



## Correlates of Computer Self-efficacy and Computer Anxiety among Business Education Lecturers in Colleges of Education in North-East, Nigeria

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### ABSTRACT

*This study examined the relationship between computer self-efficacy and computer anxiety among business education lecturers in colleges of education in north-eastern, Nigeria. The study adopted correlational survey research design. 153 business education lecturers from colleges of education in North-East, Nigeria served as respondents in the study. The instruments used in the study are Computer Self-Efficacy Rating Scale (CSERS) and Computer Anxiety Rating Scale (CARS). Pearson Product-Moment Correlation was used in analyzing the data collected. The finding revealed that there was a negative and significant relationship between the computer self-efficacy and computer anxiety among business education lecturers, thus; if computer self-efficacy of business education lecturers increases their computer anxiety level decreases. This study therefore, recommended that, computer facilities and other technology based instructional facilities should be provided and lecturers should also be encouraged to incorporate them in the teaching process. This will help in reducing their computer anxiety.*

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### INTRODUCTION

Introduction of Information and Communication Technology and its economic importance has caused global emphasis to more technologically literate workers. Mudasiru and Hamdallat (2009) observed that Information and Communication Technology contributes positively to all aspect of human life, thus, inventing control mechanism for modifications in human existences; ways of living; socially, culturally, economically, commercially, politically and educationally. Computer as one of the important product of technology plays vital role particularly in the field of education. The uses of computer soft-ware applications, internet service and multimedia facilities have changed the way educator presents lesson to students (Daly, Pachler, & Pelletier, 2009). In view of this, the recent innovative approaches in computer technology have challenged traditional strategies of teaching and learning in all fields of education. As a result, Nigeria plans a prevalent use of computers and other technology based instructional gadgets in teaching and learning processes, this is to ensure the proficiency of students in the use of computer and other related technology gadgets.

However, appropriate use of computer for classroom instruction, is extremely connected with

lecturers' beliefs, attitude, control and confidence towards computer (Philip, Kristi, Shelia, Zachary, & LaToya, 2013).. Therefore, Computer self-efficacy among lecturers and students plays a vital role in applying computer supported education. Thus, Compeau and Higgins (1995) have defined Computer self-efficacy as quote in Chuo, Tsai, Lan, and Tsai (2011) as "a judgment of one's capability to use a computer" or as a "judgments of how well one can execute courses of action required to deal with potential situations on computer".

Jebeile & Abeysekera, (2010) postulated that lecturers' knowledge, skills and confident on computer entails their level of readiness and capability to use computer in teaching and learning processes. Besides, Celik & Yesilyurt, (2013) believed that lecturer could develop an anxiety feeling upon given a computer challenging task in the classroom. However, according to Chuo et al. (2011) defined computer anxiety as an individual's anxiety aroused in the process of using or facing the computer while Parayitam, Desai, Desai, and Eason (2010) described Computer anxiety as a negative emotional state when using a computer or computer equipment. Recent advances in computer technology thus introduction of personal computers, activity-based software and multimedia, over the last decade, disclosed the

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development and implementation of new and innovative teaching strategies (Klassen & Tze, 2014)

With the current intense advocates of technology incorporation in teaching and learning process to improve the quality of education as well as other service delivery is gaining acceptance in other parts of the world including Nigeria. Despite the fact that many countries are investing by providing numerous educational technology and innovations in institutes; few to mention includes computers, interactive white boards, digital pen, digital paper, smart board, educational software packages, simulators, animations, televisions, video players, projectors, have been introduced into classrooms but without using them efficiently and effectively for the desired purpose, especially in developing countries (Straub, 2009). It was further observed that despite these provisions in various educational institutions, most lecturers do not use them in classrooms especially in developing countries like Nigeria. Recently, Dahawy, Tooma, & Kamel, (2015) lamented that some lecturers integrate technology innovations into instruction but not as expected in comparison to developed worlds.

