Undergraduates Self-Regulated Learning: the Place of Social Media Addiction and Learning Strategies

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Abstrak

Kehadiran dan kesalahan penggunaan media sosial ditambah kurangnya inisiatif untuk strategi pembelajaran yang dapat diterima adalah faktor-faktor penyebab buruknya capaian pembelajaran. Pembelajaran mandiri memang mampu meningkatkan capaian akademik, tetapi tidak banyak penelitian terkait dengan kecanduan media sosial, strategi pembelajaran, dan pembelajaran mandiri. Penelitian ini mengkaji peran kecanduan media sosial dan strategi belajar mandiri mahasiswa. Responden penelitian ini sebanyak tiga ratus lima puluh (350) dari empat (4) universitas di Nigeria, dan semuanya merespon kuesioner terstruktur yang berupa skala ukur terhadap variabal ketertarikan. Dengan menggunakan analisis varian dan independent T-test, penelitian ini menunjukkan bahwa strategi pembelajaran dan adiksi media sosial berpengaruh signifikan terhadap self-regulated learning, sedangkan gender tidak berpengaruh secara signifikan terhadap self-regulated learning. Oleh karena itu disimpulkan bahwa kecanduan media sosial dan strategi pembelajaran merupakan faktor penentu pembelajaran mandiri dan berdampak pada capaian pembelajaran mahasiswa.

Abstract

The emergence and wrong use of social media coupled with the lack of initiative for an acceptable learning strategy are factors for poor academic performance. Self-regulated learning improves academic performance, but there is a paucity of research on social media addiction, learning strategies and self-regulated learning. This study examined the role of social media addiction and learning strategy in undergraduates' self-regulated learning. Three hundred and fifty (350) participants conveniently sampled across four (4) universities in Nigeria responded to a structured questionnaire consisting of scales measuring variables of interest. Using Analysis of Variance and Independent T-test analyses, results showed that learning strategy and social media addiction have a significant influence on self-regulated learning while gender had no significant influence on self-regulated learning. It is therefore concluded that social media addiction and learning strategy are determinants of self-regulated learning, and impact the academic performance of undergraduate students.

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INTRODUCTION

Learning can be improved by social network tools (Relojo Howell, 2019). Social media has a lot of social network tools or sites that constantly impact both negatively and positively on students learning, more especially, students in the tertiary institutions and individuals can easily be addicted to these sites. Studies on social media addiction have found that Facebook is the most popular of all the sites (Young, Kuss, Griffiths, & Howard, 2017). Social media addiction has been known to cause a series of psychological as well as academic problems (Dogan, Norman, Alroba, Jiang, Nordin, & Adnan, 2019). Learning strategies refers to a variety of behaviours that include the ability to concentrate in class, organise jotted notes meaningfully, schedule time for studying, and intrinsic motivation. Various studies have reported a significant influence of learning strategies on academic performance (Akyol, Sungur, & Tekkaya, 2010; Yip, 2013; De Zoysa, Chandrakumara & Rudkin, 2014).

Self-regulated learning (SRL) is one of the important aspects of research (Panadero, 2017) and has been seen as one of the vital competencies for learning throughout life (Ifenthaler, 2012; Zheng, 2016). Studies have shown the positive role of self-regulated learning in greater academic performance and achievement (Chen & Huang, 2014) and even linked self-regulatory abilities to high achieving students (Isaacson & Fujita, 2012). Most of the studies conducted linking gender with self-regulated learning were done in sub-sections such as gender difference in metacognition, time management skill, and help-seeking. Also, most of the studies done on self-regulated learning were conducted to view its impact on academic performance, academic achievement or academic success (Broadbent & Poon, 2015; Namani & Oyibe, 2016) with no impact of other variables on self-regulated learning.

