

**RELATIONSHIP BETWEEN INTERNET ADDICTION  
AND ACADEMIC ACHIEVEMENT OF SECONDARY  
SCHOOL STUDENTS IN NASARAWA NORTH  
SENATORIAL OF NASARAWA STATE, NIGERIA.**

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**Abstract**

*The study investigated the relationship between internet addiction and academic achievement of secondary school students in Nasarawa State. The study employed correlation research design. The population of the study was 21, 433 and the sample size of 400 students was used for the study. Multi-stage sampling techniques were used to compose the sample. Three research questions were answered and three null research hypotheses were tested at 0.05 level of significance in line with the research objectives. Two instruments were used to collect data from the students. These included: Internet Addiction Questionnaire (IAQ) and the Students' Academic Achievement Records (SAAR). The variables were correlated using the mean and standard deviation to answer research questions while Pearson product moment correlation was used to test hypotheses 1 and 2 and independent sample t-test was used to test hypothesis 3. The finding of the study revealed that there is no significant relationship between internet addiction by male and female students and their academic achievement. Thus, it was recommended among other that students should be compelled by parents, teachers and counselors to have a personal, daily time table for studies to avoid spending unnecessary time on internet for less important things to the detriment of their academic.*

**Introduction**

This age of globalization information and technology, the Internet has become a major factor in human knowledge development, organizational management, business activities and leisure activities. The Internet has become increasingly important to all users in their everyday lives which secondary school students are not exempted. This is because a great deal of research has proven the benefits of internet to the quality of secondary school

education. Internet services have the potential to accelerate, enrich, and deepen skills, to motivate and engage students, to help relate school experience to work practices, create economic viability for tomorrow's workers, as well as strengthening teaching and helping schools change as well as enhancing academic achievement among secondary school students which is a vital activity in all educational environments (Adedeji 2011).

Academic achievement refers to how well a student is accomplishing his or her tasks and studies (Scott, 2012). Grades are certainly the most well-known indicator of academic achievement. Grades are the student's "score" for their classes and overall tenure. Grades are most often a tallying or average of assignment and test scores and may often be affected by factors such as attendance, and assignment among others. Grading systems vary greatly by level and school. Common scales include a percentage form 1-100, lettering systems from A-F, and grade point averages (GPA) from 0-4.0 or 0-5 as in the case of tertiary institutions. According to Ward, Stocker and Murray-Ward, (2006) academic achievement refers to the outcome of education, the extent to which the student, teacher or institution have achieved their educational goals. Academic achievement is the ability to study and remember facts and being able to communicate one's knowledge verbally or written on paper (Answers, 2010).

Despite the use and significance of academic achievement in school setting, the issue of poor academic achievement of students in Nigeria has been a thing of concern. The quality of education does not only depends on the teachers as reflected in their performance of their duties, but also the student outcome and committed effort displayed during assessment while most students nonchalant attitude to study in most case has led to the widely acclaimed fallen standard of education in Nasarawa state at large and the North Senatorial District in particular. Over time students academic achievement in both internal and external examinations had been used to determine excellence in teaching. Report has shown that success or high a achievement has become a difficult task to accomplish by students in recent times. The decline in academic performance of secondary school students in Nasarawa North Senatorial Zone has continued to pose a serious concern to parents, government agencies and students themselves (Ahmed 2011).

According to Akhter (2013), a number of benefits can be derive from the internet ranging from keeping in touch with friends, making vacation plans, managing finances to assisting with educational needs. More specifically, it may academically help students improve their skills for effective communication and application of successful strategies (Torres and Zoricic 2013). Moisan (2012) attracts the attention to the increasing Internet

use since the beginning of the century figuring that the numbers of people addicted to these problematic activities were amounting to 61% of the population in the most recent years. Even though most people agreed that the advantages of the Internet as healthy productive activities such as students can catch up the opportunity by surfing web-sites, engaging in chat-room, excellent tool for research among others. (Kirchner, 2010); yet many students have fallen behind in their studies due to excessive investments of their time and energy in online activities which are called internet addiction (Serin 2011).

Internet addiction could be harmful on students, changing their social behavior, habits and abilities in a negative way (Kirchner, 2010). The Internet use particularly by secondary school students has been associated with more frequent communication with friends and family members rather than study. The uncontrollable use of phones, computers and all forms of communication technology, Social media and its network such as BBM, Whatsapp, Instagram, 2go, Facebook, Twitter, Badoo, YouTube used excessively by students for non-academic purpose cause their academic to suffer. Many secondary school students who have access to phones and computers waste their time chatting and surfing the internet for non-educative reasons. They remain glued to their phones all day making them waste so much time on things that are detrimental to their academic work. The recalcitrant ones are seen pressing their phones during classes, seminars and in the libraries. They believe that their smart phones are catalysts for easy assimilation when reading and some even go as far as plugging them in their ear pieces and are seen humming out the songs they are listening to while studying.