However, the dilemmas regarding the use of computer in Nigeria Colleges of Education it might not be unconnected to lecturers believes and inability concerning the use of computer in classroom and as a result could lead to computer anxiety among the lecturers. This assertion has been confirmed in some parts of the literature, for instance Inan & Lowther, (2010); Fluck & Dowden, (2013); and Philip, (2013) emphasizes that lecturers' willingness to use computer and other learning technology in their classrooms, depend upon their attitudes, beliefs, capability, confidence, skills and perceived benefits of doing so. Many studies have been carried-out on computer self-efficacy and computer anxiety. However, all the studies were conducted overseas. (see for example, Embi (2007), Hong, Abang & Zaimuarifuddin, 2009, Simsek (2011). Therefore, the researchers could not lay hands on any published studies on the association between computer self-efficacy and computer anxiety in Colleges of Education particularly in North-East, Nigeria. Hence, the need for this study.

### **Objectives of the Study**

This study identified the relationship between computer self-efficacy and computer anxiety among business education lecturers in colleges of education

in north-eastern Nigeria. Specifically, the study intends:

- i. To determine the relationship between computer self-efficacy on software applications and computer anxiety among business education lecturers in colleges of education.
- ii. To determine the relationship between computer self-efficacy on multimedia application and computer anxiety among business education lecturers in colleges of education.

### **Research Hypotheses**

**H<sub>01</sub>** There is no significant relationship between computer self-efficacy on software applications and computer anxiety among business education lecturers in colleges of education

**H<sub>02</sub>** There is no significant relationship between computer self-efficacy on multimedia application and computer anxiety among business education lecturers in colleges of education

The results of this study could be of paramount important to administrators of colleges of education, business education lecturers, students and researcher. Precisely, Administrators will have an insight about major challenges deterring lecturers from incorporating computer and other related learning technology in teaching process for necessary actions in term of provision of the necessities (ICT facilities), orientation, training, frequent supervision and monitoring any improvement towards innovative technology incorporation through instructional process.

The business education lecturers may benefit from the research results if attracted the attention of administrators and duly considered; In the sense that training will be given to them for proper application of computer in classroom and they might not be cycled-out in the contemporary development in the world of instructional strategies. Furthermore, improving lecturer's life style by being well informed about the global development, intellectual, social and professionally. If the above-mentioned benefits are being observed, the students definitely will receive adequate training with computer and other learning technological devices and they are more likely get white cola job due to their familiarity with modern ICT facilities they used to it in learning environment; which may pave way for them to cope with any kind of technology they may

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likely asked to use with in world of work. The findings of this study can serve as sources of references to researchers who have interest in the topic or any aspect of it for thorough study.

### METHODOLOGY

Correlational research design was employed in conducting this study, the study covered all colleges of education offering business education at the Nigeria Certificate in Education (NCE) level in the six (6) States in North-Eastern sub-region of Nigeria. The Population of this study comprised one hundred and fifty-three (153) Business education lecturers and total population sampling was used in the study. Computer Self-Efficacy Rating Scale (CSERS) developed by (Murphy, Coover, & Owen, 1989) was adapted with the reliability coefficient of 0.98 to measured level of computer self-efficacy on, software application and multimedia application in teaching process. Computer Anxiety Rating Scale (CARS) used in the work of Heinszen, Glass, and Knight (1987) with the reliability coefficient of 0.96. was also adapted and used to measured computer anxiety level of business education lecturers. Four (4) points scale was employed for the instrument. These were Always (A), Often (O), Seldom (S), Never (N) and Strongly

Agreed (SA), Agreed (A), Disagreed (D) Strongly Disagreed were used respectively and each instrument contained ten (10) items. The face and content validations of the modified adapted instruments for data collection was validated by three experts from the Department of Vocational and Technology Education, Faculty of Technology Education, Abubakar Tafawa Balewa University, Bauchi. Cronbach Alpha statistics was used to obtained reliability coefficient for Computer Self-Efficacy Rating Scale (CSERS) and Computer Anxiety Rating Scale (CARS) of 0.90 and 0.85 respectively. The response rate of the survey instrument was 96%. The data collected was analysed using Pearson's Product –Moment Correlation.

