Internet Addiction as a Correlate of Biology Students Academic Achievement in Tertiary Institutions in Odeda Local Government Area, Ogun State, Nigeria

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Abstract

This study was carried out to determine the influence of internet addiction on the academic performance of biology students in tertiary institutions in Odeda Local Government Area of Ogun State. The research design was a descriptive research. The population consisted of 150 respondents of Biology students in tertiary institutionsand stratified random sampling techniques was used to randomly selected 50 respondents from each selected tertiary institution. A self-designed questionnaire of 150 copies was used to elicit information from the respondents (n=150). Three hypotheses were stated to guide the study. The research data was analysed using Pearson Product Moment Correlation (PPMC) and was tested at p< 0.05.Results of this study revealed that internet addiction statistically and significantly influenced students' academic performance. The study concluded that students encountered obstacles in their studies, sleep and completing their assignments as well because students spend most of their useful time on the internet which in turn affect their academic performance. It was therefore recommended that it is vital for parents to scrutinize their children internet use in order to curb its excessive use.

Introduction

Internet addiction refers to the excessive and compulsive use of the internet that interferes with daily life, productivity, and well-being. It is characterized by an inability to control one's online activities, leading to significant negative consequences in various aspects of life, including academic, social, occupational, and personal domains (Iluku-Ayoola, Olalekan, Agunbiade-Olu & Asoh-Chika, 2020). Individuals with internet addiction may spend excessive amounts of time online, often neglecting responsibilities, relationships, and even their own health. This behaviour can manifest in various forms, such as compulsive use of social media, online gaming, browsing, or other internet-based activities (Babatunde, 2024).

The concept of internet addiction is closely related to other behavioral addictions, where the individual experiences an overwhelming urge to engage in the behavior despite knowing its harmful effects. Common symptoms include a preoccupation with online activities, withdrawal symptoms when not using the internet, and a gradual increase in the amount of time spent online to achieve the same level of satisfaction (University College London, 2024). Over time, this addiction can lead to isolation, decreased physical activity, and disruptions in sleep patterns, all of which can contribute to a decline in overall well-being. Internet addiction is increasingly recognised as a mental health issue, and it often requires intervention and treatment to help individuals regain control over their internet use (Ukeh, 2024).

Internet addiction has emerged as a significant concern in the digital age, particularly among students in tertiary institutions. The increasing reliance on the internet for academic, social, and recreational activities has led to a blurred line between productive use and excessive indulgence (Omoyemiju & Omotosho, 2023). This addiction can have far-reaching consequences, especially for students in demanding fields such as biology, where consistent study habits and focused learning are crucial. The pervasive nature of the internet, with its easy access to social media, gaming, and endless streams of information, can distract students

from their academic responsibilities, leading to procrastination, decreased study time, and ultimately, poorer academic performance (Arijeniwa, 2023).

For biology students, whose academic success often depends on rigorous study and engagement with complex material, internet addiction can be particularly detrimental. The distraction caused by excessive internet use can impede their ability to concentrate during lectures, reduce the effectiveness of study sessions, and lower their retention of critical information (Oyinvwi & Ojimaojo, 2021). Moreover, the addictive nature of online activities can lead to irregular sleep patterns and increased stress levels, further diminishing students' academic performance. This problem is compounded by the fact that many students may not recognize the extent of their addiction, believing their internet use to be a necessary part of modern education, rather than a hindrance (Aderinto, Olatunji, Afolabi, Muili, Olaniyi,Edun & Olakanmi, 2024).

The impact of internet addiction on academic performance is a growing area of concern that warrants further research, particularly in the context of biology students in tertiary institutions. As these students prepare for careers that require a deep understanding of biological sciences and a high level of academic achievement, addressing the issue of internet addiction is essential (Ipem & Okwara-Kalu, 2020). Strategies for mitigating this problem could include promoting awareness of healthy internet use, integrating time management skills into the curriculum, and providing support systems for students struggling with addiction. By addressing internet addiction proactively, educational institutions can help students maintain their academic performance and ensure that the internet remains a tool for learning rather than a source of distraction (Onyemaechi, Unnadike, Izuchukwu, Onwusobalu, Umenweke & Agu, 2022).

Statement of the Problem
The problem addressed in this study is the growing concern over the impact of internet addiction on the academic performance of biology students in tertiary institutions. As internet use becomes increasingly integrated into students' lives for educational, social, and recreational purposes, the line between beneficial use and compulsive behavior has

become blurred (Arome, Mercy &Idris, 2022). Excessive and uncontrolled internet usage, often referred to as internet addiction, poses a significant threat to students' academic success, particularly in demanding disciplines like biology, where deep focus and consistent study habits are essential (Arome, Mercy & Idris, 2022).

