

Original research article

Knowledge, Perception, Utilisation and Attitude Towards Social Media-Based Learning as Predictors of Students' Academic Achievement in Geography

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Abstract: This study examined the predictive power of knowledge, perception, utilisation, and attitude toward social media-based learning on students' academic achievement in geography. Adopting a correlational research type and population proportion to size sampling technique, 975 respondents were selected from thirty-nine schools. Assessment of Social Media Knowledge (KR20 = 0.73), Geography Achievement Test (KR20 = 0.82), Social Media Perception ($\alpha = 0.86$), Perceived Social Media Utilisation ($\alpha = 0.72$), and Social Media Attitude Scales ($\alpha = 0.83$) were used to collect and analysed by descriptive statistics and multiple regression. Fifty percent (50%) of the respondents use social media-based learning for academic purposes. Positive linear relationship exists between the predictor variables and the criterion variable. The four predictors accounted for 9.9% of the student's achievement in Geography. Knowledge of social media $\beta = .266$; $t(617) = 6.936$ was most influential, followed by attitude ($\beta = .157$; $t(617) = 3.031$) in predicting students' achievement in Geography, while perception and utilisation were not statistically significant at 0.05 significant level. Conclusively, students are encouraged to use social media for academic purposes in order to excel in geography and, perhaps, in other subjects.

Keywords: knowledge, perception, utilisation, attitude, social media-based learning

1. Introduction

Geography is considered one of the subjects in the natural and social sciences and has always attracted fewer students than other subjects in schools. This can be demonstrated by two groups of students with a secondary school education. According to Okwilagwe (2002), geography is seen as a difficult subject from secondary school students to university and adults in higher education. In developing countries, as can be understood from the study of Neathery (1991), it has been observed that the natural and social sciences, especially geography, have never fully achieved their goals; Boylan (1996); Dick (1997); Rivard and Straw (2000); Mattern and Schau (2002), it is a method that punishes students for low academic performance and ensures that students perform well in lessons. Researchers in the region also attributed this change to poor student performance, which was linked to many factors, most notably teacher qualifications, academic year (Okwilagwe, 2002), students. number of talents, gender and class (Falaye, 2006), lack of manpower (Adinna, 1988; 1988; Yalokwu, 1990), lack of teaching opportunities in and outside the classroom for geography courses (Yalokun, 1990).

Over the years, the way geography is taught to students has changed from a lecture-based approach to an innovative and participatory approach that has recently included the use of information technology. According to Okwilagwe (2011), these include: simulations, roleplaying, discussions, inquiries, projects, and exploration strategies: practical and nonvisual. While exploratory teaching strategies involve the teacher directly teaching and supervising students, nonexploratory teaching allows students to freely choose research, where the teacher is the facilitator and facilitator. Simulation as a teaching strategy in geography lessons is a way of presenting ideas, problems, problems, and realities of past and present economic

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life to students, it is copied and effective in conveying geographical information (Okwilagwe, 2011). These strategies improve students' learning and performance in the field and other subjects as they facilitate data collection.

The list of other relevant strategies goes on and on, but despite the many strategies teachers can use, academic performance in the field does not seem to improve significantly (WAEC, 2013). The potential impact of using existing and versatile technology as a way to teach the field to improve student learning over time. Shortly after the turn of the millennium, new ways of changing the way users interact with websites began to emerge. In 2004, the term "Web 2.0" became a new term for the Internet and became popular among websites that allow users to interact with each other as contributors to website content. These new features, which facilitate user participation, collaboration and interactive information sharing, differ from traditional websites that restrict the display of information (McLoughlin & Lee, 2007). Web 2.0 is now used by many social media sites that rely heavily on user engagement to create, manage and share content. The new information society has enriched classroom learning, accelerated by the globalization of business, communication and computer technology. New social information technologies in these software systems provide support for intelligent collaboration.

In particular, blogs, Wikipedia, and other social media sites are about learning and are useful tools for building knowledge, skills, and relationships (Shirky, 2003). Newell (2009) argues that more and more information can be obtained from social media studies. Social media is an umbrella term for mobile and web technologies that "create interactive networks where individuals and communities share, collaborate, chat and update online chat content" (Kietzmann & Kristopher, 2011). The term social media can also be defined as a platform that promotes social interaction between online groups (Shirky, 2003). In Dron (2007)'s view, this means that social media as a form of control and structure will emerge from the communication process, not from creation, generation, as a result of the social group.