### RESULTS

The relationship between Computer Self-Efficacy on Software Application (CSEOSA) and Computer Anxiety (COMANX) was examined using Pearson Product-Moment Correlation. The results in the table 1 revealed the R-value of -.690 with probability value of 0.027. This implies that, the relation between the variables is negative and significant, the higher the CSEOSA the lower COMANX. Hence, hypothesis 1 is not supported

**Table 1:** Correctional Analysis of Computer Self-efficacy on Software Application and Computer Anxiety

Variables	R	PV	Strength	Decision
CSEOSA	-.690*	.027	Strong	Not supported
COMANX				

Pearson Product-Moment Correlation was used to address the hypothesis 2. The statistical result presented in table 2 shows the R-value of -.647 with the probability value of 0.043. This proved that the

relationship between the Computer Self-Efficacy on Multimedia Application (CSEOMA) and Computer Anxiety (COMANX) is negative and significant. Hence, hypothesis 2 is not supported.

**Table2:** Correlation Analysis of Computer Self-Efficacy on Multimedia Application and Computer Anxiety

Variables	R	PV	Strength	Decision
CSEOSA	-.647*	.043	Strong	Not supported
COMANX				

### DISCUSSION

The finding of hypothesis 1revealed a strong and negative relationship between computer self-efficacy on software application and computer anxiety among business education lecturers in colleges of education this implies that computer

anxiety level of business education lecturers decreases with the increased in the level of computer self-efficacy on software application. The finding agreed with the study conducted by Simsek (2011) on the Relationship between Computer Anxiety and Computer Self-Efficacy the study also found a

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negative relationship between the variables.. Equally, the finding of the present study is also supported by the study of Embi (2007) who observed that low levels of computer anxiety as a result of high levels of computer self-efficacy.

The finding from hypothesis 2 revealed that there is existence of a strong and negative relationship between business education lecturers' level of computer self-efficacy on multimedia application and their computer anxiety. This concord Wild et al. (2012) Wild et al. found the reduction in levels of computer anxiety and increased on computer self-efficacy on multimedia level to perform on various computer tasks. Moreover, a similar finding was observed by Kiliç (2015). The study revealed that a computer anxiety has negative and significant relation with computer self-efficacy

### CONCLUSION

The study investigated the relationship between business education lecturers' levels of computer self-efficacy and their computer anxiety level. The study proven that, there existence of strong negative relationship between the variables on study. It implies that the lower the computer anxiety and the more improvement in the level of computer self-efficacy of the business education lecturers in all the two components (self-efficacy on software application and multimedia application). By implication, lecturers with higher self-efficacy are expected to embrace computer and other instructional technology and would find it with ease to used computer especially in teaching and learning processes. Thus, higher sense of computer self-efficacy, confidence, and self-determination proven the capability of lecturers to engage students within and outside normal class (virtual environment).

### RECOMMENDATIONS

The following recommendations were drawn based on the findings of this study; this study therefore, recommended that,

1. Computer facilities and other technology based instructional facilities should be provided and lecturers should also be encouraged to incorporate them in the teaching process.
2. Business Education Lecturers should be optimistic to their jobs by improving their self-efficacy through enrolment into computer professional training in different aspect of computer;

3. Computer programming; hardware, software, information system, multimedia etc. on their own, aimed at professional development and apex services delivery.
4. College administrators should be organising workshops/seminars on computer, for business education lecturers to have sound knowledge, skills, strategies and techniques towards contemporary service delivery and educational quality.

