EFFECTS OF SOCIAL MEDIA - WhatsApp ON THE ACADEMIC PERFORMANCE OF STUDENTS IN THE FEDERAL UNIVERSITY DUTSE, DUTSE, NIGERIA

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Abstract
The social media is an indispensable tool in the communication and learning process. The fact that they facilitate knowledge acquisition qualifies them as learning scaffolds. Learning scaffold as established by self-regulated theory are platforms that facilitate learning. Therefore, considering WhatsApp as a scaffold, this study examined the effect of social media-communications on academic performance of students, using Federal University Dutse, Dutse, Nigeria as a case study. The research was cross-sectional and engaged multi-stage sampling. First, quota sampling was used to sample fifty students’ quota per faculty. thereafter 250 respondents were randomly selected from five faculties in the University. Study results revealed that WhatsApp was effective, easy to use and satisfactory for communication. The “Forethought phase” of self-regulated learning was identified as a key determinant of self-regulated learning on WhatsApp groups. The Implication is that WhatsApp platforms can be used to facilitate learning activities provided students are regulated, guided and rightly motivated.

Keywords: self-regulated learning, social media, academic communication, learning scaffold, Information Communication Technologies

Introduction
Social media is an indispensable tool among people that has become a part of every day’s activities and most daily activities are facilitated by their utilization. It is anchored by the ubiquitous Information Communication Technologies (ICTs) which are arguably adjudged to be the most utilized technologies ever known to humanity (Maqableh et al., 2015). ICTs are especially very popular among youth and students due to their facilitative ability and thus they are used to interact, communicate and coordinate learning and other social activities as well. The use of social media to express and broadcast emotions, achievements, disposition and or challenges has also become a regular action among people in recent times.

The Face book and WhatsApp media have been identified as the most utilized social media world over. Harvard University revealed that over 90 percent college students have Face book accounts as at 2011 (Harvard Polls, 2012). It is also reported that the average University student in Nigerian access one to two social media daily (Orifah et al., 2017). Although the entry of other mobile based social media has surfaced and has taken a great part of the users over time; the web-based chat platforms like the Black Berry Messenger and especially WhatsApp have grown in popularity among different age group people overtime. In Nigeria social media is heavily utilized by all age groups but the youth are generally considered to be
among the habitual users of these platforms (Muktar et al., 2015). Other heavy user groups identified in the country were the mainstream media, the political class, the extension/advisory services providers, and marketers among others. Figure 1 shows the type of social media used in Nigeria indicating that the Facebook and WhatsApp were the most penetrated ones, that they are the most utilized social media in the country.

![Figure 1: Social Network Penetration as at third quarter of 2017](image)

Source: Statista (2017)

The advent of the social media including the WhatsApp, Facebook, LinkedIn, Twitter, Blogs, and Instagram have greatly revolutionized how communication is done and is seen to literally shortened all distances and difficulties in passing out ideas and information in the world today (Öktem et al., 2014; Muktar et al., 2018). As a result, social media as an ICT have been happily embraced and used in a number of human activities, virtually there is no sector in the world that has not relied on the services of ICTs. In this vein, the educational sector has so much utilized the ICTs in learning and teaching and in recent times the social media is seen to be heavily used by the students and lecturers as well, to aid teaching and learning and even facilitate collaboration for educational activities (Asemah et al., 2013; Lau, 2017). The use of technology is seen to be favoured by students as it helps them accomplish several social goals of networking, self-worth development, self-confidence and general self-development (Bragdon, 2016).

Social media has become an important tool of communication in the world, it grows from what started as a social networking tool mainly among youths, to capturing the rapt attention of the elderly as well. The wide acceptance of social media and its heavy use by people has earned it a steady and relevant position in the world of communication. People use social media for social interactions. Many of social media available offer choices to people regarding which media to use and for what purposes. The social media has grown in utility from a mere social networking instruments to being a business platform and even for educational use among youths (Lau, 2017). This is evident in the way platforms like the WhatsApp are used to form groups of common interests. These platform have different level of acceptance and relevance in the communication sphere. For instance, since the year 2015, when the Facebook Chief Executive Officer Mark Zuckerberg celebrated Facebook’s achievement of attracting more than 1.5 billion users (Michikyan et al. 2015; Kaya & Bicen, 2016), the users have increased to over 2 billion as at 2017 and the number keeps increasing. Figure 2 shows the estimated number of people using social media in the world as of the year 2021.
Popular social media platforms and their role in the University

