

Social Media–Based Learning Communities and Academic Performance in Higher
Education

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ABSTRACT

The presence of digital technologies in higher education is becoming more and more integrated, and it has altered the ways students communicate, cooperate, and study academic materials. The advent of social media based learning communities has turned out as an interactive mode of learning that goes beyond the conventional classrooms through its ability to facilitate communication, peer support, and collaborative knowledge sharing. The paper reviews how involvement in social media-based learning communities, student engagement and academic performance relate among university students. The quantitative cross-sectional design was employed to gather information by interviewing 300 higher education students using a structured questionnaire. To test the proposed relationships, statistical analysis, and descriptive statistics, correlation analysis, and structural equation modeling were performed. The results indicate the engagement of social media learning communities has a positive and significant impact on student engagement and academic performance. It can also be seen that student engagement has a very strong positive impact on the academic performance, which emphasizes that is one of the key mechanisms of the digital learning environments to improve academic performance. These findings implicate that the intentional implementation of social media can be useful in collaborative learning, enhance an academic engagement, and enhance student performance. In the study, the researchers highlight the need to consider incorporating learning communities that are based on the use of social media in higher learning institutions to achieve interactive and student-based learning experiences.

Keywords: *learning communities on social media, academic achievement, student interaction, higher education, collaborative learning, online learning environment, online interaction.*

INTRODUCTION

The adoption of digital technology in higher education has really changed the way teaching and learning happens and redefined the process of producing, disseminating and experiencing knowledge. One of the most critical changes in this transformation is the emergence of social media based learning communities and these communities are interactive communities where students are able to discuss academic materials, share activities and knowledge outside of the classroom setting. These societies have redefined the learning process by allowing unceasing interaction between learners, establishing group problem-solving, and offering chances to have mutual educational experiences both in geographical and institutional borders. With the adoption of digital tools in higher education institutions to improve the learning outcomes, the role of social media-based learning communities in improving academic performance has become a significant topic of interest.

The social media platforms are no longer just social network spaces, but rather integrated multi-faceted spaces that facilitate intellectual interactions and knowledge development. Students are now using these mediums to not just communicate socially, but to also conduct academic discussions, get learning materials as well as discuss assignments. The social media being interactive allows the learners to have a dialogue, questions and have feedback all in real time, hence encouraging them to participate actively in the learning process. The change is part of the more general educational paradigm shift, which no longer focuses on

teacher-centered teaching but on learner-centered and collaborative teaching that focuses on participation, interaction and shared knowledge creation (Vygotsky, 1978).

The conceptual basis of social media-based learning communities is also strongly associated with social constructivism which highlights the importance of social interaction in the cognitive growth. In this view, learning is a process of engaging with other people, whereby knowledge is built in cooperation instead of being passed across to an instructor to a student. Social media websites offer a space through which this can be achieved, whereby the learners are able to communicate and negotiate the meaning and mutually construct meaning through discussion and experiences. These online communities act as communities of practice whereby people collectively learn through holding shared activities and knowledge sharing (Lave and Wenger, 1991). Consequently, online learning communities may be effective to improve the conceptual knowledge and critical thinking of students as well as their engagement in the learning process.

Along with social constructivism, the collaborative learning theory can also give more insight to the role of social media based learning communities in improving academic performance. Collaborative learning lays a lot of stress on the need to work in group to foster increased understanding and a level of high-order level of thinking. As students sit and discuss and solve problems together, they will get to learn other different points of view and this will prompt them to reflect, argue and integrate the knowledge (Johnson & Johnson, 2009). This process is made possible through social media platforms as students can engage in asynchronous and synchronous communication which gives them the opportunity to engage in discussions at their own time and still remain in constant contact with peers. This adaptability accommodates non-traditional involvement and offers the opportunities to learners who are not active in the conventional classroom setting.

