COMPUTER ANXIETY AND RESEARCH ATTITUDE IN THE ACADEMIA: AN EMPIRICAL STUDY OF LECTURERS IN COLLEGES OF EDUCATION

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Abstract: -

The colleges of education in Nigeria are an essential component of the higher education ecosystem saddled with training future teachers. However, a growing indication suggests a poor research attitude in the colleges of education. Although, the constrictions impeding efficient and globally competitive research development in the higher education system have been emphasized in the literature. However, the construct of computer anxiety and its effect on computer use instigated the current paper. Thus, the study's primary purpose is to examine research attitudes in colleges of education based on computer anxiety. Ninety-six academic staff pooled from the CoE in the Enugu States of Nigeria completed a self-report measure. The linear regression analysis conducted to test the study hypothesis revealed that computer anxiety statistically significantly predicted research attitudes in CoE at $F(1,94)$, 60.031, $P<.000$. The R^2 indicated that the predictor variable explained about 22.1% of the observed variance in research attitudes in CoE. The paper concluded that computer anxiety determines research attitude in CoE.

Keywords: *Computer anxiety, research attitudes, lecturers,*

INTRODUCTION

The contemporary education ecosystem is increasingly demanding evidence-based learning and an innovative model. Integrating research-based knowledge with education gradually assumes a significant trend in the education sector that requires attention (Amaratunga & Senaratne, 2009). Importantly, research in higher education occupies a central position in the industry's growth (Kachalova et al., 2019). The modern-day tertiary institutions in Nigeria and beyond are undergoing a growing shift to inquiry-based education that inspires more research representations different from conventional education (Etzkowitz, 2003). Indeed, vigorous organized investigation and a logical research framework are essential in general development (Ashrafi-Rizi et al., 2015). Hence, Bhagavathula et al. (2017) defined evidence-based knowledge as a universal aspect of education. Accordingly, academic research is indispensable in promoting and improving all aspects of the global sphere. Thus, Sabel'nikova-Begashvili and Khudoverdova (2020) underscored the relevance of imparting research knowledge to the learners. Similarly, Krylova et al. (2019) stressed training research competence to the students.

Research in higher education reflects assumptions, collection, and assessment of related data to increase understanding and enhance knowledge relative to a specific issue (Creswell, 2012). Thus, it symbolizes careful procedures that provide credible knowledge. Numerous literature abounds that associates good research behavior and the inclination to participate in research actions (see. McLaughlin et al., 2018; Mina et al., 2016; Partido & Colón, 2019). Similarly, Vossen et al. (2018) underscored the implication of research and evidence-based inquiries on the rising trend of science education globally. In particular, the tertiary education system in the contemporary academic environment encompasses research and teaching. Hence, the familiar concept of 'publish or perish in academia (Uzochukwu et al., 2016). In precise, research in higher education is the pathway to global comparisons and institutional evaluation.

The higher education ranking has been the primary assessment tool for institutional quality and is generally based on teaching and research potentials (Boholano et al., 2014). Accordingly, scholarly research quality and productivity have been the prerequisite for institutional assessment. This confirms the beginning of research as a distinguishing feature of the higher institution (Marchant, 2009). Consequently, about seven higher education institutions in Nigeria made the Times Higher Education World University Rankings list. Remarkably, the University of Ibadan ranked among the top 401–500 globally (Times Higher Education, 2021). Therefore, suggesting poor research productivity in Nigeria's tertiary institutions.

Researchers opined that effective research behavior in academia facelifts institutional integrity (Hajdarpasic et al., 2015) and equips students with innovative information (Davis & Jones, 2017). More so, others noted that research increases scholarly encouragement (Falconer & Holcomb, 2008) and impact innovative knowledge and basic research methods on the students (Brown et al., 2016). In particular, numerous studies have underscored the importance of divulging student's inquiry-based knowledge (see., Abu-helala et al., 2015; Beanlad et al., 2020; Borakati et al., 2017; Kozlov et al., 2017; Noguez & Nerri, 2019; Razeghi, 2019; Roach, 2017; Swan et al., 2018; Weiner & Watkinson, 2014). Thus, research in higher education is fundamental to achieving the required developmental objective of contemporary societies.

