

AN APPRAISAL OF ONLINE GAMBLING ON UNDERGRADUATE STUDENTS' ACADEMIC PERFORMANCE IN UNIVERSITY OF ILORIN, ILORIN, NIGERIA

ALIMI, Adebayo Emmanuel, ADEROJU, Musiliu Adekola & FALADE, Ayotunde Atanda

eaalimi@unilorin.edu.ng

Department of Educational Technology, University of Ilorin, Ilorin, Nigeria

Abstract

The convergence of gambling and ICT has meaningful implications for gambling among youths most especially students as ICT makes the play and practice of gambling increasingly familiar and easily accessible to ICT users. Most University students are youths and ICT savvy and are prone to get lured into online gambling practice hence the study examined the influence of online gambling on academic performance among the University of Ilorin students. The study adopted a descriptive survey method. The sample of the study was 199 undergraduate students. Responses from the questionnaire were analyzed and findings revealed that over 50% students have performance that qualifies them for a second-class lower degree; students averred to online gambling; and there was a significant relationship between undergraduates' attitude towards online gambling and academic performance in school. From the findings, it was concluded that students' online gambling has eroded the time needed to study, increases their stress level through anxiety and ultimately affected their performance through cumulative grade point average. It was therefore recommended that university authority should monitor online gambling participation through blockage of websites that promote online gambling, amongst others.

Keywords: Online Gambling, Academic Performance, Addiction, Gambling Addiction

Introduction

Information and Communication Technologies (ICTs) are digital tools that involve the integration of technological devices. ICTs, as described by Bandele (2006) are a revolution that involves the use of computers, the internet, and other telecommunication technology in every aspect of human endeavors. These include Internet access, electronic mail, CD-ROMS, telephone, online databases, library services and fax machines (Nwosu & Ogbomo, 2012). Internet use is increasing globally as a result of readily available high-speed, low-cost, Internet access and Internet-enabled technology. During the last two decades, the way students live and work has changed due to the developments in the communication and information industries (Unsal, Ruzgar, & Ruzgar, 2008). Worldwide internet consumption is constantly on the rise, with studies as far back as the year 2011, showing that there were more than 2.4 billion internet users in the world (De Leo & Wulfert, 2013). Durkee and Mandelli, (2012) opined that the majority of Internet users are adolescents and young people. The Internet has become an important part of students' lives and most significantly to the University of Ilorin students. Students use the Internet because it is the easiest way to get information and however, if the Internet is not widely used, it may affect their studies, health, and social relationship.

Chen and Fu, (2009) showed that the Internet could be both harmful and helpful to adolescents' academic performance. That is, if the Internet is used to search for information, it could be beneficial to academic performance. However, if the Internet is used to either socializing or online gambling it could have a negative effect on students' academic performance. Although the Internet could be somewhat beneficial to students' academic performance, the disadvantages seemed to outweigh the benefits (Englander, 2010). The gambling industry has expanded its opportunities on the Internet. At the same time, there has been an exponential growth on the Internet and people's desire to gamble. Therefore, it is not surprising that there has been an increase in the number of online gambling and betting opportunities. In 1997, there were approximately 30 gambling Web sites available, ten years later this number had increased to around 3,000 (Matthews, Farnsworth, & Griffiths, 2009; Alimi, 2018). However, with the increasing interest and demand

for online gambling, there came difficulties such as reliability, transparency and many more. The competition got fierce and organizations began fighting against gambling Web sites, claiming there's a relationship between online gambling and compulsive gambling or problem gambling (Matthews, Farnsworth, & Griffiths, 2009, Eklund, 2012; Smed & Hakonen, 2003).

