# DIGITAL LITERACY AND TEST ANXIETY AS PREDICTORS OF STUDENTS' SATISFACTION WITH COMPUTER-BASED EXAMNATONS, IN TERTIARY INSTITUTIONS IN ANAMBRA STATE, NIGERIA.

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## Abstract

This study investigated digital literacy, and test anxiety as predictors of undergraduate students' satisfaction with computer-based examinations (CBE). Five research questions and two hypotheses were formulated to guide the study. Correlational survey research design was adopted for the study. The population of the study comprised of 12,776, 200-level regular undergraduate students drawn from public tertiary institutions in Anambra state out of which 810 students were sampled through multistage sampling procedure. Digital Literacy Test (DLT), Test Anxiety Questionnaire (TAQ) and Satisfaction with Computer-Based Examination Questionnaire (SCBEQ) were used to collect data. DLT, TAQ and SCBEQ were validated by three experts. The reliability was determined using Kuder-Richardson formula 20 for DLT and Cronbach alpha method for TAQ and SCBEQ and coefficients of .70, .74 and .70 were obtained respectively. Data collected were analyzed using Pearson Product Moment Correlation, linear and multiple regression. In testing the hypotheses, a p-value of less than 0.05 was deemed significant. The findings of the study revealed that digital literacy and test anxiety scores are joint of undergraduate students' satisfaction predictors with computer-based examination. It was also revealed that digital literacy did not significantly predict 200-level undergraduate students' satisfaction with computer-based examination but test anxiety significantly predicted 200-level undergraduate students' satisfaction with computer-based examination. The findings of the study revealed that digital literacy and test anxiety scores contributed .50% variance in 200-level undergraduate students' satisfaction with computer-based examination. It was recommended among other things that Government should equip tertiary institutions' libraries and laboratory with digital literacy tools for students' use. Keywords: Digital Literacy, Test Anxiety, Satisfaction with Computer-Based **Examinations**, Tertiary Institutions

## Introduction

Digital literacy is an indispensable aspect of human endeavours in this modern era. This is because it has virtually entered into all spheres of life such as education, politics business, finance, industries and so on. This is due to the perceived benefits such as access to information, improved communication, enhanced job prospects, creativity, and problem-solving abilities. These benefits underscore the relevance of digital literacy in enabling individuals including students to navigate today's digital world effectively.

Nardi & Ranieri, (2019) opined that in recent years, increasing number of tertiary institutions and evaluation organizations have started using electronic tools to test and examine their students. This increase is due to educational institutions' growth, the enlargement of class sizes, development of user-friendly web-based applications for assessment and availability of testing protocols secured over the internet leading to the common utilization of online assessments, guizzes, tests/ examinations (Cassady & Gridley in Bello, & Abdullah; 2021). There is a growing adoption of computer-based examination (CBE) as a mode of assessment among examination bodies in many countries, including Nigeria, especially at the tertiary level (James, et al., 2019). CBE is any form of assessment (formative or summative assessment) that is conducted electronically with the use of information technology (Simdols, 2020). Bello, & Abdullah, (2021) stated that CBE is an electronic assessment process in which information and communication technologies (ICTs) are used for assessment activities, performance of grading, and response recording. This encompasses students' ability to navigate, and utilize computers for responding to test items. CBE offers many benefits such as prompt result feedback, objectivity in grading, however it may be likely that students' preference for CBE depends on their possession of higher digital literacy, which may make them less anxious during the examination. This paper thus investigates digital literacy and test anxiety as predictors of students' satisfaction with CBE in tertiary institutions in Anambra state.

# **Literature Review**

Student satisfaction refers to how content and fulfilled students feel with their educational experience. It is a feeling of pleasure and relief for students both for the physical and non-physical services provided during the learning process, (Harmen, *et al.*, 2019). According to Rabin, *et al.*, (2019), students' satisfaction refers to overall positive assessment of their learning experience. It is crucial therefore, to understand that undergraduate students' satisfaction with CBE, which is part of students' learning experience in contemporary times is paramount. This is because if they are not satisfied, the aims and objectives of introducing CBE cannot be fully actualized. Students' satisfaction may be a factor of their proficiency or otherwise in utilizing the CBE tools. This points to the need for digital literacy.

