

Using Social Media In Higher Education: Enhancing Students' Learning And Engagement

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Received: November 29, 2017| Revised: January 11, 2018| Accepted: January 15, 2018

Published online: March 05, 2018

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Abstract Social Networking Websites such as Youtube, Twitter and Facebook are an important part of college students' lives. The purpose of this study is to examine how incorporating social media into teaching process can contribute to students' learning, engagement, and their academic performance. Primary Data is collected through an online pre-test and post-test survey administered to a sample of 90 Daulat Ram College students (45 in the experimental group and 45 in the control group). With the experimental group, social media is used for various types of academic and co-curricular discussions. Engagement was measured using a 24-item scale based on the National Survey of Student Engagement. The two group's differences in engagement and marks are analyzed using fixed effects analysis of variance (ANOVA) model (using statistical software SPSS).

This study addresses the following Research Hypothesis

H1: Encouraging the use of Social media for educationally relevant purposes has positive impact on marks of students (Academic Performance)?

H2: Encouraging the use of social media for educationally relevant purposes has positive impact on students' engagement?

This paper investigates the acceptability of social media for collaborative learning and the possibility of using it as an effective teaching tool.

Keywords: Social Media, Engagement, Academic Performance, ANOVA model, Daulat Ram College

1. INTRODUCTION

New developments in the digital technology have dramatically changed the way individuals and families communicate and socialize. In fact, a major

Issues and Ideas
in Education
Vol-6, No-1
March 2018
pp. 29–39

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proportion of total number of users who engage in online social networking activities are the university students. There are 142 million facebook users in India with 69 million accessing it daily.

Incorporating social media in higher education can be beneficial to both students and instructors. Instructors will be able to improve their teaching methods and can stimulate students' thinking by posting messages or launching dialogs with specific students even after the normal class time. They can design and develop course related online social networking websites to enhance student learning. With such technology, students can discuss the study tips among themselves and with the instructors. Moreover, they can communicate and extensively share knowledge among the peers. Improvement in students' learning and academic performance can be expected through such kind of intensive communications and knowledge sharing between faculty members and students, and among the diverse group of students.

Social media can provide the means to learn and apply the theory. It can be used for improving the teaching and learning processes. It encourages collaborative learning, group studies. Today eBooks and online videos are very good source of learning. They prove to be so knowledgeable. Social media helps in the sharing of great ideas related to studies and education as well. It helps like-minded people to get together and plan their studying schedule. The best part is that social media can be used as per our own convenience. People can access study material on social media as per our own convenience. There are no restrictions. Also, Social Media can prove to be great for the students who hesitate to speak in class.

Thus, Social media can act as a great tool for uplifting the educational standards of the society. The classroom teaching methods of lectures, pin drop silence in class and continuous staring at books would be replaced by long hours of carefree interactions among students and teachers and creation of a cheerful and knowledgeable environment. These websites can be accessible almost everywhere in the world which is the advantage of inculcation of social media in education. It can help children to learn the benefit that technology provides in their education and learning process. Even those students who show lack of interest in offline studies may achieve great heights through online education. The interaction among students will increase and even the shy ones start to become extrovert.

The benefit of using social media for education purposes is not only limited to instructors but in fact a greater part of benefit lies with the students. Social media allows both the academic and co-curricular engagement of the students, which are powerful forces in students' psychological development and academic success. It provides a medium to extensively communicate

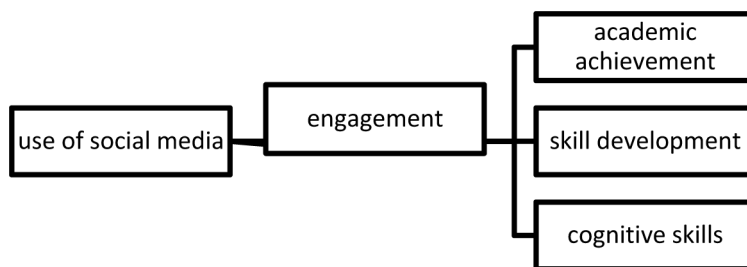


Figure 1: The importance of Engagement in Teaching-Learning process.