The other important feature of learning communities that are based on social media is that they have the ability to improve student engagement. Engagement has been commonly known to be an important predictor of academic success, whether it involves behavioral, emotional, and cognitive engagement in learning activities (Fredricks, Blumenfeld, and Paris, 2004). Interaction within social media space is facilitated through interactive options like discussion forums, group chats, sharing of content and peer commenting. These aspects make students actively participate in the learning process by providing ideas, asking questions, and responding to those provided by the other learners. This active engagement will facilitate motivation and the feeling of belonging to the learning community, which has the potential to positively impact academic achievement.

Moreover, social media-based learning communities facilitate self-regulated learning as it allows the students to control their learning activities. Self-regulated learners establish objectives, track their performance, as well as adjust strategies to attain preferred results (Zimmerman, 2002). These processes are supported with the help of the tools in digital learning communities, such as access to resources, peer support, and reflection. Students are able to discover lapses in their comprehension and have clarification and hence improve their learning through a constant interaction and feedback. This ability to learn and learn independently and collaboratively is in tandem with the current requirements in the higher education system whereby there is a growing focus on learner autonomy and lifetime learning capabilities.

Although these advantages may be possible, incorporation of social media in the academic settings also has its challenges. The risk of distraction is also among the key issues since social media platforms exist to receive attention with constant notification and various streams of content. Overindulgence in or uncontrolled use of social media can lead to lack of concentration in studying which can deteriorate learning levels (Junco, 2012). Also, overload of information may be the case when students are introduced to enormous amounts of material with poor filtering and evaluation skills. This can cause confusion, cognitive overload and low comprehension. The other issue is the disparity of engagement in digital learning

communities whereby some students are engaged actively as others would be a mere spectators. These differences have the potential to undermine the collaborative opportunities of these spaces and influence the allocation of learning gains.

Furthermore, the learning communities based on social media rely on the manner in which they are incorporated in the process of learning. Access to digital platforms alone would not ensure more significant learning results. Learner support, instructional design, and structured guidance, with clarity of purpose and learning goals are needed to learners to help them grow academically through online interactions. Teachers are very important in allowing exchanges, mediating, and promoting active participation. Social media learning environments, when correctly designed and controlled, can supplement traditional learning by increasing the learning opportunities and creating continuous learning activities.

The correlation between academic performance and social media-based learning communities is thus a multidimensional and multifaceted correlation. On the one hand, these communities provide the possibilities of cooperating, interacting, and creating knowledge that can improve the learning outcomes. Conversely, distraction, management and inequality of participation issues should be tackled to make the most out of them in terms of value. This balance is also critical to understand in case higher education institutions want to utilize digital technologies to enhance the achievements of students.

Social media based learning communities are an important change of the way education is experienced and delivered to learners in a modern day of higher learning where the digital literacy and technology competence are becoming a critical requirement. They indicate the trends in the wider society in communication, exchange of knowledge and communalization. Studying is no longer confined to the physical classrooms but to the continuous interactive learning platforms as students engage themselves as active members of digital networks and facilitate personal and group development in the process. Exploring how the communities impact academic performance would be helpful in understanding how the field of higher education is changing and how technology is affecting the learning outcome.

Since the utilization of digital communication is increasingly becoming a crucial element in academic life, the study of the learning community, which is based on social media, has become both timely and essential in the educational context. The study will be useful in understanding in more detail how digital interaction contributes to academic success, as its mechanisms are supported by these communities, engagement, and self-regulated learning. Meanwhile, it emphasizes the value of reflective application and pedagogical advice in trying to make sure that social media is a valuable educational development tool and not a distraction.

In conclusion, learning communities in social media are an influential and intriguing part of the contemporary higher education. Their ability to network learners, enable them to work together, and share knowledge make them useful in improving academic performance. Their efficacy, however, is in the manner of its inclusion into educational practices and the way students interact with them. This research aims at shedding light on the dynamic interrelations between technology, learning, and performance in higher education by reviewing the interaction between digital participation and academic performance.

