

Using Social Media as an Learning Tool on Students' Collaborative Learning Using SEM Model with the Reference to Engineering Students in Tamil Nadu

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ABSTRACT

Social media is widely treated as a vital tool to improve collaborative learning activities among students and educators. Thus, this research study provides a literature of empirical reviews, and its distinctiveness stems from the motive on collaborative learning activities interaction with peers, interaction with teachers and engagement to understand the important factors that are relevant to affect the learning and academic performance of the students. This study additionally explores aspects that contribute to the development of collaborative learning, engagement, and perceived ease of use and perceived usefulness through social media sites. The purpose of this study is to examine the concept of social media adaptation and how its effectively relate with the factors like collaborative learning, interaction with peers, interaction with teachers, engagement, perceived ease of use, perceived usefulness and learning performance of the engineering students. The study was undertaken in southern districts of Tamil Nadu with the sample size of 241 engineering students. Data has been gathered via questionnaire which was later evaluated by using SPSS and analyzed using AMOS (Analysis Moment Structure) software to validate the proposed conceptual framework. The simulation outcomes obtained from the AMOS software revealed that majority of the students reported positive approach of the social media adaptation on developing the learning performance activities with the beta value of 0.71. The findings reveals that collaborative learning (interaction with peers, interaction with teachers, and engagement), perceived ease of use and perceived usefulness to use social media had positively and significantly relate with the learning performance of the students.

Keywords: *Social Media, Collaborative Learning, Interaction, Engagement, Perceived Ease of Use, Perceived Usefulness, Learning Performance*

1. INTRODUCTION

The use of social media are fast triggering the virtual communications like web based technologies, its changing the life patterns of young youth's at present. The usage of social media gives both benefits and demerits, mostly its advantages are seen byway of collecting the study materials in the form of video clips and sharing the instructional notes etc...Nowadays the students are feel that social media is the most convenient and cheapest tools for getting academic related information's. Zhu, 2012 said that studies in western countries have denoted that social media use for collaborative learning has a unique contribution to students' academic performance and motivation. The purpose of this research paper was to explore how collaborative learning activities of students were affected by the adaptation of social media in students' academic performance.

Many research's stated that the use of social media in education mostly for interaction with peers and interactions with instructors. Ninety percent of the instructors using social media as a way for teaching or some professional purposes they utilizing social media at out of the campus. Facebook and Twitter are the most popular social media sites for students and teachers. Majority of the instructors are using social media as a medium for their class sessions, and some of the instructors are using social media for post the topics to students for engagement in learning (Moran, Seaman and Tinti-Kane, 2011). Students engagement in social media represent their physical and mental commitment, and it's also denotes time spent to boost the involvement of their academic excellence, time spent to interactions with peers and teachers for collaborative learning (Kuh, 2007).

Student's engagement are developed when they are interacting with their peers and instructors because at the time of engagement they shares their ideas and knowledge so their thoughts will be in same directions (Chickering & Gamson, 1987). Liccardi et al. (2007) stated that 30% of the students were utilizing social media for interaction with their peers, teachers and colleagues for their learning purposes, and more than 52% of the students were utilizing social media for sharing videos, and chatting with friends during their class time.

According to Cain, 2008, social media networking sites permit the student's to interact and share their feelings with their peers, and it is also developing the connections with others. At the current era, most of the college students are frequently using these social media sites and also they are using social media for to keep them well known and updated about the external circumstances. Facebook report said that per day 1, 00,000 new members are joining in their sites; Facebook is most chose able social networking sites among the students of United States (Cain, 2008).The potential use of social media devices facilitates in attaining higher level learning by way of collaboration with peers and instructors (Junco, Heiberger, & Loken, 2011; Meyer, 2010; Novak, Razzouk, & Johnson, 2012; Redecker, Ala-Mutka, & Punie, 2010).