Digital literacy is students' ability to use digital tools and technologies to work, learn and interact in the digital world. Digital literacy manifests as both cognitive and technical skills. UNICEF (2017) reported that 70% of 15–24-year-olds are on the internet, so they are developing digital skills all on their own. Lack of these skills can affect students' performance in digitally administered examinations. Almossa (2021) noted that students feel overwhelmed and anxious during CBE due to the lack of digital literacy. It is thus possible that students' digital literacy could reduce their overall test anxiety and in turn improve their satisfaction with CBE.

Anxiety may serve to motivate as well as have its greatest adverse effects on the process of thinking and problem solving and students who are part of the general population are no exception to phases of anxiety. Intense anxiety may come in the form of a generalized anxiety disorder, a panic disorder or a social anxiety disorder. Test anxiety has been shown to have negative relationship with academic achievement (Rehman, 2021). Lu, *et al* (2016), equally reported that there is remarkable negative effect of test anxiety on performance in Computer Adaptive Test (CAT). Test anxiety may emanate from family-related factors such as low family socio-economic status. Anxiety may also relate to the form of the assessment (CBE or paper and pencil test), or the place the assessment was carried out.

CBE anxiety is an intense fear, excessive worry, nerve, and physiological arousal prior to and during CBE (Balogun & Olanrewaju, 2016). The move to CBE has brought serious challenges that threaten the academic success and well-being of students, particularly in tertiary institutions. Many students face persistent technical issues, difficulty adapting to digital platforms, and concerns about the fairness of evaluation methods. These issues are compounded by a lack of reliable internet access and the unavailability of essential digital tools such as smartphones or laptops, all of which are crucial for academic success in a digital environment. Rapid advancements in technology, with their increasing complexity, further exacerbate these challenges, leaving students struggling to keep pace. This may contribute to growing disinterest and disengagement with CBE, despite the potential advantages these technologies offer.

Test anxiety, adds another layer of complexity to this issue. High levels of anxiety, particularly in digital examination environments, can result in heightened discomfort and apprehension, further diminishing students' satisfaction with CBE. Given the increasing reliance on digital tools for assessments, the persistent challenges students face demand urgent attention. The lack of understanding surrounding the interaction between digital literacy, test anxiety, and students' satisfaction with CBE not only threatens academic outcomes but also risks deepening inequalities among students. As such, there is an urgent need to investigate how digital literacy and test anxiety predict students' satisfaction with CBE in tertiary institutions. Addressing this issue in Anambra state is critical to improving the overall educational experience and ensuring equitable access to academic success in the state in this digital age. This study thus seeks to examine digital literacy and test anxiety as predictors of undergraduate students' satisfaction with CBE in tertiary institution in Anambra State.

# The efforts of the researchers were guided by five research questions.

1. What is the nature of relationship that exists between digital literacy, test anxiety and satisfaction with CBE among200-level undergraduate students in public tertiary institutions in Anambra State?

- 2. What is the predictive strength of digital literacy on undergraduate students' satisfaction with CBE in tertiary institutions in Anambra State?
- 3. What is the predictive strength of test anxiety on undergraduate students' satisfaction with CBE in tertiary institutions in Anambra State?
- 4. What is joint predictive strength of digital literacy and test anxiety on undergraduate students' satisfaction with CBE examinations in tertiary institutions in Anambra State?
- 5. What is the nature of regression equation for predicting undergraduate students' satisfaction with CBE using students' digital literacy and test anxiety as predictors?

To carry out the study, the authors tested the following formulated research hypotheses for rejection or otherwise at 0.05 level of significance:

**Ho1:** Digital literacy does not significantly predict undergraduate students' satisfaction with CBE.

**Ho2**: Test anxiety does not significantly predict undergraduate students' satisfaction with CBE.

# Methods

This study employed a co-relational survey research design. According to Tan (2014), co-relational survey seeks to ascertain the relationship that exists between two or more variables. The study was carried out in public tertiary institutions in Anambra State, Nigeria. The population of the study comprised of 12,776 two hundred level undergraduate students in three (3) public tertiary Institutions in Anambra State that run degree programmes. The schools are Nnamdi Azikiwe university, Awka, Chukwuemeka Odumegwu university, Igbariam and Nwafor Orizu College of Education Nsugbe. (810) 200 level regular undergraduate students made up the sample of the study. Multi-stage sampling procedure was adopted to draw the sample for this study. Three sets of instruments titled; Digital Literacy Test (DLT), Test Anxiety Questionnaire (TAQ) and Satisfaction with Computer-Based Examination Questionnaire (SCBEQ) were used for data collection. The instruments were validated