According to Gorhe (2019), web-based tools that facilitate the creation of ideas, interest and information and also allows people to share these ideas, interests and information is known as social media. Kietzmann, Hermkens, McCarthy, and Silvestre (2011) saw social media as a means "to create highly interactive platforms via which individuals and communities share, co-create, discuss, and modify user generated content" through mobile and web-based technologies. Clement (2020) posits that about 3.6 billion people worldwide use social media. There abound different social media sites or platforms and some of these sites can come in handy for undergraduates in assisting them to perform better in their studies. Dlamini (2017) submits that institutions and students can improve learning styles by adopting social network tool. These social network sites or tools include Facebook, Twitter, 2go, WhatsApp, Instagram, Snapchat, Google, Wikipedia, Linkedin, and Penterest. However, students only make use of these sites to socialize rather than study (Shana, 2012).

According to ul Haq and Chand (2012), most undergraduates do not utilise social media sites to learn but spend their time socialising. Their research was however focused on the Facebook social medium. They found out that 61% of their research participants agree to the fact that Facebook impacts negatively on their academic performance. Oye, Mahamat, and Rahim (2012) revealed that even when students agreed that social platforms can have a positive impact on academic growth, they would rather socialise than study with it. The social media's impact on students depends on its usage (Wang, Chen & Liang, 2011). Talaue, AlSaad, AlRushaidan, Al-Hugail and AlFahhad (2018) believe that social media networks can help students socialise, as well as discuss matters that relate to their studies. They concluded that social media has a dual impact on the performance of students and thus giving support to Kolan and Dzandza's (2018) study on social media use.

The skeletal structure of the cyber world is social media and if judiciously used, can be a very helpful tool for learning. However, most studies on social media addiction and academic performance have revealed that social media addiction impacts negatively on academic performance (Owusu-Acheaw & Larson, 2015; Mensah & Nizam, 2016). Conversely, Hamat, Embi and Hassan (2012) study found that social networking sites do not impact negatively on students' academic performance. They added that other factors like cognitive absorption, chatting for a long time and social media addiction might account for poor performance in academics. Most of their sample participants reported that social networking sites are a means of learning that helps them understand their studies. Joehanna, Del Rosario, Pangan, and Villadelrey (2019) suggested that the advantages that social media portents should be utilised to advance the academic performance of students.

In education, social media perform role such as connecting individuals with topic experts, provision of the students institution communication link, improves learning mana-

gement systems, assists in the research process, and helps learners to build social credibility (Dlamini, 2017). The emergence of social media has brought about rapid improvement in information and communication technology as it can broaden one's perspective and expand one's horizons (Dlamini, 2017), but it has been marked with some challenges that undermine its usefulness such as cyberbully and lack of privacy (Simplilearn, 2020), and social media addiction (Hamat, Embi & Hassan, 2012).

Social media addiction is one of the challenges of social media use. Despite the several benefits of the use of social media, most individuals end up being so attached to social media to the extent that they eventually become addicted. Social media addiction "is a behavioral addiction that is characterized as being overly concerned about social media, driven by an uncontrollable urge to log on to or use social media, and devoting so much time and effort to social media that it impairs other important life areas" (Hilliard, 2020) This has become a serious problem to the education setting as students spend more time in surfing the internet at the detriment of their studies. Simanjuntak (2018) found a negative relationship between internet addiction and self-regulated learning while Wang, Lee and Hua (2015) concluded that an individual addict-ed to social media will have deficient self-regulated learning.

Learning strategy is a means by which learners acquire knowledge (Nja, Umali, Asuquo & Orim, 2019). Abidin, Rezaee, Abdullahi, and Singh (2011) summarised the numerous definitions of learning style to be "a signal for individual differences". Previous experiences, emotional factors, environmental factors and cognitive factors determine the particular learning strategy that a student would adopt. Learning strategies improve learning (Alavi & Toozandehjani, 2017) and students' awareness and adoption of these strategies can enhance academic performance (Barman, Aziz, & Yusoff, 2014). Learning strategy has been shown to influence learners' behaviour since each learner preferred style of learning differs (Abidin et al., 2011). Donker, de Boer, Kostons, van Ewijk, and van der Werf (2014) did a meta-analysis study on the effectiveness of learning strategy instruction on academic performance and discovered that the motivational aspect task value and planning are the most effective strategies. An earlier study by Yip (2013) focused on the learning strategies of high school students in Hong Kong and their

relationships to academic performance, revealed that academic performance was predicted by some learning strategies.

