

## Social Media, Learner Engagement, Empowerment and Academic Performance among University Students

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### Abstract

Social Media has been embraced by students and learning institutions in many parts of the world for communication and learning. Thus, there was a need to establish how social media impacts learning activities in a developing world university context. This study used the learning theory of connectivism and the socio-cultural theory of human learning to establish; whether the use of social media facilitated in learner engagement, empowerment and academic performance. Specifically, the study sought to find out whether there was a positive relationship between learner engagement and academic performance. There was a positive relationship between learner empowerment and academic performance; and one research question: examined ways in which social media enhanced learning and academic performance. A total of 475 students from certificate, diploma and undergraduate programmes from a private university in Kenya, filled a survey with open and closed ended questions between February and May 2018. The closed-ended questions were analysed using SPSS version 20 and the open-ended questions were analysed using content analysis. Results revealed that students actively used social media with these platforms being highly used: WhatsApp, Facebook, Google and You Tube. The learners attributed using social media for learning purposes due to its attributes and the rich information that it contains. Learner engagement and learner empowerment influenced positively academic performance. There is need for universities to design policies and engage in ways of teaching that encourage students to use social media sites for learning purposes.

**Keywords:** Student Learning, Student Empowerment, University Students, Social Media

### 1. Introduction

New technology has had profound impact on the way people communicate on a daily basis. Social media is defined as web-based and mobile applications which allow people and firms to create, engage, and share new user-generated or existing content within a digital setting through multi-way communication [1]. One of the unique features of social media is that, it is not restricted to desktop or laptops but could be accessed through mobile applications and smart phones hence making it very accessible and easy to use [2]. Social media is currently a daily part of life across the world for an increasing number of people.

According to global Internet usage statistics, there were 3.77 billion global internet users by the end of 2016, constituting a 50% penetration. In the same year, there were 2.8 billion global social media users which comprised of 37% penetration, 4.92 billion global mobile users, or 66% penetration, and 2.56 billion global mobile

social media users, an equivalent of 34% penetration. By December 2012, the number of Facebook users in Africa was 51,612,460 [3]. In general, about 9% of Africa with social media users from South African spend an average of 3.2 hours per day, in comparison to a world's average of 2.4 hours. In Kenya, by the end of 2016, there were 22 million internet users, an increase of 4% over the last 2 years [4].

Every day, many students including those in the universities spend countless hours immersed in social media communication as the utmost medium for interaction, keeping in touch or relating with their families and friends [5]. Social media sites like Facebook and MySpace are among the more popular sites that students mostly spend their time in [6].

At first glance this may seem like a waste of time, however, it also assists students to develop important knowledge and social skills, and be active citizens who create and share content. Moreover, the growing dimension of the use of the social media among the students and staff in universities cannot be wished away. Over the years, social media has become part of the daily life experience for increasing number of people [7]. Use

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of social media is the most popular activity among smartphone users in Kenya on a weekly basis and dominates with 58% [8]. It has even become more and more popular among students.

However, the emergence of social media has raised concerns among academics, and policy makers especially in relation to its effects on student performance.

The use of technology such as internet is one of the most important factors that either positively or negatively affect students' academic performance [9].

Currently, most parents and guardians are worried that students spend most of their time on the social media and it could be affecting their academic performance. Despite this, many students continue to utilize these sites on daily basis and get academic information. The university cannot account whether the social media is meeting the social, teaching and learning needs of the students and faculty, necessitating this study.

## 2. Literature Review

### *Theoretical Framework*

#### Learning theory of connectivism

Learning theory of connectivism was developed by Siemens and Downes to explore learning in the networked digital age and addressed how learning occurs when it moves into informal, networked and technology enabled environments. The connectivity model emphasizes the idea that knowledge is stored and manipulated by information technology. This is through proprietary databases that limit access to information, and web search engines that rank search results, thereby highlighting certain perspectives and rendering others invisible. This impacts the kinds of connections that learners can make by limiting the perspectives that a learner can consider. However, connectivism's focus is on the learner's ability to make such connections, learning occurs when connections are made [10]. Thus, connectivism emphasizes the importance of the ability to recognize connections, patterns, and similarities; the ability to synthesize ideas and information is central to the connectivist perspective. Essentially, connectivism views learning as a process of developing a learning network and making connections between ideas embedded throughout that network [11]. Learning is a process that occurs within a nebulous environment of shifting core elements and it is not entirely under the control of the individual. The process of learning concerns connecting specialized information sets and the networks that enable the individual to learn more than what they would otherwise know; the networks allow and promote greater learning [12].