by three experts, one from Psychology unit and two from Measurement, Evaluation and Research unit, all in the Department of Educational Foundations, Faculty of Education, Nnamdi Azikiwe University, Awka. The reliability of the instruments was determined using Kuder-Richardson formula 20 for DLT and Cronbach alpha method for TAQ and SCBEQ and coefficients of .70, .74 and .70 were obtained respectively. The researchers employed Pearson Product Moment Correlation Coefficient (PPMCC), multiple, linear regression for analyzing the data collected. Research question 1 was answered using PPMCC, research questions 2 and 3 were analyzed using simple linear regression analysis, and research questions 4 and 5 were answered using multiple regression. Linear and multiple regression analysis were used to test null hypotheses one and two. All the hypotheses were tested at 5% level of significance with the decision rule, where the p-value is greater than or equal to the alpha value of 0.05, the null hypothesis will be rejected; otherwise the null hypothesis will not be rejected. Statistical package for social sciences (SPSS) version 25.0 was the software used for data analysis.

## Result

**Research question 1:** What is the nature of the relationship that exists between digital literacy, test anxiety and undergraduate students' satisfaction with CBE among 200-level undergraduate students in public tertiary institutions in Anambra State?

 Table 1: Pearson's Correlation among digital literacy, test anxiety and undergraduate students' satisfaction with CBE (n=810)

S/N	Variables		1	2	3
1	Digital literacy	R	1	22	
		Sig		.541	
2	Test Anxiety	R	22	1	
		Sig	.541		
3	Satisfaction with CBE	R	.038	263	1
		Sig	.000		

The Pearson's correlation displayed in Table 1 shows that the relationship between the three variables was a positive relationship. The correlation between digital literacy and undergraduate students' satisfaction with computer-based

examination yielded a correlation coefficient (r) = .038 while that of test anxiety and undergraduate students' satisfaction with CBE yielded a correlation coefficient (r) = .263. This shows that there was a positive and negligible Correlation between digital literacy and undergraduate students' satisfaction with computer-based examination while there was weak negative relationship between test anxiety and undergraduate students' satisfaction with CBE.

**Research Questions Two:** What is the predictive ability of digital literacy on undergraduate students' satisfaction with CBE in tertiary institutions in Anambra State?

 Table 2: Model Summary of Variance of Undergraduate Students' Satisfaction with CBE

 Contributed by the Variance in Digital Literacy Scores (n=810).

Model	R	<b>R</b> <sup>2</sup>	adjusted R <sup>2</sup>	% variance	of Std. Error
1	.038	.001	.000	.10	7.59729

The regression model summary displayed in Table 2 using digital literacy to predict 200-level undergraduate students' satisfaction with CBE examinations yielded a regression coefficient of .001. The R<sup>2</sup> indicates that digital literacy scores contributed .10% of the variance in undergraduate students' satisfaction with computer-based examinations. It further shows that the predictive ability of digital literacy on undergraduate students' satisfaction with computer-based examinations is very negligible.

**Research Question Three:** What is the predictive ability of test anxiety on undergraduate students' satisfaction with CBE in tertiary institutions in Anambra State? **Table 3: Model Summary of Variance of Undergraduate Students' Satisfaction with CBE Contributed by the Variance in Test Anxiety Scores (n=810).** 

Model	R	$\mathbb{R}^2$	adjusted R <sup>2</sup>	% of variance	Std. Error	
1	.079	.006	.005	.50 %	7.57872	

The regression model summary displayed in Table 3 using test anxiety to predict 200-level undergraduate students' satisfaction with CBE examinations yielded a regression .006. The  $R^2$  indicates that test anxiety scores contributed .50%

of the variance in undergraduate students' satisfaction with computer-based examinations. It further shows that the predictive ability of test anxiety on undergraduate students' satisfaction with computer-based examinations is very low.

**Research Question Four**: what is joint predictive ability of digital literacy and test anxiety on undergraduate students' satisfaction with CBE examinations in tertiary institutions in Anambra State?