The social media is used for many reasons in the University settings. It has been noted to have played significant contribution in every aspect of the institution’s lifestyles. It is reported to have contributed to the conduct of academic activities, the facilitation of social life and promotion of deviant behaviours. It can then be rightly said that the social media is in every node of the University life. Due to the overwhelming acceptance and use of social media among students, it is now seen to be a medium utilized by most academics to communicate with students for supervision and instructions (Maqableh et al., 2015). It is also been used among students to facilitate online discussion (Al-Rahmi & Othman, 2016), more of a simulation of the real life classroom. In this regard the role it played can only be imagined but not fully determined. This is because the manner and way it is being put to use is subject to the context and goal of the users. For instance, it is reported that Facebook is used by students to showcase their college lifestyle including uploads of feelings, moods, photos and even live videos. The expression of experiences and activities with friends has become an important aspect of the college lifestyle in the United Kingdom (Walsham, 2017). This means that the use of social media can be made to facilitate the learning process of educational pursuits, more flexible and pleasant. The possibility of language development is also there, where users may strengthen their mastery of the language used. For instance, the English language. It will therefore impact on the writing skill and the aural communication of the user eventually.

In another perspective it is viewed that Facebook uploads and shares among course mate can influence their academic performance (Ainin et al., 2015). In this instance the urge to showcase academic achievement to friends and families is regarded as a good motivation among students. Previously, studies have been conducted on the self-regulation abilities of students on an online study (Donker et al., 2014). Although this was for an intended academic learning process, the same can be extended to apply to a non-formal unstructured learning that happens within the WhatsApp group among students. This will make WhatsApp group participation more beneficial and will further lead to understanding the factors that will make it to be more beneficial thereby making students to use it in a productive way.

Social media has been well praised by researchers for its contribution to the socio-economic development of people; in particular it is seen as a tool that has contributed to the recruitment of youths in a lot of socio-developmental activities like agri-preneurship, agriculture, marketing, and academics generally. (Lachapelle, 2011; Meng et al., 2014; Maqableh et al., 2015; Muktar, et al., 2015). Although the positive
vibes of social media on academic pursuit was promoted by many recent literatures (Hoque et al., 2012; Kyakulumbye, 2013), a rather opposing position was also discovered involving direct negative effects of social media on wellbeing and even the psychological wellbeing of people in general (Samaha & Hawi, 2016; Hawi & Samaha, 2017). Overall, there is an evident effect of the social media on students and young people in general. However, there exist little or no researches that looks at the effect of specific social media like the WhatsApp on the academic pursuit of students in Nigeria, their particular effect on the academic performance or otherwise. It is therefore pertinent to ascertain the effect of social media platforms like WhatsApp on student’s academic activities. This study therefore determined the perception levels of students about WhatsApp as well as the actual effect of social media on their academic performance.

Methodology

The Study area was the Federal University Dutse, Dutse, Nigeria. The town of Dutse is located in the northern part of Nigeria within Latitudes 11° 45' 22.25" North and Longitudes 9° 20' 20.26" E. The town is estimated to have a population of about 153,000 inhabitants. The ethnic group are predominantly the Hausa and Fulani with Kanuri extract in the eastern part (Muktar et al., 2016). The study was quantitative in nature and the data sourced via the use of a structured questionnaire. The research was a cross-sectional one, in order to achieve the stated objectives. A quota random sampling was adopted to select 50 students each from five faculties in the institution. Theses faculties were Agriculture, Arts, Science, Management Sciences and Medicine. In all, 250 students were randomly drawn from a population of 3200 undergraduate students of the University. Descriptive and inferential statistics were used to analyse the data gathered. The inferential statistics was the multiple linear regression.

Model Specification
The study’s regression model is stated as:

\[ Y = b_0 + b_1X_1 + b_2X_2 + \ldots + b_nX_n + e_i \]

Y = Academic Performance
\( X_1 \) = Perceived ease of use
\( X_2 \) = WhatsApp Use
\( X_3 \) = WhatsApp environmental Influence
\( X_4 \) = Forethought
\( X_5 \) = Self-reflection
\( e_i \) = error term