### REFERENCE

- Chuo, Y.-H., Tsai, C.-H., Lan, Y.-L., & Tsai, C.-S. (2011). The effect of organizational support, self efficacy, and computer anxiety on the usage intention of e-learning system in hospital. *African Journal of Business Management*, 5(14), 5518-5529.
- Deliyannis, I. (2012). From interactive to experimental multimedia. *Interactive multimedia*, 3-12.
- Embi, R. (2007). *Computer Anxiety and Computer Self-Efficacy among Accounting Educators at Universiti Teknologi Mara (UiTM), Malaysia*. (DOCTOR OF PHILOSOPHY Dissertation), Blacksburg, Virginia, NP.
- Eugenia, H., Lin, S. W. a., & Huang, T. (2012). What type of learning style leads to online participation in the mixed-mode e-learning environment? A study of software usage instruction. *Computers & Education*, 58(1), 338-349.
- Gilakjani, A. P. (2012). The significant role of multimedia in motivating EFL learners' interest in English language learning. *International Journal of Modern Education and Computer Science*, 4(4), 46-57.
- Heinssen, R. K., Glass, C. R., & Knight, L. A. (1987). Assessing computer anxiety: Development and validation of the computer anxiety rating scale. *Computers in Human Behavior*, 3(1), 49-59.
- Hong, K. S., Abang, E. A. O. a., & Zaimuarifuddin, S. N. (2009). Computer Self-Efficacy, Computer Anxiety, and Attitudes toward the Internet: A Study among Undergraduates in Unimas. *Educational Technology & Society*, 8(4), 14-25.
- Judy, E. S. a., & Steven, W. (2009). Cognitive engagement with a multimedia ERP training tool: Assessing computer self-efficacy and technology acceptance. *Information &*



- Management*, 1-12.  
doi:10.1016/j.im.2008.10.003
- Kiliç, D. B. Ç. (2015). Music teachers computer anxiety and self-efficacy. *Educational Research and Reviews*, 10(11), 1547-1559.
- Lee, M. J. (2010). *Web 2.0-Based E-Learning: Applying Social Informatics for Tertiary Teaching: Applying Social Informatics for Tertiary Teaching*: IGI Global.
- Mandernach, B. J., & Taylor, S. S. (2011). Web 2.0 applications to foster student engagement. *Promoting student engagement*, 1, 220-229.
- Mayer, R. E. (2013). The promise of multimedia learning: using the same instructional design methods across different media. *Journal of education*, 13, 125-139. doi:10.1016/S0959-4752(02)00016-6
- McLoughlin, C., & Lee, M. J. (2007). *Social software and participatory learning: Pedagogical choices with technology affordances in the Web 2.0 era*. Paper presented at the ICT: Providing choices for learners and learning. Proceedings ascilite Singapore 2007.
- Mudasiru, O. Y. a., & Hamdallat, T. Y. (2009). Educational reforms in Nigeria: The potentials of information and communication technology (ICT). *Educational Research and Reviews Academic Journals*, 4(5), 225-230. doi: <http://www.academicjournals.org/ERR>
- Murphy, C. A., Coover, D., & Owen, S. V. (1989). Development and validation of the computer self-efficacy scale. *Educational and Psychological measurement*, 49(4), 893-899.
- Parayitam, S., Desai, K. J., Desai, M. S., & Eason, M. K. (2010). Computer attitude as a moderator in the relationship between computer anxiety, satisfaction, and stress. *Computers in Human Behavior*, 26(3), 345-352.
- Philip, A. G., Kristi, S., Shelia, R. C., Zachary, S., & LaToya, J. O. N. (2013). Changing teachers, changing students? The impact of a teacher-focused intervention on students' computer usage, attitudes, and anxiety. *computer and education, science direct*, 71, 165-174. doi:org/10.1016/j.compedu.2013.10.002
- Powell, A. L. (2013). Review Computer anxiety: Comparison of research from the 1990s and 2000s. *elsevier*, 29, 2337-2381  
doi:org/10.1016/j.chb.2013.05.012
- Raafat , G. S. a., & Dennis, K. (2015). Computer Anxiety in E-Learning: The Effect of Computer Self-Efficacy. *Journal of Information Technology Education*, 8, 177-190.
- Simsek, A. (2011). The Relationship between Computer Anxiety and Computer Self-Efficacy. *Online Submission*, 2(3), 177-187.
- Van Acker, F., van Buuren, H., Kreijns, K., & Vermeulen, M. (2013). Why teachers use digital learning materials: The role of self-efficacy, subjective norm and attitude. *Education and Information Technologies*, 18(3), 495-514.
- Wild, K. V., Mattek, N. C., Maxwell, S. A., Dodge, H. H., Jimison, H. B., & Kaye, J. A. (2012). Computer-related self-efficacy and anxiety in older adults with and without mild cognitive impairment. *Alzheimer's & dementia: the journal of the Alzheimer's Association*, 8(6), 544-552.