The main "relationship" of this social media supports the development of a learning environment that allows students to connect, discuss and share ideas to be effective and useful. In this context, learning using these resources is considered to have the potential to contribute to changes in teaching and learning as we know it (McLoughlin & Lee, 2007). Thus, social media tools such as wikis, blogs, and discussion forums provide multiple learning opportunities by encouraging and promoting knowledge sharing, exchange, and discovery (Baird & Fisher, 2006). The academic community has been slow to adopt these resources, as many of these sites are often blocked by school Internet filtering software (Deibert, Palfrey, Rohozinski, & Zittrain, 2008). However, the huge popularity of these social media sites has led teachers to explore how these tools can contribute to education.

According to Baird & Fisher (2006), ten years before the new millennium, a new age of student-centered, technologically and socially richly resourced teaching has become important and promising, changing teaching and male pedagogy. This has led many school teachers to continue to seek strategies to foster student collaboration and collaboration inside and outside the classroom. User settings often vary from user to user. Social network users engage in many activities on a site and their motivations for using a site vary. Connecting with friends, finding motivation, playing games and sharing photos are just some of the ways students use social media that can affect their work, study hours and more.

However, over the last decade, technology has gradually been introduced into the classroom and much of the course content is now available on the web. People from all walks of life, including education, have now become social media users. Social media is said to improve education, but the basis of social media use is the user's thinking, knowledge and use that is personalized and different to others. Advertising is considered useful and easy to use as it facilitates communication and social interaction in education. Social media literacy refers to thoughts, feelings, emotions, beliefs, judgments and/or predictions about social media learning. While some users agreed on the impact of social media on students' learning, others disagreed, arguing that social media hinders education. Although people seem to misunderstand about the potential impact of social networking sites (SNS) on student learning, it is necessary for teachers and students to interact in this way. Students also believe that these learning tools allow them to share their knowledge in the classroom. Research by Churchill (2009) shows that the use of blogs or 'blogs' (social media) in education supports safety education, especially in subjects that require research such as the field.

Social media literacy is another variable used to indicate how much social media content a person has. In schools, organizations, etc. knowledge is always a conversation. Wiig (2000) defines knowledge as the ability of individuals and organizations to understand and act

effectively. In learning and learning work environments, professionals gather the best information to achieve their goals. Knowledge creation is not about gathering knowledge, it is about achieving goals.

Although knowledge and information seem to mean the same thing, this can be confusing. When information is true, knowledge is more than that. The new knowledge matches the existing knowledge in the mind and becomes new knowledge. Knowledge not only helps us solve everyday learning problems, but also enables us to respond to new situations, predict outcomes, and improve when necessary (Wiig, 2000). Having to grow, compete and work in an everchanging environment, a student will not let him give up the development of his own important skills that are more important for education.

Outside the academic context, information exchange between students is an important part of knowledge management. To facilitate knowledge management, Wiig (2000) argues that school management should be motivated to encourage innovation, learning and knowledge sharing. Its relationship with information is the use of social media. To use means to use or make use of something, or to receive as a function of something.

To ensure that the product works for a specific purpose or is used as designed. It is widely observed that many Nigerian secondary schools do not have ICT facilities, which hinders the use of social media in teaching, thus creating some barriers for students to access relevant resources and understand the relationship as a subject. In addition, it was found that most of the secondary schools do not have teachers who are knowledgeable about ICT, and this further affects the use of technology in teaching. For example, Okwudishu (2005) reported that the lack of access to some ICT equipment required for accessing social media in schools is an important factor hindering the use of ICT, not only by teachers and students. , how many people know, for example, one's knowledge of learning strategies, how accurate that person is about learning strategies.

Psychologists and educators emphasize the recognition that people's knowledge, emotions, practices, and social behaviours vary from person to person. If social media is used as a form of learning or effective learning, it is related to learning (Yusuf, 2005; Ofodu, 2007). When students are unaware of the many ways to improve learning available to them, it can negatively affect their learning. To further analyse this point, Estrom (1996) explained that when a student says "I will not understand the material" he meant more than content. Such a student will not be able to resist in any way, as he determines himself from his knowledge and knowledge of the learning strategies used in school activities. Students who are familiar with and understand social media as an educational concept will likely know how to use it. Effective learning through social studies can be awareness of social strategies as they are used. One of the main goals of teaching is to improve the performance of students in school subjects, especially those who have difficulties with academic and social skills, by using appropriate learning strategies. While earlier work such as Churchill (2009) devoted themselves to 'blogging' and its use in teaching and learning, Boyd & Ellison (2007) also studied social networking sites, context, history and science. As a result, they investigated a single variable between social relationships and student achievement and did not find much variation between different types of social relationships (such as social media, virtual worlds, blogs, and wikis) as predicted by Geography Academic Achievement.