Despite the potential advantages of the internet as a resource for learning, the addictive nature of online activities can lead to significant distractions, reduced study time, and decreased academic performance. This study seeks to explore the extent of internet addiction among biology students and its direct and indirect effects on their academic achievements (Unachukwu, Nwankwo & Iweanya, 2022). By identifying the factors contributing to this addiction and understanding its impact, the study aims to provide insights that can inform interventions and strategies to help students manage their internet use and maintain a balance between their online activities and academic responsibilities (Ojonuba, Abdul Rahman, Zaremohzzabieh & MohdZulkefli, 2023).

Aim and Objectives

The aim of this study is to investigate the relationship between internet addiction and Biology students' academic achievement in Tertiary Institutions in Odeda Local Government Area of Ogun State.
The objectives are to:

i) identify the level of internet addiction among Biology students in the study area.
ii) ascertain the gender difference on the level of internet addiction among Biology students in the study area

Hypotheses

H_o1: **There will be no significant relationship between Biology students' academic level and internet addiction in the study area**.
H_o2: There will be no significant gender difference in the level of internet addiction among Biology students in the study area.

Methodology

This describes the methodology used in carried out research in this study. In this study, research design, population of the study, sample and sampling techniques, research instrument, validation of instrument,

reliability of the research instrument, method of data collection and method of data analysis.

Study Design

The study adopted a descriptive research Design.

Research Population: The population include Biology students in the three tertiary institutions in Odeda Local Government Area of Ogun State.

Sample and Sampling technique: Stratified random sampling technique was used to randomly select fifty respondents from each selected tertiary institutions-

1. Centre for Degree Programmes, Federal College of Education in affiliation with University of Ibadan.
2. Federal College of Education, Osiele.
3. Federal University of Agriculture, Alabata.
   A total of one hundred and fifty students (150) participated in the study.

Research Instrument

A well-structured of 150 copies of questionnaire was used to collect data from the respondents. The questionnaires were divided into two sections where the first part contained the respondents' demographic data (age, sex, level). The second section contained the opinion of the respondents on internet addiction and its effects on their academic performance.

Validity of Instrument

The designed questionnaire instrument was tested for both phase and content validity using Coronach Alpha statistical tool.

Procedure for Data Collection

The questionnaire was administered and retrieved personally by the researcher. The administration of the questionnaire lasted for two weeks.

Method of Data Analysis

The data collected was subjected to descriptive statistics while Pearson correlation was computed to investigate the relationship between internet addiction and academic performance.

Results

H$_o$1: There is no significant relationship between students' academic level and internet addiction.

Table 1: Summary of Pearson Product Moment Correlation showing relationship between students' academic performance and level of internet addiction

Variables	N	R	P	Sig
Students' academic performance	150	.290**	.000	Significant
Internet addiction	150			

Table 1 shows the relationship that exists between students' academic performance and their level of internet addiction. The results from the table indicate that there is positive relationship between academic performance and internet addiction (r= 0.290**) and the relationship is significant at p < .05, P.0.05. The implication of this is that there is significant relationship between students' academic performance and their level of internet addiction. This is in line with the findings of Nadarajan, Hengudomsub & Wacharasin, 2023) who stated that as internet addiction intensifies, students may experience increased distractions, leading to procrastination and a reduction in the quality and quantity of their study time. This often results in poorer comprehension of course materials, lower grades, and overall diminished academic achievement. The compulsive nature of internet addiction can also disrupt sleep patterns, increase stress levels, and cause difficulties in managing time effectively, all of which further contribute to a decline in academic performance (Omoyemiju & Popoola, 2020).

H$_0$2: There is no significance effect of internet addiction on the academic performance of male and female students.

Table 2: The independent sample t-test showing the difference in mean scores between male and female students internet addiction

Student Gender	N	Mean	Std. D	Df	T	Sig	Remark
Male	55	35.836	2.556	148	2.835	.0034	Sig.
Female	95	31.695	3.416				

The result in Table 2 indicates that there is significant difference (p<0.05) between male and female students internet addiction. The mean score of male is higher ($\bar{x} = 35.836$, S.D= 2.556) than mean score of female students ($\bar{x} = 31.695$, S.D= 3.416), t (148) = 2.835, p<0.05) statistically significant. This collaborates with study of Banyan Global (2023) that gender differences in internet use has consistently shown that male students tend to spend more time online than their female counterparts. This difference in online behaviour is often linked to the varying purposes and interests that drive internet use among genders. Male students are more likely to engage in activities such as online gaming, streaming, and exploring tech-related content, which can significantly extend their time spent online. In contrast, female students may use the internet more selectively, focusing on social networking, educational purposes, or communication with friends and family.