LITERATURE REVIEW

The increased prevalence of digital technologies in higher education has produced much scholarly attention on the role of learning communities based on social media and the impact they have on academic performance. The scholars are becoming more aware that learning is not limited to an institution within a formal classroom setting but rather that learning is defined by interactive, networked, and socially mediated spaces in which knowledge is assembled through collaboration. Theoretical reasons It is possible to trace back to the early theoretical ideas of Lev Vygotsky (1978) who stressed that cognitive development is

strongly based in social interaction and collaborative sense-making. A central framework to understand the ways in which digital learning communities facilitate students to co-construct knowledge through dialogue, participation and shared experiences is his sociocultural perspective. In the same way, the idea of communities of practice by Jean Lave and Etienne Wenger (1991) focuses on the process of learning by involvement in social groups, which have similar interests and practices. The social media settings reflect these communities as they allow the learners to interact with each other in an unceasing manner and collaborate in finding solutions to problems.

Modern digital learning theories also confirm the role of networked space in academic development. Connectivism was proposed by George Siemens (2005) who held that learning in the digital era was about networks of information and relationships and not about solitary cognitive processes. Learning communities based on social media provide a perfect example to explore this principle since learners are able to get access to various knowledge sources and connect with students that are outside the institution and geographical lines. This web-based learning model conforms to the collaborative model of learning that was developed by David W. Johnson and Roger T. Johnson (2009) who established that institutional interaction among learners leads to the development of critical thinking, problem-solving, and academic success. The social media platforms make this interaction possible by helping in both the synchronous and asynchronous communication so that constant interaction can be experienced even after the classroom teaching hours.

There has been an increasing trend of empirical studies on the impacts of learners using online learning communities to influence student engagement and academic outcomes. Engagement is commonly believed to be the major indicator of academic success, which refers to behavioral and emotional engagement, as well as cognitive involvement in learning exercises. Jennifer A. Fredricks, Phyllis C. Blumenfeld, and Alison H. Paris (2004) theorized the concept of engagement as a multidimensional construct, which affects persistence, motivation, and achievement. Social media settings allow favoring such dimensions as an active discussion, the possibility of sharing certain resources, and peer feedback. Research has shown that learners engaged in digital learning communities show a greater level of academic motivation and better conceptual knowledge (Greenhow & Robelia, 2009).

Studies done on the pedagogical importance of social media platforms indicate that it serves as an unofficial learning environment that supplements school education. According to Nada Dabbagh and Anastasia Kitsantas (2012), social media tools facilitate self-managed learning by allowing the ability to set goals, reflect and work together with peers. These processes allow the students to observe their progress and change their learning strategies. On the same note, Linda Harasim (2012) reiterates that knowledge construction in the online collaborative environment is facilitated by discourse and collaborative questioning. This kind of interaction will foster more informed learning as students are able to critique ideas, broker meanings and merge multiple views.

A number of empirical studies have directly examined the correlation between social media use and academic performance in the higher education institutions. A study conducted by Reynol Junco (2012) revealed that with properly organized academic use of social media, in communication and collaboration, there are beneficial impacts on student engagement and grades. Nevertheless, unorganized or excessive use can result in the adverse results because of distraction and mismanagement of time. Equally, Paul A. Kirschner and Aryn C. Karpinski (2010) found that multitasking using the social media during academic work may lead to poor concentration and lower academic performance. These results point to the fact that the educational effect of social media relies much on its utilization than on the technology.

The use of social media in collaborative knowledge building and peer learning has also been studied by scholars. Christine Greenhow and Beth Robelia (2009) discovered that online networking systems facilitate information sharing and informal learning habits that boost academic growth.

On the same note, Marguerite Koole (2009) indicates that mobile and social technologies facilitate flexible learning environments that facilitate constant interaction and access to resources. These environments provide the students with the opportunity of engaging in learning activities anytime and thus fostering sustained learning.