Gambling is understood as the established practice of staking money or other valuables on games or events of an uncertain outcome (Binde, 2005). Gambling is rarely presented in a realistic way rather, gambling is presented either very positively with few, if any, references made to negative consequences or accurate probabilities of winning with gambling depicted as socially rewarding, or very negatively, resulting in viewing gambling problems as so severe that individuals have lost their homes and families. Nigerian youths especially undergraduates are engaging themselves in gambling as a means of surviving, this is an intricate issue of special concern as this behavior may predispose them to pathological and compulsive gambling (Oyebisi, Alao, & Popoola, 2012)

For most individuals, gambling provides a harmless and entertaining diversion to everyday life. Along with the growth of the gambling industry and the corresponding increase in approval and convenience, there has also been a rise in the prevalence of pathological and problem gambling, with the rate of disordered gambling among adults has risen significantly from 1977 to 1993 (Williams, 2006). Both problem and pathological gambling are characterized by destructive behaviors that can disrupt or damage careers, personal relationships, and families and the human costs and suffering prove most difficult to quantify. Although challenges associated with gambling exists in all age categories, university students are particularly vulnerable, as going to university often represents the first move away from a student's family with fewer associated restrictions on their activities (Shaffer, Donato, LaBrie, Kidman, & LaPlante, 2005). Governments, all over the world view gambling as a relatively easy way to increase revenues with only minimal attention being paid to the societal costs.

The acceptance of gambling as a harmless form of entertainment vastly underestimates the risks involved such as time management, gender attitude and many more. Time management for students can be one of the most important and difficult skills to learn during university years. Lucier, (2013) argues that with so much going on, having strong time management and control can sometimes seem impossible. However, there are time management options that can help students take control of their lives instead of getting exhausted and behind in academics. There is a connection between how much time was spent on the Internet and the grades students got. The more time students spent online, the worse the impact was on their academic performance (Englander, 2010, Summerfield & Loo, 2010).

Hing, Russell and Browne (2017) stated that prevalence rates of pathological gambling are higher among Internet gamblers than offline players that it could be regarded as an addiction that needs urgent treatment. The addiction which is a neurotic disorder caused by a strong compulsion to engage in online gambling is characterized by dependence, loss of control and disruptions to significant areas of a gambler's life. Students Academic performance could be adversely affected by online gambling if not unchecked. What makes gambling so attractive to individuals is the element of risk and reward; this means that by its very nature excessive gambling could ultimately cause gamblers to lose their stake. Unfortunately, they might end up losing more than money, as their relationships with their family and friends as well as their academic performance are directly impacted by the money and time spent. For instance, a student at Kabianga University in Kenya committed suicide after losing a bet, and other students have dropped out of college after using their fee money to bet (Koross, 2016). There are also cases whereby university students have engaged in heavy drinking and abuse of drugs after winning thousands of money in their bets.

Students' academic performance in Universities is recorded as a cumulative grade point average (CGPA) which ultimately decides the class of degree a student would graduate with from the University. Any adverse effect on a student's CGPA would subsequently affect the class of degree the student would

graduate with. Internet gambling poses a psychosocial problem to gamblers which makes them become obsessive and addicted to gambling websites. This is most notably because of an increased number of gambling websites, convenience, 24-h access, and flexibility, increased event frequencies, smaller intervals between gambles, instant reinforcements, the ability to forget gambling losses by gambling again immediately and urge to recover lost funds (Griffith & Barnes, 2008). Canallatos (2017) asserted that youths who participate in gambling will have more difficulty with successful academic performance because they'll be preoccupied with their gambling, they'll be anxious due to losses, and they may be dealing with a diminishing social life as they lose friends.

Gender differences have been reported in several studies. Males are described as engaging in gambling more frequently than females (Walker, Courneya, & Deng, 2007). This stronger drive to gamble could be related to the adventurous characteristic of stereotypical male behavior or the social drive to compare oneself with other influential males (Walker, Courneya, & Deng, 2007; Alimi, 2018). There are differences with preferences for type of gambling, gender differences found in gambling behavior reveals that males students were more likely to engage in playing cards, betting on sports, and games that involved skills while females students were more likely to be involved with gambling at casinos, playing slot machines or bingo (Engwall, Hunter, & Steinberg, 2004).