Another way through which students show addiction in the use of internet is playing series of games online. According to Smed and Hakonen (2004) a “game” is defined as “a universal form of recreation generally including any activity engaged in for diversion or amusement and often establishing a situation that involves a contest or rivalry”. Among the youth, one of the most preferred online game types is the massively multiplayer online role-playing games (MMORPGs). These games are played online, alone or with/against other gamers. The years 1997–2001 have been referred to as the “golden age of multiplayer online role games”, mainly because of the growth and popularity of online games such as Ever Quest and Asheron’s Call. Research has shown that excessive gaming time leads to negative consequences. The average MMORPG player spends about 20 hours a week playing. The negative effects attributed to gaming seem to increase with more intense gaming time (Torres and Zoricic 2013). Although the term addictive behavior is normally used to describe substance use, yet excessive gaming can

be considered another type of addictive behaviour. In particular, more than five hours of online gaming per day in adolescence seems to increase the risk of negative consequences on their daily or weekly endeavour of which their academic is not an exception as witnessed in Nasarawa North Senatorial Zone.

In addition to the internet addiction factors considered in this study, gender is equally another factor that is of interest to this work. Gender is a factor that plays a significant impact on problematic internet usage by students as considered by this study. Male college students are at increased risk of experiencing gaming problems compared to female college students. Fifteen percent of college males participated in weekly gaming and gambling activities as compared to only 1.6% of college female and frequent gaming participation may be an indicator of a gambling problem affecting more boys than girls of school age.

It is pertinent at this juncture to say that the poor quality of students and declining academic achievement at secondary school level in Nasarawa North in recent time which could be trace to internet addiction exhibited causing nonchalant attitude towards their academic especially in Mathematics and English Language which are the main aspect of academic achievement focus in this study. It is against this background that this study seeks to determine the relationship between internet addiction and academic performance of secondary school students in Nasarawa North Senatorial of Nasarawa State.

The study was guided by the following three research questions and three null hypotheses formulated and tested at 0.05 level of significance.

What is the relationship between online chatting ratings and academic achievement scores of Secondary school students in Nasarawa North Senatorial Zone?

What is the relationship between online game playing ratings and academic achievement scores of secondary school students in Nasarawa North Senatorial Zone? .

What is the relationship in internet addiction ratings between male and female students in Nasarawa North Senatorial Zone?

There is no relationship between the ratings of online chatting and academic achievement scores of secondary school students in Nasarawa North Senatorial Zone.

There is no relationship between the ratings of online game playing and academic achievement scores of secondary school students in Nasarawa North Senatorial Zone.

There is no difference in internet addiction ratings between male and female students in Nasarawa North Senatorial Zone.

## **Method**

Correlational design was adopted for this study. Correlational research design attempts to establish relationship between two or more variables. This design is suitable as it is capable in establishing the relationship between Internet Addiction and Academic Achievement among secondary school students in Nasarawa North senatorial district. The target population for this study was 21,433 (12,461 males and 8,972 female) as revealed by Nasarawa State Ministry of Education (2018).

The sample size for the study was 400 using Krejcie and Morgan (1970) table for determining sample size from a given population. Multi stage sampling procedure was adopted.

Two instruments were used for data collection. A structured questionnaire developed by the researchers titled: Relationship between Internet Addiction Questionnaire (IAQ). Students Academic Achievement Test (SAAT) in Mathematics and English Language and. IAQ contains two sections, A and B. Section 'A' focuses on demographic information like gender and school location. Section B contains 24 items put into two clusters namely A, B to elicit information on internet addiction. The instrument has five response ratings such as Strongly Agree (SA) – 5 Points, Agree (A) - 4 points, Undecided (UD)-3 Disagree (D) - 2 points, Strongly Disagree (SD) -1 respectively.

The validity of the questionnaire gave indices level of 0.72 for SAAT and 0.70 IAQ. In order to determine the reliability of the items on the questionnaire, pilot testing was conducted among a sample of 40 secondary school students of Kofar Hausa Secondary School Keffi, Nasarawa State. The result of the pilot test was subjected to Cronbach's Alpha which produced reliability coefficient of 0.71 hence, the instrument was considered reliable for the study.

The questionnaire was administered by the researchers and aided by two research assistants who were earlier trained on the use of the instrument by the researcher. A total number of 400 questionnaires were administered and all were returned fully filled. The academic achievement test scores in Mathematics and English was collected by the researchers to correlate with the students' individual response. The data generated were analyzed using mean and standard deviation to answer research questions while Pearson product moment correlation coefficient and independent sample t-test was used to test the research hypotheses at 0.05 level of significance.