Table 4: Model Summary of Percentage of Variance in 200 level Undergraduate Students'Satisfaction with CBE Accounted for by their Digital Literacy and Test Anxiety Scores(n=810).

Model	R	<b>R</b> <sup>2</sup>	adjusted R <sup>2</sup>	% of variance	Std. Error
1	.086	.007	0.005	.50%	7.57917

The regression model summary presented in Table 4 using digital literacy and test anxiety to predict 200-level undergraduate students' satisfaction with CBE examinations yielded a regression R = .086,  $R^2 = .007$  and Adj.  $R^2 = 0.005$ . The  $R^2$  adjusted indicates that digital literacy and test anxiety scores contributed .50% of variance in undergraduate students' satisfaction with computer-based examination scores. It further indicates that digital literacy and test anxiety scores jointly predicted very low of undergraduate students' satisfaction with computer-based examination.

**Research Question Five**: What is nature of regression equation for predicting undergraduate students' satisfaction with CBE using students' digital literacy and test anxiety as predictors?

Table 5: Coefficient	of Equation	for Predicting	200-level	Undergraduates'	Students'
Satisfaction with CBE	using Student	ts' Digital Litera	icy and Te	st Anxiety (810).	

Model	Unstandardized B	SE	Standardized β	
Constant	44.838	.852		
Digital literacy	.096	.101	.033	
Test anxiety	058	.026	078	

The model for predicting 200level undergraduate students' satisfaction with CBE using students' digital literacy and test anxiety was presented in Table 5, which reveals a regression equation as follows: The unstandardized and standardized ( $\beta$ ) for satisfaction with CBE using students' digital literacy were 0.096 and 0.033; while that of and test anxiety were -.058 and -.078 respectively. The nature of this equation, therefore, is presented below:

$$\hat{Y} = b_0 + b_1 X_1 + b_2 X_2$$

 $\hat{Y} = b_{intercept} + b_{digital \, literacy} X_{digital \, literacy} + b_{test \, anxiety} X_{test \, anxiety}$ 

SWCBE= 44.838+.096DL - .058TA. Where SWCBE stands for satisfaction with computer-based examination, DL for digital literacy and TA for test anxiety. This equation shows that for every unit increase in digital literacy score, satisfaction with computer-based examination increases by .096 and for every unit increase in test anxiety score, satisfaction with computer-based examination decreases by -.058

**Hypothesis One:** Digital literacy does not significantly predict undergraduate students' satisfaction with CBE.

Table 6: Test of Significance of Unique Contribution of Digital Literacy and Test Anxiety Scoresto Undergraduate Students' Satisfaction with CBE (810).

Model	Unstandardized B	S.E	В	Т	<b>P-value</b>	Decision
Constant Digital literacy	44.838 .096	.852 .101	.033	52.650 .951	.000 .342	Significant Not Significant
Test anxiety	058	.026	078	-2.206	.028	Significant

Result displayed in Table 6 was used to respond to hypothesis 1 and 2. The coefficients of regression presented in Table 6 shows that digital literacy was not a predictor of 200-level undergraduate students' satisfaction with CBE, t (2, 808) = .951, p=.342. Since p-value is greater than 0.05, the null hypothesis was therefore retained. This implies that digital literacy did not significantly predict 200-level undergraduate students' satisfaction with CBE.

**Hypothesis Two:** Test anxiety does not significantly predict undergraduate students' satisfaction with CBE.

Data in Table 6 further show that test anxiety was a predictor of 200-level undergraduate students' satisfaction with CBE, t(2, 808) = -2.206, p=.028. Since p-value is less than 0.05, the null hypothesis was therefore rejected. This implies that test anxiety significantly predicted 200-level undergraduate students' satisfaction with CBE.

