

Students' Mobile Technology Self-Efficacy and Reading Anxiety in English Reading Comprehension among Public Senior Secondary Students in Ibadan, Nigeria

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Abstract

This study investigated mobile technology self-efficacy and reading anxiety in English reading comprehension among public secondary school students in Ibadan, Nigeria. The study adopted the survey design. The participants were senior secondary two students from six public senior secondary schools in Ibadan, Nigeria. These were purposively selected from six Local Government Areas out of the eleven existing Local Government Areas in Ibadan. The study utilised three instruments: The English Reading Comprehension Attainment Test ($r=0.76$), the Mobile Technology Self-efficacy Questionnaire ($r=0.82$), and the Reading Anxiety Questionnaire (0.72). The findings showed a high level of mobile phone self-efficacy, with a weighted average of 3.28, against the threshold of 2.50, indicating students' ability to leverage mobile technology for instructional objectives. However, students exhibited low reading anxiety (2.46) at the threshold of 2.50. The study recommended the need for teachers to tailor treatments to combat reading anxiety, while also improving the effective incorporation of mobile technologies in education

Keywords: Mobile technology, Reading anxiety, English comprehension, Public senior secondary schools in Ibadan.

Introduction

English reading comprehension is a critical skill for academic success, enabling students to access, interpret, and apply knowledge across various disciplines. According to Haliru et al. (2015), achieving academic potential hinges on acquiring the necessary proficiency in reading English as a second language. The primary aim of teaching English reading comprehension is to enhance readers' cognitive abilities, enabling them to interpret texts, improve phonological awareness, and develop the capacity to infer deeper meanings (Oladunjoye and Kolawole, 2015). Comprehension is widely regarded as the cornerstone of reading, involving the extraction and construction of meaning through active engagement with written language (Piquette, 2021). It is a crucial part of a comprehensive education because it gives learners the tools they need to succeed in school and in life. It is regarded as the key component of reading since it facilitates the process of successfully deriving

meaning from written materials (Alghonaim, 2020). It requires linguistic familiarity, background knowledge, phonemic awareness, fluency, and a variety of reading competencies for quick understanding, encompassing both informational and comprehension readings. Kolawole and Jire-Alag (2015) also observe that comprehension lessons play crucial roles in the acquisition of the English language, serving as the basis for developing critical skills necessary for navigating texts in diverse fields. These lessons equip students with skills such as prediction, self-questioning, evaluation, summarisation, clarification, inference-making, logical reasoning and vocabulary development. These skills are essential to academic success and must, therefore, be exhibited by learners.

The rapid advancement of mobile technology has significantly influenced educational practices globally. Mobile devices such as smartphones, tablets, and laptops are increasingly being integrated into learning environments, offering students access to

diverse educational resources. In Nigeria, the adoption of mobile technology in education is gaining momentum, particularly in urban centers like Ibadan. However, students' ability to effectively utilize these technologies referred to as mobile technology self-efficacy remains a critical factor influencing their academic success. Notwithstanding the increasing availability of digital learning tools, many students in public senior secondary schools continue to face challenges with reading comprehension. These difficulties are often intensified by low self-efficacy in using mobile technology and elevated levels of reading anxiety.

Reading anxiety, characterized by feelings of tension, apprehension, and nervousness when engaging with reading tasks, can negatively impact students' ability to process and retain information. Understanding the interplay between mobile technology self-efficacy and reading anxiety is crucial for developing interventions that enhance English reading comprehension among students in Nigeria.

Statement of the Problem

In spite of the proliferation of mobile technologies in Nigerian schools, many students continue to perform below expectation in English reading comprehension. Previous studies have highlighted various factors contributing to this challenge, including inadequate access to resources, poorly trained teachers, and socio-economic barriers. However, limited research has focused on the psychological and technological dimensions of this issue, specifically students' mobile technology self-efficacy and reading anxiety.

Given the pivotal role of English reading comprehension in academic success, it is imperative to investigate how these factors influence students' performance. This study seeks to fill this gap by assessing the levels of mobile technology self-efficacy and reading anxiety among public senior secondary school students in Ibadan, Nigeria, and their

relationship to English reading comprehension.