Numerous studies have documented that college and university students have the highest rates of gambling and problem gambling (Shaffer, Forman, Scanlon, & Smith, 2000). Several studies recommend the need for gambling educational programs, similar to current alcohol and drug education awareness seminars currently offered in many colleges and universities (Shaffer, LaBrie, Kidman, & LaPlante, 2005). The fact that students could get addicted to Internet use much like drug addiction, online gambling has fueled considerable controversies and debates. However, existing literature has clearly indicated that users are experiencing negative consequences from the time they spent online (Anderson, 2001). However, the paramount issue of managerial concern is how to manage online gambling among students' population and to minimize its impact on academic performance. Macan, Shahani, Dipboye, and Phillips, (2013) opined that one potential coping strategy frequently offered by university counseling services is time management. By comparing the impact thereof upon gambling attitudes and time control, college administrators may be better able to design effective education-based interventions. Moreover, there has been little research documenting whether online gambling has any influence on students' attitudes and academic performance. Hence, there remains a void for studies related to these factors.

This study discovered if online gambling has an effect that could potentially benefit the academic performance of the university student. However, the study specifically:

- i) determined undergraduates' academic performance through their CGPA
- ii) found out undergraduates' attitude towards online gambling;
- iii) investigated how often undergraduates gamble
- iv) determined the relationship between undergraduates' attitude to online gambling and their academic performance

The study provided answers to the following research questions.

- i) What are undergraduates' academic performance?
- ii) What attitude do undergraduates have towards online gambling?
- iii) What is the rate of online gambling among the undergraduates?
- iv) What is the relationship between students' online gambling attitude and their academic performance?

The following two null hypotheses were tested at 0.05 level of significance:

H₀₁: There is no significant difference between male and female students' attitudes towards online gambling.

Methodology

This study is a descriptive research of the survey type. Researchers' designed questionnaire was used to gather relevant information on influence on Online gambling on the academic performance of students in University of Ilorin, Ilorin, Nigeria. The population for the study was all undergraduates in the University of Ilorin, Ilorin while the target population was undergraduates from seven faculties in the university selected based on the presence of the faculties on the university's main campus. Two hundred (200) respondents were randomly selected from seven (7) faculties within the University. The selected Faculties are Social Sciences, Life Sciences, Physical Sciences, Education, Engineering and Technology, Environmental Sciences and Arts. The research instrument was validated by three experts for face, value and content validity. The data obtained through the questionnaire were subjected to descriptive and inferential statistics.

Results

The analysis of the data gathered and the corresponding results are thus presented.

Table 1:

Percentage Distribution of Respondents by Faculty

Faculty	Frequency	Percentage (%)
Social Sciences	28	14.1
Physical Sciences	27	13.5
Life Sciences	30	15.1
Education	31	15.6
Environmental Sciences	31	15.6
Arts	28	14.1
Engineering & Technology	24	12.0
Total	199	100%

Table 1 showed the percentage distribution of respondents by faculty. Faculty of Social Sciences 28 (14.1%), Faculty of Physical Sciences 27 (13.5%), Faculty of Life Sciences 30 (15.1%), Faculty of Education 31 (15.6%), Faculty of Environmental Sciences 31 (15.6%), Faculty of Arts 28 (14.1%), Faculty of Engineering and Technology 24 (12%) the total number of respondents is one hundred and ninety-nine (199).

Table 2:

Percentage Distribution of Respondents by Level

Level	Frequency	Percentage (%)
200	43	21.6
300	88	44.2
400	66	33.2
500	2	1.0
Total	199	100%

Table 2 revealed the percentage distribution of respondents by level. 200 Level 43 (21.3%), 300 Level 88 (44.2%), 400 Level 66 (15.1%) and 500 Level 2 (1%).

Table 3:

Percentage Distribution of Respondents by Gender

Gender	Frequency	Percentage %
Female	44	22.1
Male	155	77.9
Total	199	100%

Table 3 showed that 44 of the respondents (22.1%) were Female while Male were 155 representing 77.9% of the total respondents.

Table 4:

Percentage Distribution of Respondents by Age Range

Age Range	Frequency	Percentage%
14-19	43	21.6
20-25	140	70.4
26-31	13	6.5
32 and Above	3	1.5

Table 4 indicated that the respondents that fell within ages 14 – 19 years were 43 (21.6%), 20 – 25 years were 140 (70.4%), 26 – 31 years were 13 (6.5%), while the remaining respondents 3 (1.5%) were 32 years and above.