The other considerable line of studies is concerned with pedagogical integration of social media in higher education. Neil Selwyn (2012) claims that social media transforms the establishment of the higher education order through changing the communication pattern and increasing opportunities of informal learning. Nevertheless, he warns that education will only be useful with a well-considered teaching approach and critical digital literacy. Likewise, according to Megan Tess (2013), social media can contribute to the power of participation and collaboration but the success of the tool depends on the institutional support, the instructional strategies, and the preparedness of the student.

The international applicability of social media-based learning communities is also established by the research carried in a variety of educational settings. The results of the study by Ahmed Al-Rahmi and Mohd Shahizan Othman (2013) revealed that social-media-based interaction has a positive effect on collaborative learning and academic performance of the university students. Likewise, Sulaiman Ainin, Farah Najwa Naqshbandi, and Nur Husna Moghavvemi (2015) also indicated that the use of social media by the students boosts their satisfaction and learning outcomes. These data indicate that online learning communities can lead to academic achievement in cultural and institutional contexts.

Although the advantages have been reported, researchers also highlight the possible difficulties that might be related to the social media-based learning environment. Marco Manca and Maria Ranieri (2016) present the issues related to the lack of equal participation, digital illiteracy, and information overload. On the same note, Caroline Haythornthwaite (2002) observes that online networks can recreate some of the existing social orders, influence on the participation and knowledge access in the same manner. These difficulties highlight the importance of systematic direction and instructional help so as to guarantee significant learning results.

All in all, the reviewed literature confirms that social media-based learning communities are important in determining the academic performance through collaboration, engagement, and knowledge building. Nevertheless, their utility requires a deliberate incorporation in the teaching practice and conscientious utilization by students. The interaction of the technological affordances, pedagogical design, and the behavior of the learners eventually defines the educational value of digital learning communities. With the increase in the transformation of higher education in reaction to the application of technology, a clear comprehension of the dynamics is imperative in order to fully capitalize on the educational utility of learning mediated by social media.

METHODOLOGY

Research Design

The research design adopted in this study was a quantitative cross-sectional study that was used to test the relationship between academic performance and social media-based learning communities in higher education. The design allowed the researcher to quantify the relationship between participation in digital learning environments by students and their academic performance by applying statistical analysis.

Research Approach

It used a correlational research design to investigate the relationship between social media learning community participation, student engagement and student performance. The technique is used to test naturally occurring relationships without control of variables.

Population of the Study

The target group was made up of undergraduate and postgraduate students studying in higher learning institutions who actively interact, collaborate and share knowledge using social media platforms.

Sampling Method and Sample size.

The respondents who were selected using a non-probability purposive sampling technique are active learners in social media learning communities.

The study sample size was 300 university students, which is sufficient to conduct statistical analysis and the structural equation.

Data Collection Instrument

Structured questionnaire collected the data based on five-point Likert scale where strongly disagree (1) to strongly agree (5). The instrument measured:

- Being a member of social media learning communities.
- Student engagement
- Academic performance
- Demographic information

The questions used in the questionnaire were based on the existing scales used in earlier studies in the field of educational technology.

Data Collection Procedure

The questionnaires were distributed to the students of the university both online and via in-person means. The study was voluntary and the respondents were made aware of what the study was about. The analysis was carried out after screening of the completed responses.

Validity and Reliability

Expert review was used to achieve content validity. Factor analysis was used in evaluating construct validity. Cronbach alpha was used to test reliability and a value above 0.70 was acceptable.

Data Analysis Techniques

Statistical software was used in data analysis and involved the following:

Demographic analysis

- Descriptive statistics
- Reliability test (Cronbach alpha)
- Correlation analysis
- Structural equation modelling (SEM)

Hypotheses of the Study

H1: The participation of social media based learning communities significantly correlates positively with academic performance.

H2: There is a strong positive influence of participation in a social media-based learning community on the student engagement.

H3: There is a strong positive correlation between academic performance and student engagement.