Objective of the Study

The primary purpose of the study is to assess students' mobile technology self-efficacy and reading anxiety in relation to English reading comprehension among public senior secondary school students in Ibadan, Nigeria. The study specifically sought to:

1. Determine the level of students' mobile technology self-efficacy.
2. Assess the level of students' reading anxiety.

Research Questions

The study provided answers to the following research questions:

1. What is the level of students' mobile technology self-efficacy in relation to English reading comprehension among participants?
2. What is the level of students' reading anxiety in relation to English reading comprehension among participants?

Scope of the Study

The study investigated mobile technology self-efficacy and reading anxiety in English reading comprehension among public secondary school students in Ibadan, Nigeria. It covered SSII students from six public senior secondary schools in Ibadan, Nigeria.

Significance of the Study

This study is significant because, it contributes to the growing body of knowledge on the use of mobile technology in education, particularly in the Nigerian context. It provides insights into the psychological factors affecting students' academic performance, such as reading anxiety. The findings of this study can inform policymakers, educators, and curriculum developers in designing interventions that enhance students' reading skills and technology use. The study also has the potential to improve educational outcomes for public senior secondary school students in Ibadan and beyond.

Literature Review

Mobile Technology Self-Efficacy

Recent studies have highlighted the significant role of mobile technology self-efficacy in influencing students' attitudes toward and performance in reading comprehension. Mobile technology self-efficacy refers to an individual's belief in their capability and confidence to effectively use mobile devices, such as smartphones and tablets, for various tasks and purposes, particularly in educational contexts. This perception of competence significantly affects how students approach tasks and overcome challenges (Cocorada, 2014; Downey and Kher, 2015, Olatubosun, 2023). Research indicates that high levels of technology self-efficacy are associated with improved performance in handling technology, reduced anxiety during technology training, and a greater perception of usefulness and satisfaction in online learning environments. For instance, a study by Liu (2020) found that students who utilized mobile learning applications demonstrated significantly higher reading self-efficacy compared to those who did not engage with such tools.

Furthermore, a study by Battot (2021) examined various aspects of mobile learning affecting students' satisfaction and perceived usefulness of using mobile technologies in learning a foreign language. The findings suggest that mobile technology self-efficacy plays a crucial role in enhancing students' engagement and academic performance in language learning contexts. These studies underscore the importance of fostering mobile technology self-efficacy among students to enhance their reading comprehension and overall academic performance.

Reading Anxiety

Reading anxiety is a specific form of foreign language anxiety characterized by apprehension, nervousness, or discomfort when

engaging with reading tasks. It is influenced by factors such as text complexity, language proficiency, and prior reading experiences, often leading to restlessness and confusion that negatively impact cognitive performance. This distress creates obstacles, reinforces negative self-perception, and diminishes self-confidence, ultimately hindering students' ability to concentrate, decode texts, and comprehend information, which affects their overall academic performance (Olatubosun, 2023; Frtrawati, Kamil, and Perrodin. 2023). According to Celiktürk, and Yamas (2015), anxiety is a complicated and emotional state that includes affective, physiological, cognitive, and motivational characteristics that are best described as melancholy, worry, sorrow and discomfort, which is thought of as a complex idea that causes unease and discomfort in a person, manifests differently depending on how much of an impact it has.

Methodology

The study employed the survey research design to examine students' mobile technology self-efficacy and reading anxiety. The participants were 128 SSII students from six public senior secondary schools, which were purposively selected from six different Local Government Areas (LGAs) out of the eleven existing LGAs in Ibadan to ensure broad representation

English Reading Comprehension Attainment Test ($r=0.76$), Mobile Technology Self-efficacy Questionnaire ($r=0.82$) and Reading Anxiety Questionnaire ($r= 0.72$) were used for data collection. The collected data were analysed using descriptive statistics.

Results

Research Question 1: What is the level of students' mobile technology self-efficacy in relation to English reading comprehension among participants?