### Discussion

Based on the findings of the study, the Pearson's Correlation analysis done among digital literacy, test anxiety and undergraduate students' satisfaction with CBE revealed a positive negligible and weak relationship among the three variables in public tertiary institutions in Anambra State. This is in line with Eshet-Alkalai in Da Yan, et al (2023 p. 93), who stated that digital literacy "involves more than the mere ability to use software or operate a digital device; it includes a large variety of complex cognitive, motor, sociological, and emotional skills, which users need in order to function effectively in digital environments. This means that when students possess digital literacy skill, it will help them in many areas of life and enable them function effectively wherever they find themselves and be satisfied. Also, according to Thompson, (2023) standardized testing has created stress and anxiety in the classroom and forces students to focus more on their ability to pass a test rather than their ability to learn and have fun while doing it. However, when students try to pass examination at all cost, it makes them to put more effort and the end will be satisfaction. Kuo, et al, (2014) and Littlejohn, et al, (2016), are of the view that students' satisfaction reflects students' perception of their learning experience. Another finding of the study was that digital literacy positively predicted undergraduate students' satisfaction with computer-based examination but the prediction was not

significant. The deduction here is that a student with basic knowledge of digital literacy will perform well in CBE and thereby be satisfied with it. In other words, in as much as digital literacy is very important among undergraduate students, they do not have to possess high digital literacy skills for them to do well in CBE. Rather basic knowledge in digital literacy is enough for them to confidently take CBE and perform well which

will bring about their satisfaction with CBE. This is in line with United Nations International Children's Emergency Fund-UNICEF (2017) which says that digital literacy is knowledge, skills and attitudes that allow children to flourish and thrive in an increasingly global digital world, being both safe and empowered, in ways that are appropriate to their age and local cultures and contexts. Going further, the study revealed that digital literacy did not significantly predict undergraduate students' satisfaction with CBE. Based on global events, CBE is a common thing among the learners due to the early exposure and the in-thing in educational system. This is in agreement with De Witt & Gloerfeld (2018) who are of the opinion that the current trend in higher education involves the digitalization of teaching and assessment which comprises of computer-based test.

The revelation of the findings of the study was that test anxiety negatively and significantly predicted undergraduate students' satisfaction with computer-based examination. This is not unrelated to the fact that a student who has test anxiety will perform poorly in CBE thereby dissatisfied with CBE, while a student who has no/low test anxiety will confidently take CBE and perform highly in CBE thereby manifesting satisfaction with it. Corroborating the afore-mentioned, Lu, *et al* (2016) reported that there is remarkable negative effect of test anxiety on performance in Computer Adaptive Test (CAT). Also, Nwosu, *et al*, (2022) stated that test anxiety has been widely discussed in the literature with its deleterious impacts on students' academic success and life satisfaction. In addition, Richa (2015) says that academic anxiety comprises of many factors such as reprimands from teachers, parents and peers, stress scores on tests, fears of graduation, and the consequences of failing an exam which bring dis-satisfaction among undergraduate students.

## Conclusions

It is concluded that there is a negligible positive relationship existing between digital literacy and satisfaction with computer-based examination, while a weak negative relationship existed between test anxiety and satisfaction with computer-based examination of 200-level undergraduate students in public tertiary institutions in

Anambra State. It is also concluded that an increase in digital literacy led to an increase in satisfaction with computer-based examination of 200-level undergraduate students, whereas, an increase in test anxiety led to decrease in satisfaction with computer-based examination of 200-level undergraduate students in public tertiary institutions in Anambra State. It is further concluded that digital literacy positively predicted but not significantly predicted satisfaction with computer-based examination, while test anxiety negatively and significantly predicted undergraduate students' satisfaction with computer-based examination. Therefore, it can be inferred that digital literacy and test anxiety play crucial roles in bringing satisfaction with CBE of 200-level undergraduate students in public tertiary institutions in Anambra State.

# **Recommendations:**

Based on the findings of the study, the following recommendations are made:

- 1. Teachers and school administrators should increase the frequency and usage time for CBE, so as to reduce the anxiety associated with it. Constant practice will result into perfection.
- 2. Curriculum planners should include digital literacy in tertiary institutions' course allocation. This will make the students take it seriously thereby giving them confident while taking CBE.
- 3. Government should equip tertiary institutions' libraries and laboratory with digital literacy tools for students' use. This will equip them with the necessary skills needed thereby reducing their test anxiety.