**Result**

**Research Question 1:** What is the relationship between online chatting and academic achievement of secondary school students in Nasarawa North Senatorial Zone?

**Table 4.1: Mean and Standard Deviation on students’ use of online chatting as it relates to their Academic achievement**

<b>Online Chatting</b>	<b>X</b>	<b>SD</b>	<b>Decision</b>
Students often use to stay online longer than necessary chatting.	3.68	1.37	Accept
Chatting makes student hardly have time for their studies.	3.88	1.42	Accept
The time students spend online chatting has nothing to do with academic.	3.81	1.37	Accept
Regular online chatting affects students’ academic performance negatively.	3.78	1.52	Accept
Online chatting has relationship with students’ underperformance.	3.46	1.45	Accept

Table 4.1 shows the relationship between online chatting and academic achievement of students. Findings from the study show that with a criterion mean of 3.00 and above were used as benched mark for accepting the items, respondents agreed that online chatting affects the academic achievement of secondary school students in Nasarawa North Senatorial Zone.

**Research Question 2:** What is the relationship between online gaming and academic achievement of secondary school students in Nasarawa North Senatorial Zone?

**Table 4.2: Mean and Standard Deviation on students’ use of online game playing as it relates to their Academic achievement**

<b>Online Game Playing</b>	<b>X</b>	<b>SD</b>	<b>Decision</b>
Online game students always play use to take their time for study.	3.85	1.35	Accept
Playing online game gives students satisfaction and as reward.	3.67	1.38	Accept
The game most time cause students to forget about their studies.	3.88	1.34	Accept
Students have been distracted from study by online game many times.	3.62	1.29	Accept
The playing of online game has relationship with students’ poor performance.	3.50	1.47	Accept

Table 4.2 shows the relationship between online game playing and academic achievement of students. The result reveals that with a criterion mean of 3.00 and above were used as benched mark for accepting the items, the sampled respondents agreed that online game playing is responsible for their poor performance as it also affects the academic achievement of students in secondary schools in Nasarawa North Senatorial Zone.

**Research Question 3:** What is the relationship between internet addiction by male and female students and academic achievement of secondary school students in Nasarawa North Senatorial Zone?

**Table 4.4: Mean and Standard Deviation on male and female students' internet addiction as it relates to students' Academic Achievement**

Gender and Internet Addiction	Male			Female		
	Mean	Std.D	Decision	Mean	Std.D	Decision
Use of internet consume most of students study time.	4.41	1.13	Accept	4.44	1.22	Accept
Male student are more addicted to internet usage than girls.	2.80	1.67	Accept	2.77	1.72	Accept
Female students are more addicted to internet usage than boys.	2.65	1.65	Accept	2.43	1.53	Accept
Internet addiction can distract both boys and girls in school.	4.29	.97	Accept	4.24	1.18	Accept

Table 4.4 shows the relationship between gender use of internet and academic achievement of students. The result reveals that with a criterion mean of 3.00 above for both male and female students' responses to the use of internet facilities in their academic pursuit, they both agreed that use of internet consume most of students study time. The result further show that male and female students all agreed that internet addiction can distract both boys and girls in school. Findings from the study further revealed that respondents disagreed that male student are more addicted to internet usage than girls and further disagreed that female students are more addicted to internet usage than boys as it affects the academic achievement of Secondary school students in Nasarawa North Senatorial Zone.

**HO<sub>1</sub>:** There is no significant relationship between the ratings of online chatting and academic achievement scores of Secondary school students in Nasarawa North Senatorial Zone.

Pearson Product Moment Correlation Coefficient was used to establish the relationship that exists between online chatting and academic achievement of students.

**Table 4.8: Correlation between online chatting and academic achievement of secondary school students in Nasarawa North Senatorial Zone**

Variables	N	$\bar{X}$	Std. Dev.	df	r	r <sup>2</sup>	Sig.(2-tailed)	Decision
Online Chatting*	400	15.93	3.20	398	.654	.428	.023	Reject HO <sub>1</sub>
Academic Achievement	400	62.73	8.11					

**Level of significance Alpha ( $\alpha$ ) < 0.05 shows a significant relationship**

Table 4.8 reveals that there is a significant relationship between online chatting and academic achievement. The result shows a positive relationship with between the two variables at: n = 400, r = .654, p < .05 (p-value = .023), while the correlation coefficient (r<sup>2</sup>)= .428; implies that only 42.8% of the variation is accounted for in the relationship that exists between online chatting and students' achievement, while 57.2% of the variation is unaccounted for in the study. The null hypothesis was therefore rejected which further indicates that online chatting has a significant positive relationship with academic achievement of secondary school students in Nasarawa North Senatorial Zone.