Results and Discussion
Perceived Usefulness and Ease of Using Whatsapp

Table 1 reveals the level of student’s agreement on corresponding statements on the usefulness of WhatsApp for their academic activities. The result reveals that for the statement ‘Using WhatsApp enables me as a student to get relevant academic information’, the level of strongly agree and agree were 30.4% and 37.9% respectively implying a high perception level on the use of WhatsApp for sourcing academic information. The statement ‘Using WhatsApp allows me follow up on academic issues and tasks’ also had a high level of perception as 50.6% of the students agreed with the statement. This also demonstrates that the use of WhatsApp by the students allowed them to follow up on academic issues and solve them accordingly. ‘Using WhatsApp is useful in the rapid retrieval of information and discussion with peers’ statement is strongly agreed and agreed by 35.2% and 43.9% of the students respectively. This presents a high level of perception to the
fact that the students viewed the use of WhatsApp as a means of group discussions that saves time and effort than the conventional physical meetings. For the statement ‘Using WhatsApp enables me get all information I need and require immediately’ the level of strongly agree and agree was 51.0 % and 34.8 % respectively, which shows that the students considered WhatsApp as a source of getting timely vital academic information. The relative high students perception of WhatsApp on the academic use however negates the findings of Apuke (2013) who reported that students in Taraba State University perceived that social media like WhatsApp have negative effects on academic performance, whereby students engaged in social chatting rather than academic pursuits. Another research conducted in Akwa Ibom State of Nigeria asserts that the use of WhatsApp do have positive effects on students’ performance especially when used in a guided and instructional manner (Etim et al., 2012). A research conducted in Austria presented a varying stance, emphasising the positive effects of Facebook on students’ academic performance (Irwin et al., 2012).

**Perceived Ease of Using WhatsApp**

Figure 3 presents the perception of the student on the ease of using WhatsApp for academic activities. For the statement ‘It is easy to use WhatsApp for both academic and social reasons’, 22.5% and 46.2% of the respondent strongly agreed and agreed respectively with the statement. For the statement ‘I will find it difficult if I did not use WhatsApp in my academic study’, 37.5% and 42.3% of the students strongly agreed and agreed respectively with the statement. This shows a high level of perception on the belief that the use of WhatsApp has simplified their academic activities. For the statement ‘I find my academic pursuance more flexible and interactive with WhatsApp’ 34.8 % of the respondents agreed with the statement. This is an indication of high perception that academic discussions and interaction are easy via the use of WhatsApp. About 32.0 % of the students agreed with the statement ‘It would be easy for me to develop more communication skills using WhatsApp’. The students perceived that the use of WhatsApp has a positive effect on their communication skills. These findings were in contrast to the result of a research conducted in Ghana which revealed that the use of WhatsApp is perceived to sluggishness among students and thus had a negative effect on their spellings and grammatical construction of sentences (Yeboah & Ewur, 2014). Another research in Bangladesh also presented a negative influence of the WhatsApp use by students (Sarker, 2015).

![Figure 3: Student's Perceived ease of using WhatsApp for academic performance](image-url)
Student’s self-evaluation of using WhatsApp for academic activities

Figure 4 shows the students self-evaluation ratings in using WhatsApp for academic communications. For the statement ‘I communicate with my classmates to find out what I am learning that is different from what they are learning’ about 48.0 % of the students agreed to the statement while less than 3% strongly disagreed. This is indicative that students evaluated their activities in comparison to that of their peers. Regarding the statement “I communicate with my classmates to find out how I am doing in my academics in comparison to them”, about 26% of the students strongly agreed while 47% of them agreed. Similarly, on the “I summarize my learning in WhatsApp and overall examine my understanding of what I have learned” statement, 37% strongly agreed and 40% agreed implying a high level of agreement to the statement. Similar research conducted in Malaysia reveals that the use of social media were generally of positive effects on students academic performance (Al-Rahmi & Othman, 2016). In another study, it was revealed rather than the use of social media to stimulate academic performance, the nature of academic performance is what determines the need for the use of social media platforms like Facebook, the study further posits that the achievement of high grades makes the students to use and share their success stories on line through social media, this is seen to motivate others to become motivated academically (Michikyan et al, 2015).

Table 2 shows the multiple regression conducted to test if the academic performance is predicted by the predictor variables as conceptualized in the study. The multiple coefficients of determination - R² show about 18% of the variation in the dependent variable is explained by the predictors in the model. The results of the regression indicated that the estimated equation that predicts the academic performance is:

\[ Y = 2.98 + 0.024X_1 + 0.157X_2 + 0.190X_3 + 0.230X_4 + 0.126X_5 \]

\[ \text{Figure 4: Student’s self-evaluation of WhatsApp use for academic activities} \]

Where Y is the academic performance level, \( X_1 \) is the perceived ease of WhatsApp, \( X_2 \) is WhatsApp Use, \( X_3 \), is the WhatsApp environmental influence, \( X_4 \) is the Fore taught and \( X_5 \) is the self-reflection variables.