The colleges of education are among the tripods of Nigeria's higher education system and are instituted with the responsibility of training teachers. Thus, the objective of the CoE is to produce teachers with sound mastery in a particular subject area and the ability to impart responsible knowledge to the students. Nonetheless, the colleges of education in Nigeria have been criticized for the lack of standards in their admission policy and lack of qualified academic personnel. There is wide intimation suggesting poor research productivity in the CoE in Nigeria. An observation of the research quality and productivity in the CoE suggests a declining trend in research activities. However, given the suppositions of a declining research culture (Yusuf, 2012), especially in the Nigeria higher education sector, numerous variables have been identified as constraints to research productivity among the lecturers (Imhunopi & Urim, 2013; Okoduwa et al., 2018; Iloh et al., 2020). Consistently, Igiri et al. (2021) noted that factors such as gender, motivation, age, research knowledge and skills, academic position, research knowledge, and collaboration, including leadership, availability of resources, and institutional research policy are the major impediments to research productivity in the Nigerian academia. Indeed, the role of the Tertiary Education Trust Fund (TETFUND) in the tertiary institutions in Nigeria is made manifest in the provision of numerous grants intended to enhance academic research and development across tertiary institutions in Nigeria. The fund has added to an unprecedented reform in the HEIs through the institute-based research grant and the national research fund. These grants have allowed scholars to partake in various inquiries and academic discourse. However, the growing trend of poor research quality and output in the CoE suggests a glaring gap in research attitude. In particular, the present paper examined computer anxiety as an antecedent of research attitudes in CoE.

Computer anxiety and research attitudes

Research attitudes reflect the tendency to engage in research practice (Tack & Vanderlinde, 2014). It describes the readiness to investigate a trend, comply with methodology and establish a presumed consequence. In particular, research inclination is fundamental in the academic profession and represents a pathway to professional development (Ulla, 2018). Thus, conducting research creates a path for academics to develop scientific skills, approaches, and strategies relative to research (Impedovo & Malik, 2016; Landicho, 2020). Also, research participation enables smooth transition in the system (Katz & Coleman, 2001) and governs professional success (Chin & Law, 2020). Therefore, research undertakings are considered vital and meaningful in the overall operations of the academic community. However, research activities in the contemporary educational setting depend much on computer proficiency. In other words, the ability to use the computer system describes the first step in developing research attitudes. Moreover, computer knowledge represents a significant driver to research productivity in academia.

Computer anxiety is conceptualized as a disallowing, dissenting condition or an impulsive perception encountered by an individual utilizing a computer or thinking about a prospective utilization of a computer (Bozines, 2001). The concept of computer anxiety describes the negative emotions and bodily sensations that arise when an individual interacts with a computer system (Santos & Santana, 2018). Numerous literature on ICT has revealed that people who are anxious about the presence of a computer experience trouble adopting and actively using innovative technologies instead of preferring to use analog or traditional solutions (Nycyk, 2020; Rivinen, 2020). Significantly, negative emotions relative to computer use in modern-day education can affect the overall learning process. Accordingly, Beckers and Schmidt (2001) described computer anxiety as a multidimensional construct encompassing positive and negative beliefs about the computer systems, nervousness, apprehension, fear, intimidation, and hesitation. It is a condition that is not an innate or dispositional quality. Still, it happens or takes place when an individual is using the computer or thinking about the prospective utilization of the computer system. Computer anxiety is considered an alarm of horror when an individual uses a computer or is expected to utilize the computer. Individuals concerned about using the computer may encounter hidden horror, disappointed emotions, conceivable abashment, downfall, and dissatisfaction.

Although, the mechanism of acquiring a research attitude remains unclear (Lawton-Sticklor & Bodamer, 2016). However, numerous works suggest that a research attitude can be developed by constantly engaging in research activities. Indeed, continuous research practice is a pathway to an increased research attitude, whereas computer use increases the chance of research engagement. Consequently, computer anxiety poses a limitation to research participation and thus, decreases research attitudes. In particular, computer anxiety can create constraints on a lecturer's involvement in research work. Therefore, it could contribute to the variation in research productivity among lecturers in CoE in Nigeria.

Hypothesis: *Computer anxiety would significantly predict research attitudes in colleges of education.*

Method
The participants in the present paper comprised scholars from colleges of education in Enugu State, Nigeria. One hundred and twenty-two male and female lecturers from different academic disciplines were approached between February and April 2022. They were asked to partake in a survey to understand their attitudes about research. The one hundred and twelve lecturers who consented to participate in the survey were given the study questionnaire. In total, only ninety-six (96) copies of the research questionnaire were filled correctly and used for further analysis, perhaps, the twelve (12) improperly filled copies and three (3) unreturned copies were discarded.