The principle of networked learning which is grounded on connectivism is based on the following facts: learning and knowledge rest in diversity of opinions, learning is a

process of connecting specialised nodes or information sources, learning may reside in non-human appliances, capacity to know more is more critical than what is currently known, nurturing and maintaining connections are needed to facilitate continual learning, ability to see connections between fields, ideas and concepts is a core skill, currency of knowledge is the intent of all connectivist learning activities, decision making is in itself a learning process [13].

#### Socio-cultural theory of human learning

Majority of the framework for socio-cultural theory was developed by Lev Vygotsky [14]. Socio-cultural theory is an emerging theory in the discipline of psychology and captures society's input to individual development. Social-cultural theory emphasizes the interaction between developing people and the culture in which they live [15]. Furthermore, social-cultural theory implies that human learning consists of a social process.

Learning is viewed as a social process and the origination of human intelligence in society or culture [16]. Vygotsky's emphasized that everything is learned in two phases. Namely; through interaction with people, and then integrated into the individual's mental structure. A second idea brought out by Vygotsky's theory is that the potential for cognitive development is limited to a "zone of proximal development" (ZPD). This "zone" is the area of exploration for which the student is cognitively prepared, but requires assistance and social interaction to fully develop [17]. An instructor therefore is able to equip and support a learner developing understanding of vast knowledge and complex skills.

Today we cannot ignore this era of new technology in information and communication in education. Each single day settings, scholars, working from a socio-cultural perspective, are aiming to expand terminologies, such as distributed cognition, to include individuals, artifacts and digital technologies. In recent times socio-cultural theory has been taken into consideration in the design of online distance learning education technologies. In a digital era traditional learning may not be appropriate with new technology.

However, the challenge that could be encountered is how to design online learning environments where by students feel connected to peers and professors in a virtual classroom senerio. In addition, it is possible to design a distance learning module to encompass the social cultural theory just like Brigham Young University (BYU) in the United States of America has done. Social interaction among learners has carefully and successfully been developed whereby substantive and interactive assistance from the course facilitators, and dynamic course content has been designed to be responsive to student learning [18].

This is an indication that the social cultural learning can be done using new technologies such as social media.

### *Impact of Social Media Usage*

ICT usage is not only using computer, but also using the internet and social media as an important tool in teaching and learning process. It provides opportunities for both teachers and students to engage beyond classroom setting enabling them to flexibly interact. Social media like Prezi, RSS ( Rich Site Summary) feeds, Blogs, podcasts, Wikis, Bookmark, Facebook, Twitter, Flickr, YouTube, Quizboxetc., has gained tremendous popularity in our today's world, and educators have seen this as an opportunity to develop innovative ways to create more interesting learning experience for their students, especially in order to improve students' critical thinking skills.

In addition, by using blog students can engage with ideas and questions, because it can stimulate students to think and give response. Involvement in the process of scaffolding blogging, where students can be asked to make basic deconstruction of the blog design and they can add more function for the blog. This type of process will empower students' critical thinking skills since they will experience and involve actively in the learning process [19]. Wikis encourage collaborative development and sharing of knowledge among users [20]. Students and teachers also use bookmark application in order to store their favorite website that will help them to seek understanding about certain issue and subject concepts. From the education point of view, bookmark can help students and also teachers to support their research. There is a development that has happened in the usage of bookmark where users can not only record their web address but also share it with others in a network [21].

RSS works together with Bookmarks allows educators to subscribe to "feeds" of the content that is created on the Internet [22]. These tools allow students to see other people who are accessing the same information and they can contact them. By doing so, students can interact with other people who have the same interest with them. This will surely help students to gain more resources that relates and are relevant to their research topic. They can transmit and share their knowledge or perspective to others. Prezi- web-based storytelling tool that uses a single, unlimited canvas that hold images, audio clips, video, and other objects and the information existing can be zoomed in and out depending on the depth of exploration desired [23]. This can empower education process since Prezi can be an interesting way to write and present ideas.

In the contrary, not all studies have found a positive impact of social media use on learner performance. Others have found no impact or negative impact.