and share knowledge among the peers and teachers. This allows students to improve their knowledge acquisition process and their academic performance. Continuous discussions among the students allow dissemination of knowledge and development of critical thinking skills. There is a move from rote learning which has been prevailing in India since ages towards creative learning and better understanding of subjects. Social media can prove to be a powerful medium to improve communications skills of the students. Students who are too shy are much more comfortable to voice out their opinions by using this new form of communication.

2. SCOPE OF STUDY

Many current studies suggest that using social media for educational purpose offers new opportunities for innovation and improving the quality of education. McCarthy (2010) reported that in his 2009 study “using *Facebook* as part of a blended learning approach, the vast majority (73-88%) of students felt that the Facebook group activities helped them develop academic and social relationships with their classmates”. There have been attempts to incorporate various social media tools (such as microblogs, video-sharing sites, blogs and social networking) into the teaching-learning process particularly by faculty members with an inclination towards using new inventions in educational technology.

In a study, it was found that students who participated in social media felt more connected and could establish closer ties with their peers than those students who did not participate in social media (Annetta et al., 2009; Jackson, 2011; Tomai, Rosa, Mebane, D’Acunti, Benedetti, & Francescato, 2010). In addition to linking existing peer groups, social media helps in bridging the diversity among the students by providing them a platform to interact with one another (Junco et al., 2011; Krause & Coates, 2008; Kuh, 1993, 2009; Mehdiuezhad, 2011; Pike et al., 2011). Further, these peer connections made even those

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students comfortable to voice their opinion that were initially shy in class discussions (Arnold & Paulus, 2010; Junco et al., 2011; Rambe, 2008).

Social media not only facilitates networking and connecting various individuals coming from various diverse backgrounds, it also provide medium of discussion and enhancing course related knowledge even beyond the boundaries of the classroom (Fewkes & McCabe, 2012; Hurt et al., 2012; Junco et al., 2011; Top, 2012).

Terry Anderson's (2008) model states that online education must be learner-centric, knowledge-centric, assessment-centric, and community-centric, and must make use of existing learning theories, and also transform them to fit online contexts . Rosenfield (2009) argued that prohibiting the use of social media in higher education "prevents the effective use of technology in teaching, the acquisition of vital 21st-century literacy skills by students, and the professional development of teaching staff". Another study by Baran (2010) identifies limitations involved in using Facebook for academic purposes, concluding that not all students are willing to accept facebook, twitter etc as a medium for learning and exchanging ideas.

Engagement is conceptualized as the degree of curiosity, attention, time, interest, passion and enthusiasm students invest in higher education that result in desired college outcomes. Engagement include various factors, including collaboration, discussion with diverse group, reflective and integrative learning, interactions with faculty, investment of time in co-curricular activities, and higher order learning. Kuh (2009) emphasizes two major facets: academic (or in-class) engagement and co-curricular (or out-of-class) engagement in educationally relevant activities, both being crucial for students' all-round success.

Two studies have recently focused on studying the relationship between social media and engagement and have found significant relationships between time spent on social media and student engagement. A positive relationship was found between usage of social networking websites and student engagement in studies by Heiberger and Harper (2008) and HERI (2007).

3. STATEMENT OF PROBLEM

The aim of this study was to examine whether it is effective to utilize online networking sites to design collaborative learning activities, e.g., exchange of project information, to increase interactivity and learning among individual students, and develop a rich environment for socialization.

Currently, the research on the use and benefits of incorporating online social networking sites into the educational process is limited in India to a few small studies .**This project is first-of-its-kind that has been undertaken in India.**

This study will address the following **Research Hypothesis-**

H1: Encouraging the use of Social media for educationally relevant purposes has positive impact on marks of students (Academic Performance)?