Teachers and instructors need to play an active part in collaboration with students through social media sites. This is because it is their duty to develop student's innovative activities, assess their performance, and explain the demerits arising from the content area and knowledge creation in order to sustain the learning environment activities (Frye et al., 2010; Liu, 2011). Collaborative learning comprises the interactions and connections among the students at their curriculum. In the present era, social media allows the extension of the learning circumstances because in class rooms only a part of learning's are took place (Chen & Bryer, 2012; Friesen & Lowe, 2012; Wodzicki, Schwämmlein, & Moskaliuk, 2012; Al-rahmi et al., 2015a). Therefore, it's important for educators to decide the effective approaches to integrating social media into classes (Fewkes & McCabe, 2012).

2. OBJECTIVES

- To examine the concept of social media networking sites and how its acts as the learning tool in collaborative learning activities of engineering students
- To examine the how social media adaptation can effective in collaborative learning activities of engineering students
- To examine collaborative learning with how students interaction with their peers
- To examine collaborative learning with how students interaction with their teachers and educators in college and out of campus
- To examine collaborative learning with how students get engage with their peers and educators or teachers in social networks
- To examine the learning or academic performance of the engineering students

3. REVIEW OF LITERATURE

At present, the interest of education has changed from the idea of skills and abilities into peak in terms of knowledge (Junco, 2012). This is one kind of skills that get awareness by students it is known as collaborative learning. The concept collaborative learning has got much awareness by analysts, researchers and scholars. For instance, Dillenburg et al. (1995) narrated this kind of activity (CL) as the circumstances where by more than two learners activate in the process of studying new skills. Many social media sites learned such as MySpace, Facebook and Twitter are devices that could be utilized for academic reasons.

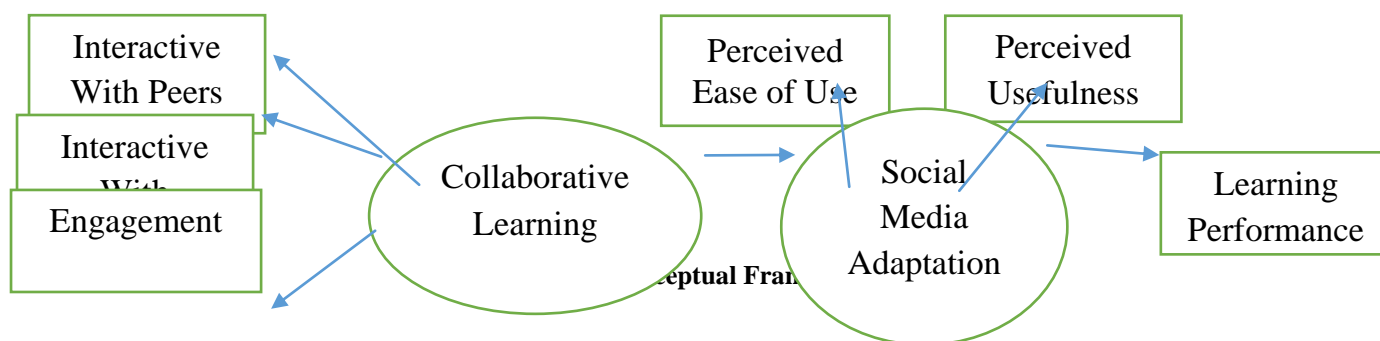
Thorough the utilization of social media sites in the context of collaborative performance, college students will have positive propensity to acknowledge innovative ideas, assists towards friend's alumni, and have equal support with the school. According to Yang et al. (2011) discovered that communal sites play a predominant role in the friend's interaction amongst students it's a key to achieve educational success. In some other research, it was showed that the college students had been adversely affected by the time they are spent on Facebook and it adversely influenced their activities. It additionally has a poor connection with the time given for class activities. The conversion of individual learning activities to be an innovative pedagogical strategy is one of the most prospective advantages of social media and this conversion has the goals to develop self-regulated performance (Dabbagh & Kitsantas, 2011). Through this conversion, students will be got the benefits of having power over their academic activities. Flicker, Wikis, and Blogs are examples of internet based devices that can be used for the motive of developing learning activities.