**HO<sub>2</sub>:** There is no significant relationship between the ratings of online game playing and academic achievement scores of secondary school students in Nasarawa North Senatorial Zone.

Pearson Product Moment Correlation Coefficient was used to establish the relationship that exists between online game playing and students' academic achievement.

**Table 4.9: Correlation between online game playing and academic achievement of secondary school students in Nasarawa North Senatorial Zone**

Variables	N	$\bar{X}$	Std. Dev.	Df	r	r <sup>2</sup>	Sig.(2-tailed)	Decision
Online Gaming *	400	14.76	3.20	398	.746	.557	.045	Reject
Academic Achievement	400	62.73	8.11					HO <sub>2</sub>

**Level of significance Alpha ( $\alpha$ ) < 0.05 shows no significant relationship**

Table 4.9 reveals that there is a significant relationship between academic online game playing and academic achievement. The result shows a negative relationship with  $n = 400$ ,  $r = .746$ ,  $p < .05$  ( $p$ -value = .045), while the correlation coefficient ( $r^2$ ) = .557 further implies that only 55.7% of the variation is accounted for in the relationship that exists between online game playing and students' achievement, while 44.3% of the variation is unaccounted for in the study. The null hypothesis was therefore rejected which further indicates that online gaming has a significant positive relationship with academic achievement of secondary school students in Nasarawa North Senatorial Zone.

**HO<sub>3</sub>:** There is no significant relationship between internet addiction ratings by male and female and academic achievement of students in Nasarawa North Senatorial Zone.

**Table: 4.12: Independent Sample t-test between Gender Internet Addiction and Academic Achievement of Secondary School Students**

Variables	N	df	Mean Difference	Std. Error Difference	t	Sig. (2-tailed)
Gender Internet Addict	400	398	.470	.256	1.84	.067
Academic Ach.	400	398	.018	.812	.022	.983

Result from table 4.12 shows the difference between of male and female students' use of internet and academic achievement of secondary school students in Nasarawa North Senatorial Zone, Nasarawa state. The result reveals that gender has no significant relationship with academic achievement: [ $t_{(400)} = 1.84$ ;  $P > .05$  (.067)] and academic achievement was [ $t_{(400)} = .022$ ;  $P >$

.05 (.983)]. The result from the study therefore implies that students' gender has no significant relationship with academic achievement of secondary school students in Nasarawa North Senatorial Zone, Nasarawa State, Nigeria.

### **Discussion of Findings**

Findings from the study reveal that there is a significant positive relationship between online chatting and academic achievement. Gluing to laptops, computer, phone and i-pad for social and non-academic purpose could have a serious distraction to students' academic work which could cause them to perform poorly in school. This result is in corroboration with Hansen (2002), view that many students fall behind in their studies due to excessive investments in online relationships which has no bearing on their academic work making them not putting their best into academic activities. As a result, it has shows that online chatting could be done during leisure times.

Result from the study revealed that there is a significant positive relationship between online gaming and academic achievement. This did agree with Rosen (2011) that adolescent online gaming behaviour may lead to negative consequences for some gamers. They also asserted that gaming problems increase in line with more time spent on game as time spent sleeping was reduced when game playing time increased. They equally suggested that gaming may lead to less sleep with subsequent attention problems and poorer school achievement. However, students who could manage their time well online game can lead to the development of IQ level, even when, Rosen (2011) opined that computer-related activities have become a new health risk. The relationship between computer gaming and musculoskeletal symptoms might be explained by consecutive periods of screen-based activities leading to sustained muscle tension and lack of recovery cannot be proved.

The result further revealed that there is no significant relationship between internet addiction by male and female students and their academic achievement. In the same vein, the study result also indicated that internet addiction has fairly strong positive relationship in term of gender. This result agrees with Valentine and Emshoff (2011) that 15% percent of college males participated in weekly gambling and gaming activities as compared to only 1.6% of college girls and frequent gambling and gaming participation may be an indicator of an addiction problem affecting more boys than girls of school age.

### **Conclusion**

As a result of the finding, it was concluded that internet addiction exhibited by online chatting and online game playing affect secondary school students irrespective of their gender or school location they find themselves.

### **Recommendations**

Based on the conclusions of this study above, the following are recommendations from the researcher:

Teachers should disallow the use of phone and internet facilities in class and for some kind of assignment and classroom exercises to discourage lazy attitude towards reading and brain- storming which internet addiction has caused among the male and female students.

Students should be compelled by parents, teachers and counselors to have a personal, daily time table for studies to avoid spending unnecessary time on internet for less important things to the detriment of their academic for both urban and rural students.

The ministry of education as well as school management should ensure strict compliance with the schools rule and regulations forbidding the use of phones, ipad among students in schools as this will curtail the use of phone especially among male students which are prone to gambling and gaming.

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