H2: Encouraging the use of social media for educationally relevant purposes has positive impact on students' engagement?

4. RESEARCH METHODOLOGY

4.1 DATA COLLECTION

To address the research questions, data was collected from a sample of 90 students at Daulat Ram College, University of Delhi during the summer semester through **an online survey** in the college. 45 students were randomly assigned to the experimental group and 45 to the control group. The experimental group used social media website like Facebook for academic and co-curricular related activities while the control group did not.

Students were asked to participate in the study by taking a pre- and post-test survey. A detailed questionnaire was prepared and the link was sent to the participating students. Students took a survey prior to the start of the course to assess several factors including:

- Number of hours per week spent on social networking websites such as Facebook, Twitter etc. to assess the current social networking habits of college students.
- Access to WIFI- enabled computers at college and at home/in hostel
- Access to social-networking websites via mobile phone

The following activities were done with the experimental group through social media in order to address the research questions-

1. Organized **study groups**
2. **connected** students with each other and with instructors
3. provided **assignments** to students
4. **academic discussions**
5. provided information on academic and co-curricular activities on campus
6. **class reminders**
7. **posting of links, notes, or videos** related to course content.

At the end of the semester, students completed a post-test online survey to determine whether there had been changes in attitudes, values, and beliefs

about social networking and its relationship to education, as well as the nature of these changes.

4.2 MEASURE

Engagement scale: Pre- test and post- test engagement scale. Engagement was measured using a 24-item scale based on the National Survey of Student Engagement.

The *Statistical Package for Social Sciences (SPSS)* was used to analyze the data for this study.

Engagement scale items 1–17 were coded using a four-point Likert scale ranging from ‘Very often’ to ‘Never’. For our analyses, ‘Never’ was coded as 1, ‘Sometimes’ as 2, ‘Often’ as 3, and ‘Very often’ as 4. Question 18–20 were presented as a seven point Likert scale. Responses for question 21-24 were coded 1 for ‘Very little’, 2 for ‘Some’, 3 for ‘Quite a bit’, and 4 for ‘Very much’. An aggregate engagement score was created using the sum of the individual items.

4.3 Engagement Indicators Used

Engagement Indicators

- Collaborative Learning
- Discussion with Diverse
- Student- Faculty Interaction
- Reflective & Integrative Learning
- Effective teaching practice
- Higher Order Learning
- Quantitative Reasoning

TESTING RESEARCH HYPOTHESIS:

4.4 Social media and academic performance-

Dependent Variable- Overall Semester Marks (measured by CGPA)

The differences in academic performance between the two groups- control and experimental group are analyzed using **fixed effects analysis of variance (ANOVA) model**.

4.5 Social media and engagement-

In order to assess changes between the pre- and post- test measurement of engagement, we defined **Difference in Engagement score=Post- test**

engagement score -pre-test score. Dependent variable is Difference in Engagement Score.

The differences in engagement between the two groups- control and experimental group was analyzed using **fixed effects analysis of variance (ANOVA) model.**

5. ANALYSIS AND RESULTS

Table 1 shows the descriptive data for academic performance (measured by CGPA) by groups. The control group (group 1) has mean score 5.60 and standard deviation 2.56 whereas the experimental group has mean score of 7.05 and standard deviation of group 2.

Table 2 shows that the experimental group had significantly (P value-0.014) higher academic performance as compared to control group.

Table 1: Descriptive Statistics.

Dependent Variable: Marks			
Group	Mean	Std Deviation	N
1	5.60	2.560	45
2	7.05	2.657	45
Total	6.33		90

Table 2: Fixed Effect ANOVA Model.

Pairwise Comparisons					95% Confidence Interval for Difference ^b	
(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig. ^b	Lower Bound	Upper Bound
1	2	-1.450*	.575	.014	-2.594	-.306
2	1	1.450*	.575	.014	.306	2.594

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Table3 shows the descriptive data for engagement score difference by groups. The control group (group 1) has mean engagement score -0.875 and standard error 1.265 whereas the experimental group has mean engagement score of 3.7 and standard error of 1.265.