Social media networking sites have a prospective power to facilitate higher level learning results through collaborative activities, its shows proof and it is also supported by studies in reviews (Brown, 2012; Junco, Heiberger & Loken, 2011; Novak, Razzouk, & Johnson, 2012). Compared to usual networking sites, social media sites has specified approaches that given numerous ways to interact. They contain variety of devices enlarged by Kaplan and Haenlein (2010), which consists of collaborative activities (Wikipedia), blogs, content communal (YouTube), and social media sites (Twitter). Social media sites (SMS) have powerful academic cultures that are created within the online network community (June, 2011). Social media not only permit the information sharing's but it additionally facilitates students collaborative learning activity to make a

understanding amongst students, conversation with friends, educators, develop information transferring, and upgrade students research knowledges (Redecker et al., 2010). In addition, Meyer (2010) stated that, using social media sites in finishing class works guide to higher level of performances as maintained by Bloom's taxonomy. Especially in online conversations.

Collaborative learning is a performance that consists of the process wherein a crew of students interact with one another to solve some issues solving task in a connective circumstances (Alavi, Wheeler & Valacich, 1995). It is fully based on the structure that the information is generated within a group of students where students energetically interact by transferring their knowledges and experiences in a shared framework. The process of built the meaning, performance, and abilities improvement needs active interaction with the things and persons in a social environment. In this regard, social media and innovative software's are being considered as the powerful intervenors of collaborative learning, by way of giving academic assistance to the students regarding improving innovative thinking, transferring study guidance, and competence in an effective network (Schrader, 2015). Maloney (2007) stated that, the interactional and collaborative performance of social media sites amplify the entire learning performances of the students by motivating their communal knowledges consists of social obedience, teamwork, and improvement of growing connections as important elements of learning (Gehlbach, 2010).

4. CONCEPTUAL FRAMEWORK



4.1 HYPOTHESIS

H₁: There is a significance between collaborative learning and social media adaptation

H_{1a}: There is a significance between interactive with peers and collaborative learning

H_{1b}: There is a significance between interactive with teachers and collaborative learning

H_{1c}: There is a significance between engagement and collaborative learning

H₂: There is significance between social media adaptation and learning performance

H_{2a}: There is a significance between perceived ease of use and social media adaptation

H_{2b}: There is a significance between perceived usefulness and social media adaptation

5. RESEARCH METHODOLOGY

Data collection process took place in southern districts of Tamil Nadu and 241 samplings were collected from engineering students through questioner later which was tested by AMOS software to validate the structural equation model. Interaction with Peers, Interaction with Teachers, Engagement, Collaborative Learning, Social media Adaptation, Perceived Ease of Use, Perceived Usefulness and Learning Performance were involved in the model. The methodological strategy of this research study permit the researcher to explore research question being presented and evaluate and analyze the statistics with respect to the research hypotheses.