Conclusion

Internet used particularly by students has been associated with more frequent communicationwith friends and family members on social media. Indirectly, it impairs their psychological wellbeing, peer and family interaction. Consequently, students encountered obstacles in their studies, sleep and completing their assignments as well. This problem also influences their academic performance indirectly. The results of this study have shown that students spend most of their useful time on the internet which in turn affect their academic performance.

Recommendations

1. Biology students should be encouraged to develop strong time management skills to balance their academic responsibilities with internet use.
2. Students should also be made aware of the potential impact of excessive internet use on their academic performance and health, and they should seek support if they struggle to control their online habits.
3. Lecturers should integrate discussions on responsible internet use into their curriculum, highlighting the benefits and dangers associated with internet addiction.
4. Lecturers should encourage the use of internet resources that directly support academic achievement, such as online journals, educational platforms, and academic networking sites, while discouraging excessive use of non-educational content.
5. The government should invest in awareness campaigns that educate students and the public on the risks of internet addiction, particularly its impact on academic performance.

References

Aderinto, N., Olatunji, G., Afolabi, S., Muili, A., Olaniyi, P., Edun, M., & Olakanmi, D. (2024). Sleep patterns   and quality among Nigerian medical students: A cross-sectional study. *Medicine*, *103*(12), e37556.

Arijeniwa, Adedeji. (2023). A Study of Social Media Usage on The Academic Performance Of Secondary School Students In Benin Metropolis**.** *Thesis for: Postgraduate Diploma in Education (PGDE).*

Arome A. T., Mercy A. B. &Idris A. T. (2022).Impact of Internet Use on Biology Students' Academic   Performance in Zaria, Kaduna State.*African Journal of Humanities & Contemporary Education Research,* **3** (2); 120-128

Babatunde T. (2024). Digital dilemma: Nigerians' growing struggle with smartphones, Internet addiction. Retrieved from

https://punchng.com/digital-dilemma-nigerians-growing-struggle-with-smartphones internet-addiction/

Banyan Global (2023).Understanding the Gender Digital Divide in Nigeria.*Learning Brief, United States Agency for International Development (USAID)*.

Iluku-Ayoola, Olusoji & Olalekan, Awogbami & Agunbiade-Olu, Onaope & Asoh-Chika, Favour. (2020). Prevalence of internet addiction and its effects on academic performance among college students in semi-urban settlement of Ijero-Ekiti, Ekiti State Nigeria.*Global Journal of Engineering and Technology Advances, 4 (3); 012-022.*

Ipem J. N. & Okwara-Kalu C. E. (2020). Internet Addiction And Academic Performance of Undergraduate Students Of AlvanIkoku Federal College of Education (AIFCE) Owerri. *Journal of the Nigerian Academy of Education*, 16 (2); 306-317

Ojonuba, H.S., Abdul Rahman, H., Zaremohzzabieh, Z., & MohdZulkefli, N.A. (2023).The Effectiveness of an Empowerment Education Intervention for Substance Use Reduction among Inner-City Adolescents in Nigeria. *International journal of environmental research and public health*, 20(4), 3731-3742

Omoyemiju, Michael & Popoola, Bayode. (2020). Prevalence of internet addiction among students of Obafemi Awolowo University, Ile-Ife, Nigeria.*British Journal of Guidance & Counselling*, 49 (1); 1-11.

Omoyemiju, M.A. & Omotosho, I.M. (2023).Correlates of social anxiety and internet addiction of higher education students.*International Journal of Research in Education and Science (IJRES)*, 9(4), 909-919.

Onyemaechi C., Unnadike M., Izuchukwu C., Onwusobalu P., Umenweke O. & Agu R., (2022). Internet Addiction And Its Psychological Wellbeing Correlate Among Undergraduates. *Journal of Psychology and Behavioural Disciplines, COOU,* 2 (1); 10-19

Oyinvwi U.V. & Ojimaojo E. S. (2021). Relationship Between Internet Addiction And Academic Achievement of Secondary School Students In Nasarawa North Senatorial of Nasarawa State, Nigeria. *The Educational Psychologist*, 14 (1); 128-139

University College London. (2024). Internet addiction affects the behavior and development of adolescents. *Science Daily*. Retrieved August 7, 2024 from www.sciencedaily.com /releases/2024/06/240604184208.htm

Ukeh M. I. (2024). Influence of Internet Addiction and Loneliness on Psychological Wellbeing Among Nigeria Police Academy Cadets. *African Journal for the Psychological Study of Social Issues,* 27 (2); 13-22

Unachukwu G.C., Nwankwo C. A. & Iweanya E. N. (2022).Excessive Social Media Usage among Federal University Students in Southern Nigeria.*Socialscientia Journal of the Social Sciences and Humanities*, 7 (4); 41-54