Table 1: Students' Mobile Technology Self-efficacy

S/N	Items	VTM	TM	UM	VUM	??	Std
I...							
1	have the skills needed to use mobile phone for learning.	89(69.5)	15(11.7)	(13.3)	2(1.6)	3.41	1.039
2	can use mobile phone to search out for the meaning of new words in comprehension passages	90(70.3)	20(15.6)	10(7.8)	5(3.9)	3.48	0.964
3	can easily learn in a very short time how to use any a mobile phone.	88(68.8)	24(18.8)	6(4.7)	4(3.1)	3.44	1.048
4	can use mobile phone if I have somebody to put me through	88(68.8)	13(10.21)	13(10.2)	7(5.5)	3.31	1.189
5	can only use mobile phone to make and receive calls	49(38.3)	11(8.61)	24(18.8)	34(26.6)	2.43	1.424
6	can edit any document on mobile phone without any assistance.	58(45.3)	29(22.7)	23(18.0)	12(9.4)	2.95	1.199
7	can state my opinion(s) on any work that is done using mobile phone.	73(57.0)	27(21.1)	20(15.6)	5(3.9)	3.27	1.016
8	can make use of the phone for improvement	95(74.2)	15(11.7)	8(6.3)	4(3.1)	3.48	1.065
9	can type any document on mobile phone without any assistance.	75(58.6)	27(21.1)	14(10.9)	8(6.3)	3.26	1.081
10	can easily learn in a very short time how to use any web site features.	85(66.4)	23(18.0)	13(10.2)	5(3.9)	3.44	0.937
11	can access any English comprehension passage from the web.	77(60.2)	26(20.3)	17(13.3)	4(3.1)	3.31	1.025
12	can follow links to English comprehension passage using phone.	81(63.3)	30(23.4)	10(7.8)	2(1.6)	3.41	0.984
13	can access a specific web site by typing the address.	73(57.0)	32(25.0)	12(9.4)	6(4.7)	3.27	1.068
14	can browse the internet to access reading comprehension tasks.	86(67.2)	20(15.6)	14(10.9)	4(3.1)	3.41	1.015
15	can use a mobile device independently	86(67.2)	18(14.1)	8(6.3)	8(6.3)	3.30	1.213
16	can solve any comprehension question using mobile phone	86(67.2)	18(14.1)	10(7.8)	6(4.7)	3.31	1.189
17	have access to lots of information that can improve my reading comprehension using mobile phone	84(65.6)	23(18.0)	9(7.0)	6(4.7)	3.35	1.105
18	can learn anytime and anywhere using mobile phone	95(74.2)	8(6.3)	10(7.8)	6(4.7)	3.36	1.234
19	can improve my reading comprehension through the use of mobile phone.	89(69.5)	17(13.3)	8(6.3)	8(6.3)	3.37	1.142
20	always look forward to being engaged in mobile phone usage.	73(57.0)	23(18.0)	15(11.7)	8(6.3)	3.12	1.253
Weighted Average: 3.28		Threshold = 2.50					

The table revealed the responses of Mobile Technology Self-efficacy. It revealed a weighted average of 3.28 which is higher than the threshold of 2.5. This means that Mobile Technology Self-efficacy was high. Students exhibited exceptionally high levels of mobile

technology self-efficacy, a trend likely stemming from the innate adaptability of younger generations to emerging technologies. This, coupled with the positive influence of their peers, contributes significantly to the overall proficiency in mobile technology among

students. Moreover, the personalisation and autonomy offered by mobile devices empower students to tailor their learning experiences to suit their preferences. Positive reinforcement from teachers, peers, and educational apps further enhances their confidence and competence in effectively employing mobile technology. This observation echoes the findings of Apata (2021), where students exhibited high proficiency in utilising mobile apps for classroom activities. Similarly, Olakunle (2021) emphasised the simplification of knowledge acquisition in comprehension

classrooms due to students' heightened mobile phone self-efficacy. Interactive learning experiences, peer influence, and educational support play pivotal roles, fostering collaboration, knowledge-sharing, and guidance on effective mobile technology utilisation for learning purposes.

Research Question 2: What is the level of students' reading anxiety in relation to English reading comprehension among participants?

