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Application of Self-Regulated Learning Theory in Assessing Effect of ICT Mediated Academic Communication amongst Federal University Dutse Undergraduate Students

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ABSTRACT
This research analysed the use of social media as a learning scaffold and relate the cyclic self-regulatory phases of social cognitive theory as it applies to social media usage and its influence in facilitating academic communication and ultimate academic achievement among undergraduate students of the Federal University Dutse. The result revealed that the most utilized social media among the students were whatsapp as first for academic related communication and Facebook as second. Analysis of the construct of cyclic phase of SRL showed strong correlation among the SRL phases thereby revealing a strong relationship between the constructs. This meant that if the students have developed learning strategies in the forethought phase they will seamlessly flow through performance and self-evaluation phases, thereby achieving their learning objectives and ultimately impacting on their overall academic performance. Implication is that if the students are made conscious of social medias' contributions potentials to their academics, they would effectively utilise it for learning alongside their social interaction. A close guidance, mentoring and monitoring are thus recommended by lecturers and or appointed active motivated students to steer activities within social media especially the classes whatsapp groups.
Key words: Social media, WhatsApp, Self-regulatory learning, academic communication

INTRODUCTION

Among the most celebrated and arguably most utilized technological inventions in the world today are the Information and Communication Technologies (ICTs), thus described as most regular,

ubiquitous and generous devices or technologies being used daily by people (Maqableh et al., 2015). The ICTs are important tools that are utilized in almost every aspect of today's life activity with intensive application in all human important endeavours like in educational, agricultural, health and engineering sector etc. Their benevolence has made information dissemination and other metacognitive processes richer, more efficient, faster and very effective. This therefore has made easier the spread of ideas, information and developmental proceeds to remotest of settlements including farming communities of developing nations. Equally, ICTs revolution has embedded the idea of self-regulated learning in education and socio-economic pursuit to the fore in recent times. Nowadays, massive online lectures and online advisory services are very popular within populations. Highly technical service delivery like agricultural extension and advisory services are being extended to farmers through ICTs with efficiency and in real time (Siraj et al., 2012), students are Google's away to vast repositories of knowledge around the world for academic excellence. What is needed is the right motivation and zeal stimulation to self-regulate and learn from this pool of information. As such researchers are ever more getting interested in studying the process of online learning which is seen by social cognitive theorist as a form of self-regulated learning capable of facilitating learning process towards academic achievements (Garcia, Falkner, & Vivian, 2018; Zimmerman, 1989, 2010). In contrast to some popular social commentary within Nigeria and beyond with regard to the negative effect of social media, in some climes ICTs platforms are viewed positively and celebrated as capable of facilitating self-regulated learning in especially higher education pursuit (Sedigheh, Rashid, & Reza, 2012). This has thrusted a challenge to investigate the effect of the use of such platforms like the social media in contributing to academic performance of students in Nigeria.

Generally, proponent of self-regulated learning view students as motivationally, meta-cognitively and behaviourally active in pursuit of knowledge which is mostly linked to some prescribed personal gains like academic achievement, social esteem or even post study employment etc. (Zimmerman, 1989, 2010). As such this study viewed the ICTs and social media as learning scaffold and the students as motivated students, self-efficacious and thus capable of self-regulated learning. It therefore seeks to understand the relationship of the self-regulated academic communication skills and the academic performance of students in the Federal University, Dutse. Thus, the objective of the study is to;

i. Determine the socio-economic characteristics of the students in FUD
ii. To determine and classify the most utilized social media among students of the university,
iii. Determine the relationship of the dimension of self-regulatory learning strategies as it applies to communication and academic achievements among students

METHODOLOGY

Research Design, Data collection and analytical approach

This study is quantitative in nature and data were sourced from questionnaire. Inclusion criteria of respondents were for every male and female undergraduate student to be included while all post graduate students were excluded from the study. Data were elicited from the students within the university and the Statistical Package for Social Science (SPSS) was used in the analysis of the collected data. The use of descriptive and inferential statistics was both made to analyse the objectives of the study.

The Study Area

The Study area is the Federal University Dutse, the university was established in the year 2011 and it is located in the Jigawa State capital city of Dutse. The population of the study is the undergraduate students of the Federal University which is put at 3,200. A sample size of 270 students was drawn from the population. The sampling method used was the simple random sampling method, in which each respondent had an equal right to be selected provided they satisfied the inclusion criteria. Therefore, students were approached after being identified as a regular undergraduate student of the university. Upon return the data cleaning process expunge outliers, wrongly filled questionnaire and eventually 253 questionnaire was identified as clean to be used in the study.