The result revealed that the most important contributor factor in the equation is the fore taught phase. These findings revealed that the fore taught phase in which the goals and strategies are formed and deployed is a key determinant of the self-regulated learning that can occur in the WhatsApp groups among students. This findings corroborate the findings of Dörrenbächer & Perels, (2016) who reported a strong correlation of conscientiousness to academic achievement among students of self-regulated learning.
Also the result of a comparative research between groups of students shows that self-regulated learning do have significant relationship with metacognitive thinking (Ayşe & Ali, 2016). Furthermore the promoters of self-regulated learning have asserted the relevance of the fore taught phase in the learning process and have emphasized that there is need for good motivation and a proactive spirit to act for any identified goal (Zimmerman, 1989, 2010).

Conclusion
Social media is considered as a learning scaffold in the self-regulated model approach and thus research conducted in this regard analysed data and it was revealed that there is a high level of perception of social media (WhatsApp) as being easy to use, effective on improving academic performance and also satisfactorily useful by students. The multiple linear regressions used to determine the effect of the predictor variables on the dependent variable (academic performance). The result shows a good fit of the proposed model as indicated by F value and the r-square shows an explained variation in the DV by almost 18%. The result showed the most important contributor in the model to be the forethought phase, in which the goals are formed and strategies used in the WhatsApp group self-regulated learning. The findings of this research can help in the formulation of policies regarding the use of WhatsApp application among students, it can also aid in shaping the mindset of the students to develop goals and strategies so as to benefit from the use of WhatsApp. Since the use of WhatsApp is common among students and even lecturers in the university. The use of WhatsApp can be regarded as a class that can foster learning of and other academic endeavours. In conclusion it is recommended that the WhatsApp can be purposively used as a learning group towards improvement of academic performance provided there is forethought conception of the group and guidance of the activities.

References


Lachapelle, P. (2011) ‘the use of social networking in Research Community Development. CD Pratice pp1-8


### Table 1: Perceived Usefulness of using WhatsApp for academic activities among FUD students

<table>
<thead>
<tr>
<th>Perceived Usefulness of WhatsApp</th>
<th>SD (%)</th>
<th>DA (%)</th>
<th>NU (%)</th>
<th>AG (%)</th>
<th>SA (%)</th>
<th>Mean</th>
<th>St. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using WhatsApp enables me as a student to get relevant academic information</td>
<td>4.3</td>
<td>10.3</td>
<td>17</td>
<td>37.9</td>
<td>30.4</td>
<td>3.8</td>
<td>1.114</td>
</tr>
<tr>
<td>Using WhatsApp allows me to follow up on academic issues and tasks</td>
<td>3.2</td>
<td>11.1</td>
<td>32.0</td>
<td>50.5</td>
<td>3.2</td>
<td>4.3</td>
<td>0.797</td>
</tr>
<tr>
<td>Using WhatsApp is useful in the rapid retrieval of information and discussion with peers</td>
<td>0.4</td>
<td>3.5</td>
<td>17</td>
<td>43.9</td>
<td>35.2</td>
<td>4.1</td>
<td>0.832</td>
</tr>
<tr>
<td>Using WhatsApp saves me time and effort and don’t have to meet physically for group academic activities</td>
<td>26.4</td>
<td>19.4</td>
<td>36</td>
<td>14.6</td>
<td>3.6</td>
<td>2.5</td>
<td>1.136</td>
</tr>
<tr>
<td>Using WhatsApp enables me get all information I need and require immediately</td>
<td>1.2</td>
<td>2</td>
<td>11.0</td>
<td>34.8</td>
<td>51</td>
<td>4.3</td>
<td>0.839</td>
</tr>
</tbody>
</table>

**Key:** SD=Strongly Disagree, DA=Disagree, NU=Neutral, AG=Agree and SA=Strongly Agree

Source: Field Survey

### Table 2: Multiple linear regression between academic performance and predictor variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE B</th>
<th>B</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Ease of Use of WhatsApp</td>
<td>.05</td>
<td>.13</td>
<td>.024</td>
<td>.294</td>
<td>.000</td>
</tr>
<tr>
<td>WhatsApp Use</td>
<td>.055</td>
<td>.21</td>
<td>.157</td>
<td>2.592</td>
<td>.694</td>
</tr>
<tr>
<td>Environmental Influence (WhatsApp)</td>
<td>.218</td>
<td>.71</td>
<td>.190</td>
<td>3.059</td>
<td>.010</td>
</tr>
<tr>
<td>Forethought phase</td>
<td>.203</td>
<td>.059</td>
<td>.230</td>
<td>3.439</td>
<td>.01</td>
</tr>
<tr>
<td>Self-Reflection</td>
<td>.46</td>
<td>.080</td>
<td>.126</td>
<td>1.838</td>
<td>.067</td>
</tr>
</tbody>
</table>

Durbin Watson (1.715), $R^2 = .179$, Adjusted $R^2 = .160$ and $F$ Statistics= 9.865