De Zoysa et al. (2014) found a significant influence of learning strategies on academic performance using Management Accounting students of Australian University, Dalmolin, Mackeivicz, Pochapski, Pilatti, and Santos (2018) showed a positive relationship of learning styles and academic performance, and İlçin, Tomruk, Yeşilyaprak, Karadibak and Savci (2018) revealed higher academic performance among Turkish physiotherapy students due to the students learning style. Likewise, Nja et al. (2019) revealed a significant relationship between learning styles and academic performance of University of Calabar Science Education undergraduates in Nigeria.

Most studies on the gender difference in educational researches were conducted in areas of academic performance, achievement or success. Researchers have been concerned about gender difference in academic performance. Some of the studies have shown significant differences. For instance, Sparks Wallace (2007) revealed that females perform better than males academically; Nnamani and Oyibe (2016) reported that females performed better than males in social studies, Hdii and Fagroud (2018) showed that more females enrol in school and attain better grades than their male counterparts. In a study by Halpern (2000), female participate in advance mathematics and science classes and struggle to earn better grades like the males. On the other hand, Ali, Haider, Munir, Khan, and Ahmed (2013) found no gender difference in the factors contributing to Islamia University sub-campus students' academic performance. Goni, Yaganawali, Ali and Bularafa (2015) also found no gender difference in the students' academic performance among College of Education students in Borno State, Nigeria.

Another study by Adigun, Onihunwa, Irunokhai, Sada, and Adesina (2015) on gender influence on academic performance in secondary school computer studies, in New Bussa, Niger State, Nigeria showed that, despite recording higher mean scores by males, there was no gender difference in their academic performance compared to the females. Studies conducted on gender and self-regulated learning showed no gender difference (Yukselturk & Bulut, 2009), but some studies identified gender differences in self-regulated learning (Hargittai & Shafer,

2006; Bidjerano, 2005). Females were found to be better than males in the use of some aspects of self-regulated learning strategy (Bidjerano, 2005; Chyung, 2007), but males assessed themselves as having better skill than the females (Hargittai & Shafer, 2006).

This current study investigates the influence of social media addiction and learning strategy on self-regulated learning of university undergraduates. Given this, the following research hypotheses were tested:

1) Social media addiction will influence self-regulated learning. This hypothesis was derived from previous findings in the literature. Simanjuntak (2018) found a negative relationship between internet addiction and self-regulated learning and Wang, Lee and Hua (2015) who found that an individual addicted to social media will have deficient self-regulated learning.

2) Learning strategy will influence self-regulated learning. The previous findings of Alavi and Toozandehjani (2017) that learning strategies improve learning and Barman, Aziz, and Yusoff (2014) assertion that students' awareness and adoption of learning strategies can enhance academic performance led credence to this hypothesis.

3) Social media addiction and learning strategy will jointly predict self-regulated learning.

4) There will be a gender difference in self-regulated learning. The previous findings that females perform better than males in academics (Sparks-Wallace, 2007; Nnamani & Oyibe, 2016).

These hypotheses related to the focus and objectives of the research study which is to examine the influence of addiction to social media on self-regulated learning, find out if self-regulated learning will be influenced by learning strategy, know the independent and joint influence of social media addiction and learning strategy on self-regulated learning, and examine the gender difference in self-regulated learning.

METHOD

This research adopted the use of expost facto survey research design because none of the variables of the study was subjected to active ma-

nipulation; rather they were measured as they occurred. The independent variables are social media addiction and learning strategy while the dependent variable is self-regulated learning. The population and sample were drawn from four (4) universities in Ogun State, Nigeria, namely Tai Solarin University of Education, Ijebu-Ode; Covenant University, Ota; Bells University of Technology, Ota; and Federal University of Agriculture, Abeokuta, and the total number of participants conveniently sampled were three hundred and fifty (350). Data for the research study were collected between March and May 2019 while the analyses of data were done in June 2019.