It can be said that students are unique in terms of their knowledge of social problems, their way of seeing, using and behaving. The idea of this study is that social media can provide a better understanding of knowledge, understanding, use and behaviour, this study can be useful, quality education and the quality of education in the field can be increased. Therefore, this study investigated the knowledge, understanding, use and attitude towards learning in social media as predictors of students' learning in the field.

Research Questions

1. What proportions of senior secondary school students own social media-based learning account(s) for academic purposes in Private Schools in Oyo State?
2. Is there any statistically significant relationship existing among the predictor variables (perception, knowledge, utilisation of, and attitude towards social media-based learning) and students' academic achievement in Geography?
3. Does the obtained regression resulting from a set of four predictors (Knowledge, Perception, Utilisation of and attitude towards social media-based learning) allow reliable prediction of students' academic achievement in Geography?
4. Which of the predictor variable is most influential in predicting students' academic achievement in geography?

2. Materials and Methods

The study adopted an ex-post facto design of correlational research type. None of the variables of the study was manipulated. Only the correlations among variables were studied. A multistage sampling technique: population proportional to size was used to select schools from the existing five local government areas of Ibadan Municipality. Fifteen (15) schools from Ibadan North, eight (8) schools from Ibadan North East, Six(6) schools from Ibadan South West and Five (5) schools each from Ibadan South East and North West. Purposive sampling technique was used to select senior secondary school II classes from these schools. This is because a large proportion of Geography syllabus must have been covered by class and more so, the class was not preparing for any external examination. Lastly, simple random sampling was used to select twenty-five students from each of the schools selected. Nine hundred and seventy-five sampled students participated in the study. Five valid and reliable instruments with psychometric properties as follows: Assessment of Social Media Knowledge - ASOMEK (KR20 = 0.73), Social Media Perception Scale – SOMEPEP ($\alpha = 0.86$), Perceived Social Media Utilisation Scale – PESOMUS ($\alpha = 0.72$), Social Media Attitude Scale – SOMATAS ($\alpha = 0.83$), and Geography Achievement Test – GAT (KR20 = 0.82) were used in the study for data collection. Data were from the participants collected with the assistance and cooperation of the sampled schools' Geography teachers. The consent and maximum cooperation of the participants were enlisted prior to their participation. The data collected were analysed using descriptive statistics and multiple regression analysis

3. Results

In terms of ownership of social media account among senior secondary school students, Table 1 presents that out of the 975 participants who responded to the item 52.8% of them own social media accounts of which 30.5% are males and 21.1% are females. 9.1% males and 17.2% females do not have social media account while 22.1% did not respond.

Table 1. Cross tabulation of gender by ownership for social media account

Gender	Ownership of Social Media account			Total
	Owners	Non-owners	Excluded	
Male	297	89	95	481
	30,5 %	9,1 %	9,7 %	49,3 %
Female	206	168	120	494
	21,1 %	17,2 %	12,3 %	50,7 %
Total	503	257	215	975
	51,6 %	26,3 %	22,1 %	100 %

Table 2 shows that students' perceptions of social media-based learning have positive significant relationship with attitude (0.216; $p < .05$) and perceived utilisation of social media-based learning ($r = 0.109$; $p < .05$). A positive relationship exist between attitude and perceived utilisation ($r = 0.191$; $p < .05$). The same is true of knowledge and achievement ($r = 0.274$; $p < .05$). Other correlation that exist are positive but low These are correlations between perception and achievement in Geography ($r = 0.107$; $p < .05$), perception and knowledge of social media ($r = 0.083$; $p < .05$), perceived utilization and knowledge ($r = 0.066$; $p < .05$) and between attitude and knowledge of social media-based learning ($r = 0.087$; $p < .05$) and between attitude and achievement in Geography ($r = 0.134$; $p < .05$).

Table 2. Correlation matrix of the predictor variables

Model	Variables	Achievement in Geography	Knowledge	Perception	Perceived uti- lization	Attitude
Correlations	Achievement in Geography	1,000				
	Knowledge	0,274	1,000			
	Perception	0,107	0,083	1,000		
	Perceived uti- lization	0,064	0,066	0,109	1,000	
	Attitude	0,134	0,087	0,216	0,191	1,000

The multiple regression correlation coefficient (R) (Table 3) shows that the linear combination of predictor variables on the students' achievement in Geography is 0.304, multiple R² is 0.092 and the Adjusted R square value is 0.087 or 8.7%. This means that the variation in students' achievement in Geography accounted for by the predictor variables is approximately 9.2%, statistically significant at $F(4,721) = 18.363$; $p < 0.05$.