# References

- Almossa, S. Y. (2021). University students' perspectives toward learning and assessment during COVID-19. *Education and Information Technologies*, 26(6), 7163-7181.
- Balogun, A.G & Olanvewaju, A.S (2016). Role of computer self-efficacy and gender in computer-based test anxiety among undergraduate in Nigeria. *Psychological thought*, 9(1), 58-66. https://doi.org/10.5964/psycl.v9:1-160

- Bello, H. & Abdullah, N. A. (2022). Investigating the Influence of Quality Factors on User Satisfaction with Summative Computer-based Assessment. *The Electronic Journal of e-Learning*. 19, (6).
- Da Yan, Shaidatul Akma Adi Kasuma, Mansour Amini (2023). Gender Difference in Digital Literacy among Translation Trainees: Self-perceptions and Application Abilities. *International Journal of Academic Research in Progressive Education and Development 12*(3). 226-634. http://dx.doi.org/10.6007/Ijarped/v12-i3/19611
- De Witt, C. and Gloerfeld (2018). Mobile Learning and Higher Education. In D. Kergel,
  B. Heidkamp, P. K. Telléus, T. Rachwal & S. Nowak (Eds.), The Digital Turn in
  Higher Education, International Perspectives on Learning and Teaching in a
  Changing World. Wiesbaden: Springer VS, 61-79.
  DOI:10.1007/978-3-658-19925-8 6
- Harmen, H., Agustini, F., & Aprinawati, A. (2019). Analisis Tingkat Kepuasan Mahasiswa Terhadap Metode Dan Media Pembelajaran Pada Mata Kuliah Manajemen Sumberdaya Manusia Semester Kelas Di *Jurusan Manajemen*. *Niagawan*, 8(1), 50. https://doi.org/10.24114/niaga.v8i1.12806
- James, A., Moses, H.G., & Aliyu, B. A. (2019). Students' attitude towards the use of CBT for UTME in rural secondary schools. A case of guyuk LGA of Adamawa state, Nigeria. *International Journal of Computer Applications Technology and Research*, 8(7), 285- 290. doi:10.7753/ijcatr0807.1005
- Kuo, Y., Walker, A., Schroder, K., & Belland, B. (2014). Interaction, internet selfefficacy, and self-regulated learning as predictors of student satisfaction in online education courses. *Internet and Higher Education*, 20, 35–50. doi:10.1016/j.iheduc.
- Littlejohn, A., Hood, N., Milligan, C., & Mustain, P. (2016). Learning in MOOCs: Motivations and self-regulated learning in MOOCs. *The Internet and Higher Education*, 29, 40–48. doi:10.1016/j.iheduc.

- Lu, Hu, V.P, Gao, J.J & Kinshuk (2016). The effect of computer self-efficacy, training satisfaction and test anxiety on attitude and performance in computerized adaptive testing. *Computer and education*, 100, 45-55. https://doi.org/10.1016/j.compedu.20.04.012.16
- Nardi, A. & Ranieri, M., 2019. Comparing paper-based and electronic multiplechoice examinations with personal devices: Impact on students' performance, self-efficacy and satisfaction. *British Journal of Educational Technology*, 50(3), 1495–1506.
- Nwosu, C.K., Wahl, W., Ofojebe, E.N., Okafor, A.U., & Okwuduba, E.N., (2022).
  Associations between Students' Test Preparation Strategies and Test Anxiety:
  Gender, Age, and Parents' Level of Education as Control Variables. *Education Research International.*
- Rabin, E., Kalman, Y., and Kalz, M. (2019). An empirical investigation of the antecedents of learner-centered outcome measures in MOOCs. *International Journal of Educational Technology in Higher Education*.
- Rehman, S. Javed, E.;& Abiodullah, M. (2021). Effects of test anxiety on academic achievement at secondary school level in Lahore. *Bulletin of Education and Research*, 43(3), 67-80
- Simdols, Technology (2020). Benefits of Computer-Based Test. Global Service Company. www.simdols.com.
- Tan, L. (2014). Correlational study. In W.F Thompson (Ed.), Music in the social and behavioral sciences: An encyclopedia (pp. 269 – 271). SAGE. https://hdl.handle.net/10497/18115
- Thompson, M. (2023). Discovering the Impact of Test Anxiety on Student Motivation. *Liberal Studies Program, California State University, Chico*.
- UNICEF. (2017). State of the world's children 2017: Children in a digital world. https://www.unicef.org/turkiye/media/4291/file/World%20Children's%20D urumu%202017:%20Dijital%20bir%20dunyada%20Children.pdfs