A study conducted in Ethiopia revealed that that there was no significant relationship between time spent by students on social networks and students' school grade point average [24]. In addition, in Pakistan, another study revealed that there was no significant relationship between time spent on social media by students and students' academic performance [25].

In two studies conducted in Nigeria and in the USA also revealed that the use of social networks was not at all related to student academic performance [26].

A number of researchers however established the negative impacts of social media on student performance. One research revealed that some students in multiple studies in 2000 and 2003 respectively reported that their grades had dropped [27]. Furthermore, another research also revealed a trend of a continuing drop of grades among learners because of the use of social media [28]. In addition, other research studies have also revealed that there is a significant negative relationship between Facebook use and academic performance among learners a drop in students' grades and lack of time was a result of engaging in social networking [29].

It follows that the observed drop in performance was attributable to information overload and too much time spent online on personal gratification as opposed to learning. Indeed, further findings of a study conducted among Swedish students revealed that the extensive use of social networking and Facebook by students would eventually lead to poor academic performance [30]. The overarching research question was how social media enhanced academic performance through student engagement and student empowerment.

This led to two hypotheses and one research questions as follows:

- 1) There is a positive relationship between social media enabled learner engagement and academic performance of the university students.
- 2) There is a positive relationship between social media enabled student empowerment and academic performance of university students.
- 3) In what ways do social media enhance learning and academic performance among university students?

### **3. Methodology**

#### *Participants and Procedure*

This study adopted a survey design with both closed and open-ended questions. The stratified random sampling method was used to select 600 students from four campuses of a private university in Kenya between February and May 2018. The students were chosen from certificate to undergraduate programmes, with evening and day students learning modes. A total of 489 questionnaires were returned full filled- a response rate of 80.6%. The National Commission for Science Technology and Innovation approved the study. The researchers' sought the student and university consent, and the respondents' data was held with high levels of confidentiality and anonymity. Out of the 475 students, 47 % were male and 53% were female. Among the programmes, 18% were certificate, 37% diploma and 45%

undergraduate. Students aged below 20 were 21%, aged 20-24 were 53%, aged 25-29 were 17%, and 30 years and above were 9%. The survey was pretested for clarity and the Cronbach alpha of the key scales computed.

### Measures

The quantitative section of the survey comprised of three measures which the researchers constructed.

#### Learner engagement

This scale measured the extent to which social media enhanced student learning activities. It consisted of six items measured on a scale of 1= Not at all to 5= a very large extent.

This scale consisted of six items as follows

- 1) Creates connection that helps learners to construct knowledge as opposed to just assimilating or accommodating knowledge.
- 2) Learning new knowledge depends on creating rich and effective network.
- 3) Helps in adaptation of changing learning cultures through the use of IT.
- 4) Creates great learning power by transforming learning into distributed group activity.
- 5) Creates collaborative learning.
- 6) Enriches learning resources through the operations of learning community.

#### Learner empowerment

This scales measured the extent to which the students' learning was empowered due to the use of social media sites. This scale consisted of eight items and was measured on a scale of 1= Not at all to 5 = very great extent.

- 1) Give students voice and opportunity to air their diverse imaginations, observations opinions and feedback.
- 2) Learner can make decisions or choice on learning strategies, resources, goals and learning groups.
- 3) Provides rich resources through reading initiatives aided by collaborative knowledge reinforcement.
- 4) Puts learners power in the hands of students in both formal and informal environment
- 5) Enables the learner to engage in learning more realistic issues through debates and social forums.
- 6) Provides opportunity for reflection from time to time.
- 7) Gives opportunity to demonstrate their learning approaches and assist others with similar learning styles.
- 8) Self- assessment is made possible.

### Student academic performance

This scale measured the extent to which social media influenced their academic performance.

This scale consisted of nine questions that measured both the negative and the positive aspects of social media use on academic performance. The negative items were reverse coded and the scale ranged from 1= not at all to 5= to a large extent. The questions consisted of the following:

- 1) The use of social media has affected my grammar and spelling (R).
- 2) I use slang while communicating via social media (R).
- 3) Spending more time in social media networks sites has affected my grades (R).
- 4) The social media networking sites distract my attention during lectures(R).
- 5) My reading skills have improved since I started participating in social media.
- 6) My grades will improve when I stop participating in social media sites (R).
- 7) I use social networks to discuss my school work with my friends.
- 8) Social media enables me to complete my assignments in time.
- 9) Social media has increased my academic knowledge.

