson Correlation | .355** | 1 | .305** | .355** |
| | Sig. (2-tailed) | .000 | | .000 | .000 |
| | Sum of Squares and Cross- products | 7834.037 | 18967.267 | 6786.63 6 | 6509.900 |
| | Covariance | 19.201 | 46.488 | 16.634 | 15.956 |
| | N | 409 | 409 | 409 | 409 |
| Self- Efficacy | Pearson Correlation | .293** | .305** | 1 | .384** |
| | Sig. (2-tailed) | .000 | .000 | | .000 |
| | Sum of Squares and Cross- products | 7576.122 | 6786.636 | 26094.3 05 | 8267.110 |
| | Covariance | 18.524 | 16.634 | 63.800 | 20.213 |
| | N | 410 | 409 | 410 | 410 |

| | | | | | |
|-------------------|-----------------------------------|----------|----------|----------|-----------|
| Acceptance to Use | Pearson Correlation | .376** | .355** | .384** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | |
| | Sum of Squares and Cross-products | 8029.444 | 6509.900 | 8267.110 | 17719.320 |
| | Covariance | 19.632 | 15.956 | 20.213 | 43.324 |
| | N | 410 | 410 | 410 | 410 |

** . Correlation is significant at the 0.05 level (2-tailed).

The result of correlation analysis in (Table 4) was used to verify the following null hypotheses (Ho1, Ho2, & Ho3) respectively. The finding showed that performance expectancy, effort expectancy, and self efficacy significantly correlated with acceptance to use new media for teaching. Therefore, hypothesis one (Ho1) that stated no significant relationship between performance expectancy and acceptance to use new media was not supported, because the analysis revealed that performance expectancy statistically and significantly correlated with acceptance to use new media at $r = .35$, $p < .05$. This implies that there is significant relationship between performance expectancy and acceptance to use new media.

Similarly, hypothesis two (Ho2) stated that no significant relationship exist between effort expectancy and acceptance to use new media was not supported, because the analysis on the table showed $r = .37$, $p < .05$ which mean statistical relationship exist between effort expectancy and acceptance to use new media for instruction. The implication is that there is significant relationship between effort expectancy and acceptance to use new media

Hypothesis three (Ho3) stated that no significant relationship exist between self efficacy and acceptance to use new media was also not supported, because the analysis on the table showed $r = .38$, $p < .05$ which mean statistical relationship exist between self efficacy and acceptance to use new media for instruction. The

implication is that there is significant relationship between self-efficacy and acceptance to use new media.

Discussion of Findings

Hypothesis one: There was no significant relationship between performance- expectancy and acceptance to use new media among lecturers of colleges of education in North Central Nigeria. This is in agreement with (Haeng-Nam, Dae-Yul, Yeon-Su & Jae-Ik 2015) who carried out investigation on relationship among self-efficacy, social influence, performance expectancy, effort expectancy, and behavioral intention in mobile learning service. It was revealed in their study that effort expectancy has positive effects on performance expectancy and behavioral intention to use mobile learning. Also in support of finding of (Isaac, 2016) who carried out investigations on Perceived ease of use (PEOU) and perceived usefulness (PU) of e-government services in Ghana. The results indicate that computer self-efficacy does not significantly moderate the relationship between perceived ease of use and perceived usefulness of e-government services. Computer self-efficacy and perceived ease of use were however found to be significant in predicting the perceived usefulness of e-government services. The implications of these findings are discussed. It also concur with the findings of (Calderón, López, & Pena 2017) who carried out research on the conditional indirect effect of performance expectancy in the use of facebook, google+, instagram and twitter by youngsters. The result revealed that the effect is mediated by the behavioral intention, but only in some cases moderated by age and gender in consonance with this study in which age and gender were found to occasionally play strong mediating effect on acceptance to use new media.

Hypothesis two: There was no significant relationship between effort-expectancy and acceptance to use new media among lecturers of colleges of education in North Central Nigeria. This is supported by the research of Omar, Enas, and Mutaz (2014) whose research examining factors affecting college students' behavioral intentions to use m-learning in Saudi Arabia. Results of this

research show that performance expectancy is the main factor affecting students' adoption intention to use M-Learning in the future. This is followed by effort expectancy and Social Influences factors respectively.

Hypothesis three: There was no significant relationship between self-efficacy and acceptance to use new media among lecturers of colleges of education in North Central Nigeria. This is in support of findings of (Shittu, Baffa, Abubakar, Gopep and Abubakar 2016) whose investigate predictor of acceptance of computer mediated instruction among teacher educators in Niger State College of Education Minna. The results revealed that self-efficacy is the only factor that can induce teacher educators to accept use of computers mediated instruction for students' instruction. Also is in agreement with the work of (Ozdemir, & Erdem 2016). Who carried out research study on the relationship between computer self-efficacy and social network usage aims of information technology teacher candidates. The study revealed that it is evident that self-efficacy is an important catalyst that can enhance the effective use of information technology invariably in the form of new media. The study aligned with research of Chao and Badrie (2016) The study investigated the relationship between the apparent teacher's self-efficacy and attitudes towards integrating technology into classroom teaching, self-evaluation reports and computer performance results. The study revealed a strong relationship between the perceived self-efficacy towards technology incorporation and teachers' self-evaluation report. Also, the findings of this research revealed that 82.7% of teachers earned high computer technology scores on their active inspire projects and 33.3% received excellent grades on computer performance test.

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