Research Question 1: What are undergraduates' academic performance?

Table 5:

Percentage Distribution of Respondents' Undergraduates Academic Performance

Grade Level	Current CGPA	Frequency	Percentage
1st Class	4.5 – 5.0	1	0.5%
2nd Class Upper	3.5 – 4.4	28	14.2%
2nd Class Lower	2.4 – 3.4	114	57.3%
3rd Class	Below 2.4	56	28.0%
		199	100

Table 5 shows that 1(0.5%) of the respondents have a cumulative grade point between 4.5 and 5.0 which placed them at 1st class of degree, 28 (14.2%) of the respondents have CGPA between 3.5 and 4.4 which placed them at 2:1 class of degree, whopping 114 respondents which make up for over 50% of the respondents have current CGPA between 2.4 and 3.4 which placed them at 2:2 class of degree. 56 students who make up for 28% of the respondents are in 3rd class with current CGPA below 2.4

Research Question 2: What attitude do undergraduates have towards online gambling?

Table 6:

Students' Attitude towards Online Gambling

S. No	Item	Mean	Standard Deviation
1	Monetary loss or gain can determine the frequency of my online gambling.	3.50	1.20
2	The time I spend online increases my chance of winning.	3.26	1.17
3	I derive pleasure from gambling online.	3.13	1.15
4	I prefer gambling online to face to face interaction.	3.28	1.17
5	Online gambling improves my personal income	3.22	1.16
6	I am depressed and anxious when I do not win.	3.49	1.20
7	Internet facility is best used for gambling than for learning activities.	2.62	1.12
8	I prefer to gamble online for monetary gain than to do my school assignments.	2.64	1.12
9	I skip lectures, test and school activities to have more time for online gambling.	2.44	1.12
10	I think about winning odds while sitting in the classroom.	2.84	1.13
11	I prefer to invest my money in gambling to buying learning materials.	2.68	1.12
12	I think more about my gaming result than school results.	2.55	1.12
13	Online gambling seems effortless compared to reading.	3.19	1.16
	Grand Mean	2.99	

Table 6 indicates the undergraduates' attitude towards indulgence in internet gambling. The Grand mean of 2.99 that is above the benchmark of 2.5 set from a 4-point Likert-scale, shows that Undergraduates have a strong attitude towards internet gambling. Leading among the items in the table are items 1, 6 and 2 that suggests that undergraduates engage in online betting primarily because of the promised economic gain attached to it. Closely following are indicators for convenience (items 13, 14, 6 and 3) that suggests that undergraduates engage in online gambling because it offers convenience and 24hours access to bets.

Research Question 3: What is the rate of online gambling among the undergraduates

Table 7:

Undergraduates Rate of Online Gambling

Items	Frequency	Percentage %
2-3 times/week	76	38.2
3-4 times/week	31	15.6
4-7 times/week	73	36.7
Once/month	19	9.5
Total	199	100%

Table 10 revealed that 76 (38.2%) respondents gamble online in 2-3 times per week, 73 (36.7%) respondents gamble online in 4-7 times per week, 31 (15.6%) respondents gamble online in 3-4 times per week and 19 (9.5%) gamble online once in a month.

Research Question 4:

What is the relationship between students' online gambling attitude and their academic performance?

Table 8:

Correlation table showing relationship between undergraduates' online gambling attitude and their academic performance

		Online Gambling Attitude	Academic Performance
Online Gambling Attitude	Pearson Correlation Sig. (1 tailed) N	1.00	.691
Academic Performance	Pearson Correlation Sig. (1 tailed) N	.691	1.00

Table 8 shows the relationship between students online gambling attitude and their academic performances. The result reveals that there is a strong relationship between online gambling attitude and academic performance of undergraduates in university of Ilorin with the correlation coefficient greater than 0.5.