Questionnaires with four different sections were used to gather information from the participants, and each of the sections measured the variables of the study. Section A comprises of the demographic characteristics of the participants, such as sex, age, name of the school, and religion. Section B measures social media addiction using Social Media Addiction scale - Student Form (SMA-SF) developed by Sachin (2018). The scale is a 5-point Likert format and consists of 29 items. It has four subscales, namely virtual tolerance, virtual communication, virtual problem, and virtual information. The highest point that can be scored from the scale is 145 while the lowest point is 29. The internal consistency coefficient using Cronbach's alpha was .93 for the whole scale and at values ranging from .81 to .86 for the sub scales. The test retest coefficient was .94 (Sachin, 2018). The pilot study for this present study showed a Cronbach alpha of .89 to ascertain its internal consistency.

Section C measures learning strategy using the Learning Strategy Assessment scale (LSA) for university students developed by Boruchovitch & Santos (2015). The scale is a 35-items Likert format with Cronbach coefficient alpha values for the total scale and sub-scale 1-3 at .87, .86, .71 and .65 respectively (Prieto & Muñiz, 2000). The pilot study for this present study showed a Cronbach alpha of .95 to ascertain its internal consistency. Section D measures self-regulated learning using the Motivated Strategies Learning Questionnaire Scale (MSLQ) developed by Pintrich & de Groot (1990). The MSLQ has a reliability coef-ficient of .957 (Pintrich, Smith, Garcia, & McKeachie, 1993). The pilot study for this present study showed a Cronbach alpha of .96 to ascertain its internal consistency.

Table 1 One-way ANOVA showing the influence of social media addiction on self-regulated learning

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	79532.921	2	1120.182	1.389	.033
Within Groups	219352.076	272	806.441		
Total	298884.997	343			

Table 2 One-way ANOVA showing the influence of learning strategy on self-regulated learning

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	208414.120	2	2511.013	9.569	.000
Within Groups	67177.441	256	262.412		
Total	275591.562	339			

Table 3 Multiple regression analysis of the independent and joint influence of social media addiction and learning strategy on self-regulated learning

Variables	β	T	R	R²	F
Social media addiction	-0.6	-1.56			
Learning strategy	.76*	21.29	.76	.58	233.30*
Dependent variable: Self-regulated learning					

*p < .001

Table 4 T-Test of gender and self-regulated learning

	Female		Male			
Variable	M	SD	M	SD	$t_{(325)}$	95%CI
Self- regulated learning	109.59	29.21	112.78	29.93	-.913	[-10.07, 3.69]

The participants were given the choice to voluntarily participate in the study and have the freedom to withdraw their participation from the study at will. They were also assured of their anonymity and confidentiality of their responses. Ethical clearance for the study was granted by the Department of Psychology Ethical Committee, Federal University, Oye Ekiti, Ekiti State Nigeria.

The data from the study were analysed using the Statistical Package for Social Sciences (SPSS). Descriptive statistic such as mean, range, standard deviation, frequency distribution, and percentages was used to analyse the demographic data collected. Analysis of Variance (ANOVA) was used to test for the independent influence of social media addiction and learning strategy on self-regulated learning, multiple regression analysis was used to determine the independent and joint contributions of the independent variables on the dependent variable, while gender difference in self-regulated learning was tested using the independent t-test.

RESULT AND DISCUSSION

The participants were made up of 227 (64.9%) female, 106 (30.3%) males while 17 (4.8%) did not indicate their gender. A total of 49 (14.0%) were in 100 level, 171 (48.9%) in 200 level, 67 (19.1%) in 300 level, 42 (12.0%) in 400 level, 8 (2.3%) in 500 level while 13 (3.7%) did not indicate their level. Religious affiliation showed 217 (62.0%) were Christian, 67 (19.1%) were Muslim, 5 (1.4%) were traditional worshippers, and 9 (2.6%) indicated other religion, and 52 (14.9%) did not indicate their religious affiliation. Educational in-stitutions showed that 106 (30.3%) were from Tai Solarin University of Education, Ijebu Ode, 78 (22.3%) from Covenant University, Ota, 70 (20.0%) from Bells University of Technology, Ota, and 96 (27.4%) from Federal University of Agriculture, Abeokuta.