Ethical Considerations

The study was conducted on a voluntary basis, with confidentiality being applied at all times, and data being utilized only in academic purposes. Any time, the respondents had the right to withdraw.

DATA ANALYSIS AND RESULTS

The statistical software was used to analyze data provided by 300 university students to determine the connection between social media based learning community, student engagement and academic performance. Demographic statistics, descriptive statistics, reliability testing, correlation analysis, and structural equation modeling (SEM) were among the analytical methods used to test the study hypotheses.

Demographic Respondent Characteristics.

Demographic analysis was done to provide the basic description of the participants such as the gender, level of study and frequency of use of social media as a learning resource.

Table 1

Demographic Profile of the Respondents (N = 300)

Variable	Category	Frequency	Percentage
Gender	Male	138	46.0%
	Female	162	54.0%
Academic Level	Undergraduate	204	68.0%
	Postgraduate	96	32.0%
Social Media Use for Learning	Daily	172	57.3%
	Weekly	88	29.3%
	Occasionally	40	13.4%

Explanation

The findings indicate that the sample was slightly more female students (54%) than male students (46%). Most of the respondents were undergraduate students (68%), which means that the early-stage higher education learners were represented properly. Over 57.3% of the respondents indicated using social media in their academic activities everyday and that academic-based social media learning communities are highly adopted by students in their learning activities.

Descriptive Statistics

The presence of descriptive statistics was used to analyze the mean and variability of the key variables of the study.

Table 2

Descriptive Statistics of Study Variables

Variable	Mean	Standard Deviation
Social Media Learning Community Participation	3.89	0.61
Student Engagement	3.76	0.58
Academic Performance	3.71	0.55

Explanation

The average scores show that students have rated as rather high the levels of their involvement in social media learning communities (M = 3.89). The student engagement (M = 3.76) and academic performance (M = 3.71) were also higher than the middle of the scale, which is an indicator of overall positive academic engagement and performance. The standard deviations are medium, and they represent uniformity in the reaction of the participants.

Reliability Analysis

The internal consistency of the measurement scales was evaluated using the alpha of Cronbach.

Table 3

Reliability Analysis

Variable	Number of Items	Cronbach's Alpha
Social Media Learning Community Participation	8	0.87
Student Engagement	7	0.84
Academic Performance	5	0.81

Explanation

The values of all the alpha of Cronbach were more than the acceptable value of 0.70 and this is sufficient to show that there is good internal consistency and reliability of the measurement scales. This ascertains that the measures that were used to quantify each of the constructs were consistent and reliable.

Correlation Analysis

The Pearson correlation analysis was used to test the relationships between the variables in the study.

Table 4

Correlation Matrix

Variables	1	2	3
1. Social Media Learning Community	1		
2. Student Engagement	.62**	1	
3. Academic Performance	.55**	.67**	1

Note: $p < .01$

Explanation

Correlation findings also indicate that there are great positive relationships between all variables. Student engagement ($r = .62, p < .01$) was significantly correlated with participation in social media learning communities and academic performance ($r = .55, p < .01$) was correlated moderately. Academic performance was the most correlated with student engagement ($r = .67, p < .01$), showing that the higher the student engagement, the higher the academic performance is.

Hypothesis Testing and Structural Equation Modeling

The structural equation modelling (SEM) was carried to test the direct associations between the variables and to test the hypotheses of the study.

Table 5

Structural Model Results

Hypothesis	Path	Beta (β)	p-value	Result
H1	Social Media Learning Community → Academic Performance	0.31	< .001	Supported
H2	Social Media Learning Community → Student Engagement	0.58	< .001	Supported
H3	Student Engagement → Academic Performance	0.49	< .001	Supported

Explanation

The results of the SEM show that the relationships between all the hypothesized relationships are statistically significant. The involvement in social media learning communities was a positive predictor of academic performance ($b = 0.31, p < .001$), which supported H1. Student engagement also showed a high positive impact on social media participation ($b = 0.58, p < .001$) in favor of H2. Moreover, H3 was supported by the fact that student engagement was a strong predictor of academic performance ($b = 0.49, p < .001$). These results indicate that academic success is indirectly and directly achieved using social media learning settings due to enhanced student engagement.