Hypotheses One:

There is no significant difference between male and female students' attitude towards online gambling

Table 9:

t-test Table showing gender difference in Undergraduates attitude to online gambling

Gender	N	\bar{x}	SD	df	t	Sig	Remark
Female	44	2.18	.488	197	1.21	0.000	Reject
Male	155	3.23	.415				

Table 9 showed that df (197), t = 1.21, p<.05. This means that the hypothesis is rejected. This is as a result in the significant p value of 0.000 which is lesser than 0.05 alpha level. This implies that, the stated hypothesis establishes that, there is significant difference between male and female students' attitude towards online gambling. The hypothesis tested shows that male and female have different attitudes towards online gambling. The female mean of 2.18 is quite lower than that of their male counterparts of 3.23 and this signify that the males have a higher tendency towards online gambling.

Discussions

Research Question One sought information about undergraduates' performance in the university and revealed that over 50% of the undergraduates are below the first class and 2:1 classes of degree which are the two prestigious classes of degree undergraduates aspire to finish with in a University. This finding is in line with Ezenwoke et al (2018) study that showed that over 50% of the students in various faculties of private universities have cumulated CGPA of less than 3.50 and this implies that most students are below the second class upper (2:1) class of degree. Ezenwoke et al (2018) further classified the performance and revealed that students in computer sciences, engineering and related fields that are ICT performed worse than their colleagues form faculties of social sciences and Agriculture that are not technology oriented. Likewise, Fatokun (2019) showed that students that spend time browsing and surfing on their mobile phone have less time to concentrate on their studies which in turn affects their performance.

Undergraduates attitude towards online gambling is greatly influenced by their youthful exuberance and high spirits. The students' responses showed that they have positive attitude towards the habit and this indicates that the undergraduates have affinity for online gambling and finds solace indulging in it. The frequency at which undergraduates visit the online betting sites to bet showed that most students visit the

sites between 4 and 7 times in a week. This is alarming as the students would need to spend time on the site to speculate and wait for their bet to effect whether win or lose. Montes and Weatherly (2017) discussed that gambling is an addiction that is prevalent among adolescents and youths that is detrimental and has negative effect on the lifestyle of victims. The study further showed that the addicted youths spend most of the time betting and when they are not betting, they suffer lingering psychological stress of the outcome of their bet or worry of what next bet to play.

This study also reveals that there is a relationship between the undergraduates' attitudes towards online gambling and their academic performances (their CGPA). The relationship coefficient of 0.691 is an above average figure and it shows that online gambling is a factor that could affect a student performance of the students that indulge in it. Early student studies discovered a link between problem gambling and students' general performance. Blaszczyński and Hunt (2011) study on 448 young adult college students revealed that gambling severity was correlated with negative affect on the college students' academic performance. In another study with 127 Internet gamblers Eklund (2012) identified that students undergo negative mood states after gambling online and negative mood states generally were the best predictors of psychological stress. Kam et al (2001) agreed that there's a relationship between online betting and academic performance of students but the study categorically specified that the relationship is not causal.

This study showed that there is a significant difference between the attitude of male and female students towards online gambling. This finding corroborates the finding of Wood and Williams (2009) that revealed that online gambling is more predominant among the male students in universities in Australia. Kam et al (2017) indicated that Men were significantly more vulnerable to gambling problems ($X^2(1) = 35.00, p < 0.01$) than women in a study conducted among Chinese students.

Conclusions

The result obtained from data gathered and analyzed in this study indicated that students spend less time doing activities related to their course. Students have positive attitude towards online gambling. Students lack proper time management since they spend a lot of time gambling online. Male students engage in online gambling compared to the female students. There was no significant difference between male and female students' attitude towards online gambling and there was no significant difference between the time spent on online gambling and students' academic performance. This imply that both male and female have positive attitude towards online gambling. More so, monetary gains motivate the students to gamble online and students spend less time online learning but spend more time on online gambling.

Recommendations

Based on the findings and conclusions of this study, the following recommendations were made:

1. university authority should monitor online gambling participation through blockage of website that promotes online gambling and also create balanced approach to the online gambling issue through media literacy competence, counseling, seminars and orientation;
2. it is important that government should be aware of the risks of online gambling and necessary bill pass by the Nigerian National Assembly. With regards to students, community educators should have the specific aims of increasing awareness that students are at a risk, and more generally they should inform individuals of the purpose and risks of online gambling free credit trials;
3. professional counsellors in the university should include online gambling education program into existing programs as well as other risk-taking behaviors, such as drinking and smoking; and
4. parents should also help to imbibe socially and morally acceptable behavior into students.