6. ANALYSIS AND INTERPRETATION

6.1. STRUCTURAL EQUATION MODEL

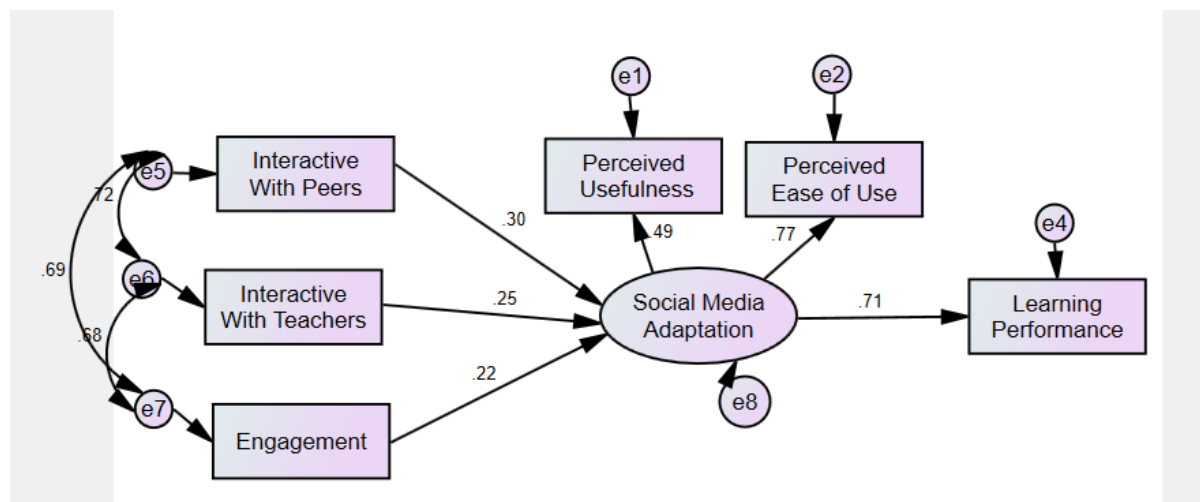


Figure 2: Proposed SEM Model

Table 1: Model fit statistics

Model fit statistics	Suggested value	Actual value
Chi square/df	≤ 5.00	2.857
Goodness of Fit Index (GFI)	≥ 0.90	0.977
Adjusted Goodness of Fit Index (AGFI)	≥ 0.80	0.921
Normed Fit Index (NFI)	≥ 0.90	0.973
Comparative Fit Index (CFI)	≥ 0.95	0.982
Root Means Square of Approximate (RMSEA)	≤ 0.08	0.088

Model fit indicate the Bentler and Bonnet (1980) study indicated that the model fit can be checked by RMSEA (Root Means Square of Approximate) which is less than 0.08, has a good fit and less than 0.05 has a closer fit. The Joreskog and Sorbom (1988) study proposed that GFI (Goodness of Fit Index) should be above 0.9 and AGFI (Adjusted Goodness of Fit Index) should be above 0.80. Bentler study suggested that CFI (Comparative Fit Index) should be greater than 0.9. The value of AGFI (0.921) and CFI (0.982) indicate the adequate between the structural model and sample data. The GFI of 0.977 and RMSEA of 0.088 revealed the goodness of fit. This confirms that the available data set moderate the fits into the proposed structural model.

Table 2: Empirical Results of the Proposed Model

Structural path		Estimate β	S.E	C.R.	P	Hypothesis
Collaborative Learning	← Interaction with Peers	0.304	0.069	3.171	0.002	Accepted
Collaborative Learning	← Interaction with Teachers	0.246	0.077	2.613	0.009	Accepted
Collaborative Learning	← Engagement	0.225	0.066	2.485	0.013	Accepted
Perceived Usefulness	← Collaborative Learning	0.489	0.093	6.617	***	Accepted
Perceived Ease of Use	← Collaborative Learning	0.774	0.082	9.012	***	Accepted
Learning Performance	← Collaborative Learning	0.713	0.080	9.045	***	Accepted

Significant at 1% level

Above table shows causal relationships between Social media adaptation with collaborative learning (interaction with peers, interaction with teachers and engagement), perceived ease of use, perceived usefulness and students'

academic performance. From table the beta value, error value and t-value corresponding to the causal relationship between Social media adaptation with collaborative learning (interaction with peers, interaction with teachers and engagement), perceived ease of use, perceived usefulness and students' academic performance.

All the Collaborative Learning variables (Interaction with Peers, Interaction with Teachers & Engagement) have positive impacts on Social Media adaptation and their beta values are 0.30, 0.25, and 0.22 respectively. The Social Media Adaptation (Perceived Ease of Use and Perceived Usefulness) have positive influence on Learning Performance their beta values are 0.49 and 0.77 respectively and collaborative learning have positive influences on Learning Performance (beta=0.71).

7. SUGGESTION AND CONCLUSION

Educators can use social media devices in educational activities with an objective to develop students learning activities and to actively participate the students in a collaborative performances. Teachers will improve greater innovative activities amongst students by motivate them to investigate the content materials in more creative ways. Universities can also play a vital role by inspecting additional chances to integrate social media into learning and teaching activities. In addition, there is additionally require to identify the source for learning interferences, cyber abuse, and blended associated to some sorts of social media.

Our findings shows that perceived ease of use, perceived usefulness, and learning performance have a significant positive relationship with social media usage. These outcomes indicate that social media has obtained vogue amongst individual due to the fact of its comfort and nationwide usage. Students like social media and use it for relationship creating, information transferring, and teamwork. Likewise, there was shows a significant positive connection amongst perceived usefulness and learning performance. The outcomes of this research showed that the social media sites play as a vital device to facilitate the improvement of learning circumstances by motivating collaboration amongst students.

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