Measure
An adapted version of the Heinssen et al.'s (1987) Computer Anxiety Rating Scale (CARS) was used to measure the participants' level of computer anxiety. The CARS is a 19-item self-report inventory, approximately equally divided between anxiety-laden statements (e.g., "I feel apprehensive about using computers") and non-anxiety statements (e.g., "I am confident that I can learn computer skills"). Participants responded on a five-point Likert form scale (1-strongly disagree; 3-undecided; 5-strongly agree). The total score could range from 19, indicating a low level of computer anxiety, to 95, which would indicate a high degree of computer anxiety. The scale has been widely used for research purposes in many studies in IT education due to its high internal reliability (Cronbach alpha =.87). The adapted version of the questionnaire was found to have good internal reliability, achieving an alpha coefficient of .71.
The respondents completed a self-report measure designed to ascertain their research attitudes. The scale measures cognitive, affective, and behavioral domains relative to research practice. The 10-item Linkert form questionnaire is scored in a 5-point response format, with high scores demonstrating a high research attitude. The reliability of the instrument was gained following a pilot study. An observation of the Cronbach's alpha coefficients revealed acceptable levels of internal consistency reliabilities of the questionnaire, which surpassed the cutoff rules-of-the thumb of .86 as recommended for study purposes (Kaplan & Saccuzzo, 2001).

Result
The present paper adopted a cross-sectional research design. Data were analyzed using the statistical package for social sciences (SPSS V,23). The study assumed that computer anxiety would significantly predict research attitudes in colleges of education. Thus, a linear regression analysis was conducted to determine the variation in research attitudes based on computer anxiousness. The investigation revealed that computer anxiety statistically significantly predicted research attitudes in CoE at F (1,94), 60.031, P<.000. Notably, the R^2 indicated that the predictor variable accounted for 22.1% of the observed variance in research attitudes in CoE.

Table 1:
Table showing the linear regression results for the variables

	B	95% CI for B LL	UL	SEB	β	R^2	t	Sig
Constant	2.35	2.09	2.62	.123			17.59	.000
C A	-.48	-.96	-.38	.051	-.48	.221	-7.84	.000

Note. CA= Computer anxiety. B = Unstandardized regression coefficient; CI = Confident Interval; LL = Lower Limit; UL = Upper Limit; SEB = Standardized error of the coefficient; β = Standardized coefficient; R^2 = Coefficient of determination. *P<.000.

Discussion

The present study examined the variation in research attitudes in colleges of education based on computer anxiety. Ninety-six respondents conveniently pooled from colleges of education in Enugu state completed the research instrument. The linear regression analysis performed on the data revealed that computer anxiety statistically significantly predicted research attitudes in CoE at F (1,94), 60.031, P<.000. In particular, the R^2 showed that computer anxiety explained about 22.1% of the observed variance in research attitudes in CoE. The result suggests that lecturers in CoE who scored low in computer anxiety are more likely to develop a favorable research attitude and disposition for research activities than their counterparts with high computer anxiety. The probable explanation for the result might be attributed to the fact that recent research activities are highly computer-oriented. The proliferation of academic research software designed to accelerate research activities is most complex and requires a certain level of computer competence.

Consequently, the anxiousness accompanying the awareness of the computer system activates a kind of flight mode that is indicated in poor research productivity in the CoE in Nigeria. The finding corroborates the intimation suggesting that computer compliance is integral in the lecturer's intention to participate in scientific inquiries. Hence, they are more likely to review literature, utilize research software, and publish research outcomes. Conversely, lecturers with poor research attitudes might be avoiding exposure to computer-related tasks, thus, leading to poor research attitudes, which is implicated in poor teaching quality. Consistent with this assertion, previous research has established a positive relationship between research quality and excellent teaching (e.g., Cadez et al., 2017; Valle et al., 2016). Thus, increasing computer efficacy might restore favorable attitudes in research practice in CoE, thereby improving teaching quality, facelifting the dwindling reputation of higher education, and fostering student motivation (Ruiz-Alfonso et al., 2021).

Conclusion

The present study investigated the variation in research attitudes based on computer anxiety. The present paper concludes that computer anxiousness is a significant predictor of research attitudes in colleges of education. Thus, the result confirmed the expectation that computer anxiety would significantly predict research attitudes in CoE. Although, certain limitations constrain the generalization of the result. For instance, the self-report measures and the sample size poses a significant impediment to generalizing the finding. Thus, multiple data collection methods and a comprehensive sampling approach are needed in future research. Regardless, the discovery has implications for the development of research excellence in the colleges of education in Nigeria. The result provides essential data to researchers, policy-makers, and stakeholders in education in improving the practice of research in higher education, especially the colleges of education. Most importantly, the present paper implies that research attitudes in CoE would increase significantly if robust computer training and exposure are continuously conducted in the colleges of education.

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