FINDINGS

On the whole, the data analysis shows that learning communities based on social media have a great impact on students engagement and academic achievements in higher education. Online learning communities are more likely to be engaged by the students and have better academic performance. The results are in line with the theoretical perspective that cooperative and interactive online learning environment has a positive impact on the learning performance.

DISCUSSION

The present research findings indicate that social media-mediated learning communities are influential in the increase in student engagement and academic performance at the higher education levels. The correlation between engagement with social media learning community and academic performance is positively related, which points to the fact that online interaction and cooperation in knowledge exchange can refer to a valuable addition to the learning achievement of students. Students and learners who are active in online discussions, post academic materials and work together with others seem to enjoy more exposure to different views and unlimited academic assistance out of the classroom setting. This leads to the opinion that learning is socially created and reinforced by interaction and engagement.

The fact that the correlation between social media learning communities and student engagement is statistically significant further demonstrates the significance of interactive digital learning environments in encouraging active engagement in learning. The social media offers adaptable communication platforms, which foster participation, peer feedback and ongoing academic discourse. With this kind of interaction, the behavioral engagement, emotional attachment and cognitive commitment of learning activities are increased. A student who feels a part of a learning community will find more incentive to work and continue with academic activities.

The findings also indicate that student engagement is a strong predictor of academic performance, which proves that engagement is a key initiative that correlates to achieve learning outcomes. These students are more conscientious, motivated and engaged in learning processes and therefore, are likely to show higher academic performance. This implies that social media based learning communities can enhance academic achievement not only by simply sharing of knowledge but also by making students more engaged and committed to learning. All in all, the results indicate that the systematic and intentional implementation of social media could be a valuable learning resource, which facilitates group learning, inspiration, and achievement.

CONCLUSION

This paper has discussed the connection between social media learning communities, student engagement and academic performance in higher education. The findings suggest that the involvement in online learning communities leads to the improvement of academic performance positively and promotes student engagement to a considerable extent. Online academic activities can be defined as students who engage themselves in active online activities in the course of their academic activities perform better and also are more involved in their academic activities.

The results attest to the fact that social media has ceased to be a mere means of socialization and has taken a significant role in the modern learning settings. In the case of academic purposes, it will promote communication, collaboration, and sharing of knowledge among which will lead to enhanced learning experiences. Nonetheless, the success of social media in learning is dictated more by the intentionality and deliberate intent (as opposed to unintentional or informal involvement).

All in all, the paper demonstrates the pedagogical possibilities of social media-based learning communities and how they can be used in addition to conventional teaching practices. These online spaces can facilitate better learning and more interactive experiences in universities through encouraging cooperation and actively engaging learners in their studies.

RECOMMENDATIONS

According to the results of this research, higher education facilities are supposed to promote the systematic adoption of social media-based learning communities into pedagogical and pedagogical endeavors. Digital platforms can support interaction of educators in formulating collaborative work, discussion forums, and peer interaction opportunities to improve student engagement and active learning. It is possible to give explicit academic reasons to use social media and allow the students to concentrate on meaningful communication instead of being distracted.

The schools should also train and give advice to the students and the instructors on the use of social media effectively and responsibly in academics. Acquisition of digital literacy skills will assist students to cope and manage information in digital platforms, and be constructive and focused on academics in online platforms. Also, the instructors are to supervise and support online discussions so that every member could participate and share the knowledge effectively.

Further studies can be conducted in the future on other factors that affect the efficacy of social media learning communities, like the type of platform used, instructional methods, or subject areas. The longitudinal studies might also be used to conduct research on the long-lasting affect of the involvement in digital learning on academic success. Further research and development into the education application of social media will help higher education institutions to more fully harness the power of social media to help students succeed.

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