The qualitative component of the survey comprised of two open- ended questions: The first questions asked students to state the social media sites that they assessed for education purposes and the second question sought to find the reasons that motivated the students to use the social media platforms for educational purposes.

### Data Analysis

The quantitative component was analysed using hierarchical regression using SPSS Version 20. While content analysis was used to analyse the open ended questions. First the descriptive data is provided below:

## 4. Results and Discussion

**Table 1:** Students' Levels of Social Media Visits within a Week

	Mean	Std. Deviation	Total
Facebook	4.35	2.05	438
WhatsApp	4.95	1.76	444
Twitter	3.16	2.07	280
Instagram	3.49	2.17	308
Youtube	4.04	1.91	319
LikedIn	2.92	2.31	189
Google	4.54	2.09	350
Myspace	1.91	1.84	158
Wiki	2.11	1.76	165
Blogs	2.42	2.02	163
Podcasts	2.01	2.19	147

In order to find the social media usage, students were asked questions on the number of times they visited the social media sites and the time spent in the social media site as given in table I above. Students ranked the time they visited the social media as follows: 0 times, once, twice, thrice, four times, five times, six time and more within the last week of activity. The results indicated that the five most popular networking sites browsed by the

students were WhatsApp with 444users, Facebook, Google, You Tube, and Instagram. Wiki, Blogs and podcasts which are invaluable in learning are yet to gain prominence.

Blogs can stimulate students to think and respond in a critical manner. Wikis can encourage collaborative development and sharing of information [31].

**Table 2** Mean, SD Cronbach, Correlations and Inter-correlations of the Study Variables

	M	SD	$\sigma$	1	2	3	4	5
1. Year of Study	-	-	-	1				
2. Location	-	-	.22**	1				
3. Academic Performance	3.11	0.87	0.80	.21**	.35**	1	1	
4. Learner Engagement	3.77	0.95	0.78	.21**	.37**	.35**	.29**	1
5. Learner Empowerment	3.69	1.03	0.83	.08	.43**	.41**	.60**	1

\*\* Correlation is significant at 0.01 2-tailed

\* Correlation is significant at 0.05 2-tailed

The correlation results reveal that there is a significant positive correlation between academic performance with learner engagement and learner empowerment at 0.01 significant level. This correlation results were followed by a hierarchical regression.

**Learner Engagement, Empowerment and Academic Performance**

A hierarchical regression was conducted to determine whether the year of study, campus location, and student engagement and student empowerment influenced student academic performance. Independent variables were centered to reduce multi-collinearity.

In the first step, the campus location and year of study were entered. In the second step, student engagement and student empowerment were entered in the regression model. Model 1 added significant variance in the model.  $R^2=.06$ , adjusted  $R^2=.050$ ,  $F(2, 219) = 6.83$ ,  $p<.05$ . In Model 2, the addition of learner engagement and learner empowerment added significant variance in the model,  $R^2=.18$ , adjusted  $R^2= .17$ ,  $F(4, 22) = 12.01$ ,  $p<.001$ . The year of study was not a significant predictor ( $t =.12$ ,  $p =.90$ ) while campus location was a significant predictor ( $t =3.69$ ,  $p<.001$ ) of student performance. The regression coefficients of learner engagement, ( $t =.2.81$ ,  $p =.002$  one- tailed test) and learner empowerment, ( $t =2.72$ ,  $p= .003$  one- tailed test) were significant. These results agree with Richardson who opines that social media can enhance learning through a combination of sharing and subject content interaction, enhancement of active learning and learner engagement in creating knowledge [32].

To determine which campus had a significant influence in academic performance a separate

hierarchical regression analysis was conducted with each campus being considered on its own as a variable. Each campus was coded as zero and the other campuses as 1. Four variables were constructed for the four campuses and entered in the first step of the hierarchical regression, while learner engagement and student empowerment were entered in the second model. Each of the four campuses variables did not show any significant influence. The table indicates 12% of 17% variance in the student academic performance can be attributed to student engagement and student empowerment through social media. These results affirmed our hypothesis one that there was a significant positive relationship between social media -enabled learner engagement and academic performance. In addition, it affirmed our second hypothesis that there was a positive relationship between social media enabled learner empowerment and academic performance.