Table 2: Level of Students' Reading Anxiety

S/N	Items	VTM	TM	UM	VUM	??	std
1	I... feel uncomfortable when the teacher corrects my pronunciation errors in class.	48(37.5)	23(18.0)	25(19.5)	26(20.3)	2.63	1.297
2	shiver when I am called upon to read a comprehension passage in class	36(28.1)	20(15.6)	39(30.5)	27(21.1)	2.41	1.233
3	get worried when the teacher asks me questions about reading comprehension.	28(21.9)	22(17.2)	48(35.5)	24(18.8)	2.33	1.151
4	get agitated when I do not have any knowledge of the concepts discussed in a reading comprehension passage.	39(30.5)	41(32.0)	24(18.8)	18(14.1)	2.70	1.181
5	do not feel comfortable with unfamiliar topic.	46(35.9)	25(19.5)	43(33.6)	9(7.0)	2.77	1.133
6	get worried about making mistakes in reading comprehension classes.	63(49.2)	28(21.9)	19(14.8)	10(7.8)	3.00	1.236
7	am always anxious in reading comprehension classes.	62(48.5)	29(22.7)	14(10.9)	15(11.7)	2.95	1.279
8	become easily afraid when I do not understand the reading comprehension questions.	41(32.0)	33(25.8)	19(14.8)	28(21.9)	2.57	1.290
9	feel amazed when some students gets irritated when I am reading a comprehension passage.	12(9.4)	24(18.8)	37(28.9)	50(39.1)	1.91	1.053
10	feel in secured whenever I am called to read in the class.	56(43.8)	28(18.0)	25(19.5)	19(14.8)	2.83	1.249
11	am worried about getting poor marks in reading comprehension	71(55.5)	28(18.0)	17(13.3)	10(7.8)	3.10	1.222
12	feel uneasy trying to get the meaning of some new words found in reading comprehension	48(37.5)	29(22.7)	31(24.2)	15(11.7)	2.78	1.183
13	feel relaxed during reading comprehension classes.	16(12.5)	14(10.9)	19(14.8)	70(54.7)	1.67	1.158
14	get nervous and confused when reading a comprehension passage	35(27.3)	23(18.0)	36(28.1)	26(20.3)	2.40	1.257
15	get bothered whenever I encounter words I cannot pronounce well while reading a comprehension passage.	62(48.2)	18(14.1)	23(18.0)	16(12.5)	2.84	1.337
16	feel relaxed whenever I am called to read a comprehension passage in class	15(11.7)	15(11.7)	22(17.2)	68(53.1)	1.70	1.133
17	feel at ease answering reading comprehension question	8(6.3)	16(12.5)	26(20.3)	68(53.1)	1.56	1.018
18	can easily deduce meaning of new words in a comprehension passage without panicking	10(7.8)	13(10.2)	40(31.3)	55(43.0)	1.67	1.028
19	get upset when I come across idioms that are unfamiliar to me in a given comprehension passage.	40(31.3)	32(25.0)	27(21.1)	20(15.6)	2.58	1.271
20	get upset when I lack the previous knowledge about the ideas expressed in a comprehension passage	50(39.1)	32(25.0)	25(19.5)	13(10.2)	2.80	1.236
Weighted Average: 2.46		Threshold = 2.50					

Table 2 presents an in-depth analysis of students' reading anxiety levels, detailing individual items reflecting various aspects of reading-related apprehension.

The result provides the mean score (2.46) which is lower than 2.50 threshold, implying that students had low reading anxiety. Various factors could have contributed to this outcome. Individual differences among participants, such as prior reading experiences, self-esteem, and confidence levels, may have influenced their anxiety levels. Those who had negative experiences or lacked confidence in their reading abilities may have exhibited higher levels of anxiety. Participants may have felt more anxious if they perceived the reading environment as stressful or unsupportive. This result is in line with that of Ayankoio. (2020) who discovered that the level of anxiety displayed by students during communicative tasks presentation was high. For Anthony (2021) she deduced that it was almost impossible for second language learners not to exhibit anxiety in the process of learning foreign language. All these findings are right because most of the students lack skills needed for them to be confident and bold in classroom environment.

Conclusion

In conclusion, this study examined mobile technology self-efficacy and reading anxiety in English reading comprehension among senior secondary school students in Ibadan, Nigeria. The findings revealed that while students demonstrated high confidence in using mobile technology for learning, they experienced low reading anxiety. Thus, effective technology integration, and supportive learning environments will help enhance students' reading proficiency and overall academic performance.