Table 3. Model summary and regression ANOVA

Model	Sum of squares	Df	Mean square	F	Sig
Regression	2093.733	4	523.433	18.363	.000*
Residual	20551.997	721	28.505		
Total	22645.730	725			

R = 0.304
R Square = 0.092
Adjusted R Square = 0.087

*Significant at $P < 0.05$ level

Table 4. Regression coefficients

Model	Unstandardized coefficients		Standardized Coefficients	T	Sig
	B	Standard Error	Beta		
Constant	5.059	0.885		5.717	0.000
Knowledge	0.645	0.088	0.261	7.303	0.000*
Perception	0.014	0.008	0.062	1.708	0.088
Perceived utilization	0.007	0.001	0.023	0.622	0.534
Attitude	0.039	0.015	0.093	2.514	0.012

*Significant at 0.05 Alpha level

Table 4 shows that two of the independent variables contributed significantly to the prediction model at 0.05 level. Knowledge $\beta = 0.261$; $t(721) = 7.303$; $p < 0.05$) was most influential followed by attitude ($\beta = 0.093$; $t(721) = 2.514$; $p < 0.05$). Two of the independent variables do not contribute significantly to the prediction model for students' academic achievement in geography, these variables are perception $\beta = 0.062$; $t(721) = 1.708$; $p > 0.05$) and perceived utilisation ($\beta = 0.023$; $t(721) = 0.622$; $p > 0.05$).

4. Discussion

Ownership of social media accounts among secondary school students from the findings of the study indicated that having social media account is a necessity while to others, it is of lesser importance. The findings on ownership of social media account by gender indicate that male students are heavy users of social media facilities for academic purposes than the female students as indicated by students' responses. Findings here support a number of studies such as DeBell and Chapman (2006); Williams and Matern (2009); Friedman, (2013); Hendrix, Chiarella, Hasman, Murphy and Zafron (2009); Ofcom (2008); Dowdall, (2009). These studies investigated the extent of use of social media among the youth. In all, these studies found out that younger generation students are the extensive active users of social network sites.

Knowledge, perception, utilisation and attitude towards social media-based learning are important in predicting students' academic achievement in Geography holistically and is statistically significant at $P < 0.05$ level. Also, the findings on the amount of variance accounted for by the predictor variables (9.2%) indicate that the prediction model obtained is reliable and as further indicated by the multiple regression correlation R and R square. This result is in line with that of Hanushek, Kain and Rivkin (2005) who confirmed that perception is an important school factor responsible for students' poor achievement in senior secondary school subjects. Also, according to Williams and Merten (2009), university students are often found to be obsessed and addicted with their Facebook profile or Twitter page which they frequently accessed indicating their favourable disposition to social media. Also, Churchill's (2009) study showed that the use of weblogs or "blogs" in education facilitator a useful learning atmosphere in the area of sciences. Findings with respect to the contributions of the predictor variables indicated that two of the predictor variables (knowledge and attitude) contributed statistically and significantly to learning Geography. This finding is consistent with the pattern of associations reported by Gable, Ludlow, Kite & McCoach, (2010). In their study, they found that, interestingly, the knowledge of social media-based learning is a significant key determinant of students' academic achievement in college. The result of attitude towards social media-based learning agreed with Agwu's (2004) study which explained that positive attitude is important when helping learners to improve learning in the Nigeria school environment. The findings of this data also corroborate that of Adike (2008) who in his study on the causes of students' poor performance in WAEC from 2003- 2007 in Kaduna State, discovered that students' attitude and poor teaching facilities were significant causes of students' performance.

Conversely, findings indicate, however, that perception and perceived utilisation of social media based-learning do not contribute significantly to the prediction model of students' academic achievement in Geography. The result of this study supports the work of Jason and Niaz (2011) who found out that there was no statistically significant relationship between social network sites usage and GPA earned in a semester examination (fall semester) in the year 2010. However, it contradicts the finding of DeBell and Chapman (2006) and Boyd & Ellison (2007) who reported that adolescent and young adults are the heaviest users of computers and the Internet which has tremendously improve their academic achievement and that social media-based learning has become the latest online communication tool that allows these users to create a public or private profile to interact with people in their networks both for social and academic purposes.

5. Conclusions

The study findings established significant relationships between knowledge and attitude which consequently had predictive influence on students' academic achievement in Geography. Students are encouraged not to be satisfied with their knowledge of social media but are implored to have a change of perception as well as attitude towards social media-based learning. Also, teachers being an influential agent should teach through social media platform

which could be an explicit way of showing student the utilisation of social media for academic purposes.

Author Contributions

Software - Dr. Jinadu; validation - Prof. Okwilagwe; writing-review and editing – Dr. Jinadu and Prof. Okwilagwe.

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Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Conflicts of Interest

The authors declare no conflict of interest.

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