The result from Table 1 shows that there is a significant influence of social media addiction

on self-regulated learning $F_{(2,272)}=1.389$, p<.05. This implies that social media addiction influences self-regulated learning of undergraduates. Consistent with previous studies of Dunbar, Proeve and Roberts (2017) that excessive use of the social media may prevent the development of self-regulation in learning, the current study showed that addiction to social media by undergraduates can affect their self-regulated learning. The current finding was corroborated by previous findings that social media addiction impacts negatively on academic performance (Owusu-Acheaw & Larson, 2015; Mensah & Nizam, 2016) and chatting for a long time and social media addiction might account for poor performance in academics (Hamat et al., 2012).

Table 2 revealed a significant influence of learning strategy on self-regulated learning. $F_{(2,256)}=9.569$, p<.01. This is an indication that the kind of learning strategy used influences the self-regulated learning of undergraduates. Learning strategy is geared towards improving knowledge and academic performance, but the strategy adopted by students could influence and have an impact on their self-regulated learning. This lends credence to a previous finding of Zimmerman (1995) that when students monitor their response and attribute outcomes to their learning strategies, their learning becomes self-regulated and thus influences the performance that is exhibited. The present study has also corroborated some previous findings that have shown the effectiveness of learning strategy on self-regulated learning (De Zoysa et al., 2014; Dalmolin, et al., 2018; İlçin et al., 2018; Nja et al., 2019).

Results from Table 3 shows that there is a joint influence of learning strategy and social media addiction on self-regulated learning $F_{(2, 337)}=233.30$, p<.001, R^2 =.58. However, only learning strategy [β= .76, p<.001] had an independent influence on self-regulated learning while social media addiction [β= -0.6, p=.12] did not. This result implies that the kind of learning strategy used by a student and also the addiction to social media influences self-regulated learning of undergraduates. The present finding is supported by the previous studies of Byrne, Flood, and Willis (2002) who pointed out the influence of learning strategy on academic performance which could be positive or negative or sometimes mixed. This implies that learning strategy influences the academic performance of students.

The above result shows that female students (M=109.59, SD=29.21) were not significantly different on self-regulated learning compared to male students (M=112.78, SD=29.93). The difference between the mean scores was not statistically significant, $t_{(325)}$= -.91, p=.36, 95% CI (-10.07, 3.69). This result implies that there is no significant influence of gender on self-regulated learning of undergraduates. This finding aligns with the previous finding of Yukselturk and Bulut (2009) that there is no gender difference in self-regulated learning variables. However, this finding negates the previous findings that found significant gender differences in self-regulated learning (Bidjerano, 2005; Hargittai & Shafer, 2006; Chyung, 2007). The plausible explanation of this finding is that both female and male gender can regulate their learning to wards academic excellence.

The findings of this study has shown that social media is a useful platform that could enhance academic performance if exerted appropriately but its excessive use can jeopardise the self-regulated learning of undergraduates which could have negative influence on academic performance. Addicted students may have concentration difficulty in reading because of the glue to social media. It is therefore important for undergraduates to reduce the rate at which they use social media platforms in schools. Students should also adopt learning strategy that could improve and have positive impact on their academic performance because learning strategy influence self-regulated learning as shown in this study.

CONCLUSION

The continued increase in the excessive use of social media and the poor learning strategies used by students may hamper the motivation and zeal for self-regulated learning which in turn reduced academic performance of undergraduates. In light of the findings obtained in this study, it is concluded that social media addiction and learning strategy determined self-regulated learning as well as impacts on the academic performance of university undergraduate students. Furthermore, male and female gender does not have a significant difference in self-regulated learning.

There is the need to educate students on the dangers of social media addiction and the importance of adopting the best learning strate-

gies that will endear them toward self-regulated learning which can enhance their academic performance and success. Additionally, every individual is unique and different, and as such may favor varying learning strategies, thus, students should be made to realize that the best approach to academic success through self-regulated learning is the adoption of learning strategy that personally suits them. Students should be educated on how to use the social media positively and efficiently to increase their academic performance.

ACKNOWLEDGEMENT

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