References

- Anderson, K. J. (2001). Internet addiction among college students: An exploratory study. *Journal of American College Health*, 50, 21-26.
- Alimi, A. E. (2018). Influence of Online Gambling on Academic Performance of Students in Community Secondary School, Aiyetoro-Gbede, Ijumu Local Government Area, Kogi State, Nigeria. *Town and Gown Community Magazine*, 1 (2), 9 – 11.
- Bande, S. (2006). Development of modern ICT and internet system. In Agagu A. A. (edition). *Information and communication technology and computer Applications*. Abuja: Panof Press.
- Binde, P. (2005). Gambling across cultures: mapping worldwide occurrence and learning from ethnographic comparison. *International Gambling Studies*.
- Blaszczynski, A., and Hunt, C. (2011). Online Sports Betting has Created New Generation of Problem Gamblers. Sydney, NSW: The University of Sydney.
- Bryce, J., & Rutter, J. (2003). Gender dynamics and the social and spatial organisation of computer gaming. In *Leisure studies* 22:1-15.
- Carnallatos S. (2018). Gaming and Gambling In 2018: Where Are We? 2018 Annual Conference of New York Council on Problem Gambling (NYCPG). New York
- Chen, S. Y., & Fu, Y. C. (2009). Internet use and academic achievement: Gender differences in early adolescence. *College Student Journal*, 44(176), 255-257.
- Choi, B., Huang, J., Jeffrey, A., & Baek, Y. .. (2013). *Development of a Scale for Fantasy State in Digital Games Computers in Human Behavior* 29(5).
- Corpus, J., McClintic-Gilbert, M., & Hayenga, A. (2009.). *Within-Year Changes in Children's Intrinsic and Extrinsic Motivational Orientations: Contextual Predictors and Academic Outcomes," Contemporary Educational psychology* (34).
- De-Leo, J. A., & Wulfert, E. (2013). *Problematic internet use and other risky behaviors in college students: An application of problem-behavior theory. Psychology of Addictive Behaviors*,.
- Durkee, T. K., & Mandelli, L. (2012). *Prevalence of pathological internet use among adolescents in Europe: Demographic and social factors*.
- Eklund, L. (2012). *The Sociality of Gaming : A mixed methods approach to understanding digital gaming as a social leisure activity (Ph.D. thesis)*. Stockholm: Stockholm University.
- Englander, F. T. (2010). Internet use among college students: Tool or toy? *Educational Review*. In F. Englander, R. A. Terregrossa, & Z. Wang, *Internet use among college students: Tool or toy? Educational Review* 62(1), 85–96.
- Engwall, D., Hunter, R., & Steinberg, M. (2004). Gambling and other risk behaviors on university campuses,. . *Journal of American College Health*, 52(6), 245-255.
- Ezenwoke A., Ogunwale O., Matiluko O., Igbekere E., Dare S. Ezenwoke O., Olayanju A. (2018). Academic performance data of undergraduate students' in 23 programmes from a private University in Nigeria. *Data in Brief*. Volume 20, 57-73
- Fatokun Victoria N. (2019). Effect of social media on undergraduate students' achievement and interest in chemistry in the Northcentral geo-political zone of Nigeria. *International Journal of Science and Technology Educational Research*. 10(2), 9-15. DOI: 10.5897/IJSTER2019.0453
- Griffiths, M. D., & Barnes, A. (2008). Internet gambling: An online empirical study among student gamblers. *International Journal of Mental Health & Addiction*, 6, 194-204.
- Hing N., Russell M. & Browne M. (2017). Risk Factors for Gambling Problems on Online Electronic Gaming Machines, Race Betting and Sports Betting. *Frontiers in Psychology*. 76(6), 1123-1141.
- Kam Sut Mei, Wong Kuen L. I., So Tong M., Un Cheong David, Chan Wa H. C. (2017). Gambling behavior among Macau college and university students. *Asian Journal of Gambling Issues and Public Health*. 7(2). <https://doi.org/10.1186/s40405-017-0022-7>
- Koross R. (2016). University Students Gambling: Examining the Effects of Betting on Kenyan University Students' Behavior. *International Journal of Liberal Arts and Social Science*. 4 :8, 57-66.