Table 4 shows that the experimental group had significantly (P value-0.013) higher difference in engagement scores as compared to control group.

Table 3: Estimates

Dependent Variable: Engagement				
95% Confidence Interval				
Group	Mean	Std. Error	Lower Bound	Upper Bound
1	-.875	1.265	-3.394	1.644
2	3.700	1.265	1.181	6.219

Table 4: Fixed Effect ANOVA model

Dependent Variable: Engagement						
95% Confidence Interval for Difference ^b						
(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig. ^b	Lower Bound	Upper Bound
1	2	-4.575*	1.789	.013	-8.137	-1.013
2	1	4.575*	1.789	.013	1.013	8.137

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

We also conducted a fixed effects ANOVA model with pre-test engagement scores as the dependent variable and found that there were no pre-existing differences in engagement.

6. FINDINGS OF THE STUDY

- Encouraging the use of Social media for educationally relevant purposes has positive impact on marks of students (Academic Performance).
- Encouraging the use of social media for educationally relevant purposes has positive impact on students' engagement?

7. IMPLICATIONS

Our results suggest that Social Networking websites can be used to engage students in ways that enhances learning and encourages intellectual and overall development.

Students collaborated through Facebook on projects assigned to them and developed interpersonal skills. They also shared their strengths and actively interacted with each other by sharing their experiences. Facebook also helped students to develop critical thinking, creating connections among the concepts and develop problem solving ability. It improved the interactions between the

students and faculty members beyond the classroom and offered the deepest kind of learning experiences by enabling students to ask questions related to their own struggles and interests, to take responsibility for their own intellectual development, and to make more personal connections with their teachers. Moreover, it helped in forming study groups which allowed students to learn a lot more, in a lot shorter time in enjoyable manner. Lastly, Facebook helped in increasing interaction among the diverse groups, encouraged students to grow outside their boundaries and motivated the students to participate online who otherwise were not active in classroom.

The development of teaching and learning methods through social networking websites stimulates, motivates and enables individualized learning experiences, the magnitude of which could not be replicated in the classroom. Through the use of these media, the digital literacy of students is promoted, which against the background of increasing digitalization and globalization of the job market, is a key requirement of higher education.

8. LIMITATIONS OF STUDY

There are limitations to the current study. The foremost is that the study was conducted on a small sample and may not be representative of the entire population ie experiment was conducted only on the students of one educational institute of Delhi University. It will be important to do the same study on a more diverse group of students (in terms of race, ethnicity gender etc) and including students of all institutions.

Another limitation is that increased engagement among students might be result of increased engagement of faculty. This study has been unable to remove that effect. The future studies may like to examine the results again by conducting the same study.

It is important to mention that as a great transition has taken place from earlier conventional ways to internet mediated facilities for fast as well as better outcomes in all aspects from education to business to banking etc, the darker side of this transition also cannot be neglected. As much as internet has been a boon it has also been a cause for several cyber crimes, cyber bullying. Also the various limitations that have been posed because of the digital divide between the rich and the poor have left a certain section of the society deprived from the access of this great technology.

CONCLUSION

The aim of this study was to examine whether it is effective to utilize online networking sites to design collaborative learning activities, e.g., exchange of

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project information, to increase interactivity and learning among individual students, and develop a rich environment for socialization. This study provided the experimental evidence that using digital technology in educationally relevant ways can increase student engagement and that social media can be used as an educational tool to help students collaborate and facilitate their learning. The world of education is currently undergoing a massive transformation as a result of the digital revolution and social media can play an important role. New technologies create learning opportunities that is taking their education out of school into homes, libraries, Internet cafes, where they can decide what they want to learn, when they want to learn, and how they want to learn. As there is continuing growth in the use of social media by college students and faculty, it is hoped that this study will motivate further studies in the field of education to optimally use emerging technologies for educational purposes.

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