RESULTS AND DISCUSSIONS

The result in Table 1 presents the socio-demographics of the students surveyed, the highest percentage of age category were between the ages of 21 and 26 years of age which is at about 45.8 % of the students surveyed, this group is followed by the age group of 15-20 years (28.9%), this shows a young and agile population that are popular with use of social media as adjudged to be young between the age of 16 and 25 years (Asemah, Okpanachi, & Edegoh, 2013; Hawi & Samaha, 2017; S.Z, Omar, Bolong, & Osman, 2011). The gender of the students revealed a population of 55.3% Male and 44.7% as female. The ethnicity of the respondents showed that the Hausa/Fulani ethnic group formed greater percentage of the surveyed students, (62.1 %). This was expected due to the location of the University. This finding is at par with the finding of Muktar et al., (2016). The second most represented ethnic group are the other tribes which represents about 21.3 % of the total surveyed population. Majority of the students were single (76.3 %) another 15.8% are married while 7.9 % are either divorced or widowed.

Table 1: Socio-demographics features of the Students

Age categories	Frequency	Percent
15-20	73	28.9
21-26	116	45.8
27-32	48	19.0
33-39	16	6.3
Gender		
Male	140	55.3
Female	113	44.7
Ethnicity of respondents		
Hausa/Fulani	157	62.1
Yoruba	26	10.3
Igbo	16	6.3
(Nupe, Kanuri, Gwari)	54	21.3
Marital Status		
Single	193	76.3
Married	40	15.8
Others (divorced, Widowed)	20	7.9

Source:

Type of Social Media Used by Students

The table 2 presents the types of social media being used by the students in the Federal University Dutse, where the Whatsapp, Facebook, Instagram and others like Linkedin, twitter were reported to be used by the students. The multiple responses revealed that, Whatsapp was mostly used by the students (31.5 %), followed by Facebook (31.0%), Instagram by 19.5% and others which included twitter, Linkedin being represented by 18.0%. Also, the features that allow for voice and video calls have popularized their uses among students who usually are not financially so rich. A similar research carried out in Kogi State of Nigeria also found out that the student's do prefer Whatsapp and Facebook in comparison to other form of social media (Apuke, 2013).

Table 2: Type of Social Media Used by the Students

Type of Social Media Used	Number	Percentage*
Whatsapp	191	31.5%
Facebook	188	31.0%
Instagram	118	19.5%
Others (twitter, LinkedIn)	109	18.0%

Source: *Multiple response calculated

A Pearson correlation analysis was performed to test the relationship between the variables in the self-regulated model. The variables of forethought phase (M= 3.72, S. D. =.653), Self-reflection (M=4.073, S.D. = .591) and the performance phase (M= 3.41, S.D. = .464) were correlated to see their relationship. The preliminary tests performed ensures all assumptions of normality are ensured. Since there were three (3) bivariate pairs, the Bonferroni adjusted alpha of 0.016 (0.05/3) was used to test null Hypothesis of the bivariate correlations. For an alpha level of .0016, the results of the correlation showed that there is a significant strong positive relationship between foretaught phase and self-reflection, r (233) = .561, p < .0016 (p = 0.0001). Between foretaught and performance r (233) = .448, p<0.016 (p=.0001) there is marked or moderate strong positive relationship, while there is positive marked relationship between forethought and self-reflection r (233) = .459 p<0.016 (p=.0001).

This result means that when the students have a prior knowledge of what they want and therefore develop some strategies in the forethought phase before the participation in the class Whatsapp group academic communication, they will there will be able to within the performance phase self-evaluate and judge their achievement in the learning process and hence will be able to know if they have achieved their goals or otherwise in the self-observation phase. This kind of result is gotten in a study in Kingdom of Saudi Arabia where it was found out that the use of social media with a set goal for learning the holy Quran, has two way effect on the academic performance of the students which are direct and indirect in nature (Al-Rahmi & Zeki, 2017). Also, the social media is reported to have a strong interrelation with the Zimmermans' model as used in this study, it was asserted that self-oriented framework of social media use presented a good support for the self-regulated learning in the creation of PLEs (Dabbagh & Kitsantas, 2012).

Table 3: Correlation results between self-regulated learning variables

Measure	1	2	3
Forethought Phase	-	.561**	.448**
Self-reflection Phase		-	.459**
Performance phase			-

** P< 0.01

CONCLUSION AND RECOMMENDATIONS

It is concluded, based on findings of the research that the most utilized ICTs platform among students of the university is the Social Media platforms of Whatsapp and Facebook, these are both for communication related to academic and social reasons. These social medias are regarded as very useful and helpful by the undergraduate students in that they ensure their connectivity and access to vital information. Perusal of the interaction within the self-regulated Learning cyclic phases has revealed the Whatsapp application as learning scaffolds that are very useful, convenient and facilitating academic communication and learning as well as social development. Correlation result showed good relationship among the self-regulated dimensions as it applies to Whatsapp use for academic exercise. This revealed the Whatsapp as a communication scaffold that can inspire and facilitate Self-regulatory learning provided the students are guided in the class groups they belong to. It is thus recommended that lecturers, instructors and or identified highly motivated and active students be made to steer events and communication within the groups. This finding can inform policies at learning institutions, extension advisory systems and other platforms of learning.

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