Alimi, A. E., Aderoju, M. A., & Falade, A. A.

- Lucier, K. (2013). *Guide to Time Management for Students Tips and Tricks on Everything You'll Need to Manage Your Time Wisely*. Retrieved from <http://collegelife.about.com/od/Time-Management/a/Guide>
- Macan, T., Shahani, C., Dipboye, R., & Phillips, A. (2013). *College Students' Time Management Correlations with Academic Performance and Stress*. American Psychological Association. Retrieved from <http://psycnet.apa.org/>
- Matthews, N., Farnsworth, B., & Griffiths, M. (2009). "A Pilot Study of Problem Gambling among Student Online Gamblers: Mood States as Predictors of Problematic Behavior". *CyberPsychology & Behavior*, 741-745.
- Montes Kevin S. and Weatherly Jeffrey N. (2017). Differences in the Gambling Behavior of Online and Non-Online Student Gamblers in a Controlled Laboratory Environment. *Journal of Gambling Studies*. 33(1), 85-97
- Nwosu, O., & Ogbomo, E. F. (2012). *ICT in Education: A Catalyst for Effective Use of Information .The official publication of the Pacific Northwest library Association PNLA Quarterly. : as a catalyst for effective*. Retrieved from [http:// www.ict in education](http://www.ictineducation)
- Oyebisi, A., Alao, D. & Popoola, G. (2012). *Prevalence And Determinants Of Gambling Behaviour Among Undergraduate Students (A Case Study OF Federal University of Oye-Ekiti)*. EBOH VIVIAN CHIMEZIE.
- Shaffer, H. D., LaBrie, R., Kidman, R., & LaPlante, D. (2005). The epidemiology of college alcohol and gambling policies. *Harm Reduction Journal*.
- Shaffer, H., Donato, A., LaBrie, R., Kidman, R., & LaPlante, D. (2005). The epidemiology of college alcohol and gambling policies. *Harm Reduction Journal*, (2), 1.
- Shaffer, H., Forman, D., Scanlon, K., & Smith, F. (2000). Awareness of gambling related problems, policies and educational programs among high school and college administrators. *Journal of Gambling Studies*, (16) , 1, 93.
- Smed, J., & Hakonen, H. (2003). *Towards a definition of a computer game*. University of Turku, Department of Information Technology., Finland.
- Stoerber, J., Harvey, M., Ward, J., & Childs, J. (2011). Passion, craving, and affect in online gaming: Predicting how gamers feel when playing and when prevented from playing. In *Personality and Individual Differences* (51) 991–995).
- Summerfield, M., & Loo, W. (2010). *Online Gaming: A Gamble or a Sure Bet?* London: KPMG International.
- Unsal, F., Ruzgar, N., & Ruzgar, B. (2008). *An Empirical Study of Internet Usage, Online Shopping, and Online Banking Behaviour of Turkish University Students*. The Berkeley Electronic Press.
- Walker, G., Courneya, K., & Deng, J. (2007). Ethnicity, gender, and the theory of planned behavior: The case of playing the lottery. *Journal of Leisure Research*, 38(2), 224-249.
- Williams, R. C. (2006). Does learning about the mathematics of gambling change gambling behavior? *Psychology of Addictive Behaviors*.
- Wood, R., & Williams, R. (2009). *Internet Gambling: Prevalence, Patterns, Problems, and Policy Options. Final Report Prepared for the Ontario Problem Gambling Research Centre*. Ontario, Canada.
- Wood, R., & Williams, R. (2009). *Internet gambling: Prevalence, patterns, problems, and policy options. Final report prepared for the Ontario Problem Gambling Research Centre*. Ontario Canada.