Recommendations

Based on the findings of this study, it is recommended that:

1. Teachers should adopt strategies to reduce reading anxiety, such as creating a supportive and engaging learning

environment, incorporating interactive reading activities, and providing positive reinforcement. Instructional methods should be student-centered, with differentiated approaches that cater to individual learning needs. Schools should integrate mobile technology into teaching and learning processes by utilising digital resources, interactive applications, and online learning platforms to enhance engagement and comprehension.

2. Training programs should be provided for teachers to improve their ability to incorporate technology effectively in the classroom.
3. Additionally, school administrators and policymakers should implement policies that support the integration of technology in education while also ensuring that students have access to necessary digital tools.

References

- Ahmadi, M. R. 2018. The use of technology in English language learning: A literature review. *International Journal of Research in English Education*, 3.2:115-125.
- Alghonaim, A. S. 2020. Impact of related activities on reading comprehension of EFL students. *English language teaching*; 13.4; *Published by Canadian Center of Science and Education*.
- Anthony, J. 2021. Anxiety in second language reading: A barrier to comprehension. *Journal of Language and Linguistics Studies*, 17.1:23-38.
- Apata, O. 2021. Mobile learning applications and students' academic performance in secondary schools. *Nigerian Journal of Educational Research and Development*, 20.4:112-127.
- Ayankojo, M. 2020. The impact of reading anxiety on English comprehension among secondary school students. *African Journal of Applied Linguistics*, 8.1-55-72.

- Çeliktürk, Z., and Yamas, A. 2015. Translation to English: Development of a reading anxiety scale for primary and secondary school students: A validity and reliability study. *Primary Education Online* 14.1:97-107.
- Cocorada, S. 2014. Computer anxiety, computer self-efficacy and demographic variables. *eLearning and Software for Education*. 4.407-414.
- Downey, J.P. and Kher, H.V. 2015. A longitudinal examination of the effects of computer self-efficacy growth on performance during technology training. *Journal of Information Technology Education: Research*, 14.91-111.
- Fitrawati, Kamil, I., and Perrodin, D. D. 2023. Foreign language reading anxiety as experienced by EFL students of a state university in Padang, Indonesia. *English Language Teaching Educational Journal*, 6.1:1-15. <https://doi.org/10.12928/eltej.v6i1.7716>
- Gilakiani, A. P. 2017. A review of the literature on the integration of technology into the learning and teaching of English language skills. *International Journal of English Linguistics*, 7.5.95-106.
- Guo, Q. 2021. Mobile technology self-efficacy and its impact on student learning outcomes *International Journal of Educational Technology*, 9.2:42-57.
- Haliru, R. A., Abdulkarim, Dogara. M.A. and Dangani, B.U. 2015. An assessment of reading habit among secondary school students in Kaduna metropolis. *IOSR Journal of Humanities and Social Science-iosrjhss*, 20. www.iosrjournal.org
- Kolawole, C. O. O., and Jire-Alao, E. O. 2015. Making omelettes without breaking eggs: Improving the comprehension skills of teachers of English as a second language in Nigeria secondary schools. *Journal of the International Society for Teacher Education*. 19.1:41-47.
- Liu, M. 2020. The Effect of Mobile Learning on Students' Reading Self-Efficacy: A Case Study of the APP "English Liulishuo" *Published by Canadian Center of Science and Education* 13.12. <https://doi.org/10.5539/elt.v13n12p91>
- Oladunjoye, O. S. and Kolawole, C. O. O. 2015. Students' cognition and comprehension content of selected passages in Senior Secondary School English Readers. *Journal of Educational Research* 19.1-2:126-132
- Olakunle, T. 2021. Mobile-assisted language learning: Implications for English comprehension. *Journal of Digital Education*, 15.2:78-95.
- Olatubosun, O. C. 2023. Offline mobile application and internet-enabled reading strategies, and learning outcomes in English reading comprehension among public senior secondary students in Ibadan, Nigeria. Unpublished PhD thesis from the Department of Arts and Social Sciences Education, University of Ibadan.
- Piquette, K. E. 2021. 'Reading' through the body in early Egypt. *Written Language and Literacy*, 24.2-229-258. <https://doi.org/10.1075/wll00054.piq>