To further understand the way social media influenced learning, student were asked an open-ended question to explain how they used social media for learning purposes. Content analysis was used to analyze this question response. The question generated four main categories namely: attributes of the social media sites, the attributes of the information, and effects of social media, and the use of social media for learning purposes 477 student participated in this questions generating 500 mentions (see Table 3).

**Table 3:** The Use of Social Media for Learning Purposes

Category	Sub-category	Explanation	Number of mentions-500	%	Example of Quotes
Attribute of the social media sites		It's easy, accessible, fast , reliable, relevant, convenient, accurate and available, cheap etc.	205	41	It makes learning easier and has easy access to information needed
Attribute of the information		There is variety of information, of various breadth and depth, well explained and easy to understand	210	42	Some information in the social media are not taught in class; has a wide range of information.
Effects of social media on learning		Improving performance, broadening thinking capacity and enhancing learning skills	10	2	To broaden my thinking capacity
Uses of social media for learning purposes	Sharing and connectivity	Sharing information and connectivity among students and teachers	19	4	I can access group work and class notes insights and contribution from different people.
	Research	Use the social media to search information for research and assignments	56	11	Easy to understand for research purpose

The results show that students access social media platforms due to its attributes. Social media has the attributes of being fast, easy to use and convenient platform to access learning materials. Another factor that influences the use of social media is the attributes of the information found in social media. It has a variety of information at different depth and breadth. The use of social media to improve learning performance, broaden thinking, and enhance learning capacity is low, which need to be cultivated. In addition, the use of social media for sharing information among teachers and students is low something that needs to be cultivated. But the use of social media to search information for research and assignment is slightly higher.

Neither the availability of social media platforms on their own can stimulate full use of these platform for learning engagement and connecting with teachers' nor can it enhance broaden thinking capacity and learning skills. Instead learning has to be designed to encourage these learning attributes. Despite students sharing learning materials through WhatsApp, has not become popular yet. All this information depicts that the research question that sought to find out how social media enhances learning and academic performance has been answered.

These studies show despite a high level of involvement in social media platforms, and the richness the media offers on accessibility and variety of information; the culture to use these platforms for learning as advocated by the social cultural theory of human learning [33], is at a nascent stage and need to be developed. The institution needs to develop and equip the learners to tap the vast knowledge that social media can offer. The online learning technologies used should incorporate these social media sites to enhance the virtual classroom.

**Practical and Theoretical Implications of the Study**

This study shows that the theory of connectivism [34] is suitable for studying social media use, student

engagement and empowerment, and academic performance. As it focuses on the learners' ability to make the learning connections and the ability to nurture and maintain connections is an ingredient that facilitates learning. The study also supports the socio- cultural theory of human learning which focuses on the cultural and social process involved in learning.

For students to make great use of these platforms, a culture that encourages their use of learning purposes has to be cultivated. The presence of social media platform in itself may not enhance learning on its own, without concerted effort to promote learner engagement and empowerment using social media platforms.

**Suggestions for Further Study**

Further study should focus on a single platform and gauge the level of student engagement and empowerment using both qualitative and quantitative platforms. If these media are combined, it's difficult to tell which contributes the highest share in positive relationship with academic performance. A pre and post study can be carried out where the instructor introduces one of these platforms in their unit and gauge whether it had a significant impact on student engagement and empowerment.

**Limitations of the Study**

This is a cross-sectional study, focusing on one private university and it may not be proper to generalize that the results for this study would apply to all private universities. The scales used have not been validated in prior study but were developed by the authors for this study. The study used a self- administered survey. However, to reduce common variance problem both closed and open -ended questions were used to validate responses.

**Conclusion**

The study was conducted to examine the effects of students' use of social media sites on their engagement,

empowerment and academic performance. The study revealed that majority of the respondents had access to internet facility and had knowledge of the existence of social media sites, with majority of the students visiting Facebook, WhatsApp and Google and You Tube. Learners visited the social media mainly due to its attribute as a media and the nature of information found in these sites-it had a variety of information for research. The study confirmed that there was a positive relationship between learner engagement, empowerment and academic performance. Though this variance was slightly lower, this implies the need to foster a culture of networking and sharing for academic purposes among the students.

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