The Effect of Social Media on Student’s Engagement and Collaboration: a case study of University of Venda using Facebook

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Abstract - In today’s e-society, the role of the social media is increasingly gaining momentum. It is known to play a vital role in collaboration, community building, participation, and sharing of information. As digital applications, several social media exist and vary in their purposes. In particular, the educational section is one giant beneficiary of this development involving impact creation on students and instructors. However, despite the widespread use of social media by students and instructors, very little empirical evidence exist regarding its impact on student’s collaboration and engagement. In this study, a case study was performed in University of Venda where students offering the module Foundation Information Technology (FIT) were used as participant. Facebook social network is the platform for various academic activities and questionnaires were designed and used in collecting data from the students. The goal of our study is to investigate the impact of the social media on students, specifically, the level of collaboration between them while using Facebook during in and out of classroom. The results obtained showed that Facebook uses has a significantly increased impact on student’s collaboration and engagement than face to face contact. Our analysis indicated that students, tutors, and instructor were highly engaged in the learning process in ways that transcended traditional classroom activities. This study provides experimental evidence that social media can be used as an educational tool to help students to collaborate and engage.

Keywords: Social media, Facebook, student, collaboration, engagement, FIT

1 Introduction

In today’s e-society, the role of the social media is increasingly gaining momentum. Social media can be defined as a group of Internet-based applications built on the ideological and technology of Web 2.0 which allow the creation and exchange of user generated content [1]. It is known to play essential role in collaboration, community building, participation, and sharing. One vital aspect of social media is that it uses mobile and web-based technologies to create highly interactive platforms through which individuals and communities share, discuss, and modify user-generated content [2]. This technology exist in different forms such as internet forums, web-logs, social-blogs, micro blogging, wikis, podcasts, rating, social bookmarking and social networks [3]. Examples of existing social networks which are popular and gained widespread use are Facebook, Skype, MySpace. Social media has found huge application in many areas in which the educational sector is one of the beneficiaries.

The Foundation Information Technology (FIT) or simply FIT1540 is a module offered at Science Foundation Unit of University of Venda, South Africa (SA). The foundation programmes was designed for students whose do not meet the requirements for direct entry into an undergraduate degree programme. In other words, it is a pre-degree program that runs for a year, designed to provide students with potential who have not met the normal admission criteria with knowledge and skills to succeed in science or science related degrees and bridge the gap between their highest education qualification and the academic qualifications accepted. The FIT module is aimed at developing interest and familiarity with modern computer technologies as well as encouraging their productive use. The module has no prerequisites and was designed specifically for students with little or no prior computing background to provide them with computer skills, understanding and gaining confidence to use the hardware and software critical for their education or professional development. However, the main challenge faced by the programme is high demand for admission access which in turn, give rise to exponential growth of student’s number in many courses and subjects offered and FIT is not an exception. This however poses a serious teaching challenge involving large number of students in a small class. Consequently, we found it difficult getting students to collaborate and engage inside or outside the classroom since the University has no e-learning platform. In addition, this situation goes a long way affecting the performances of the students.

In other get rid of this impending challenge, we introduced an online blog using Facebook as a platform for various academic discussions, posting of all information about the course including tutorial, test-memos, feedback and
communiqués about the course between the students, tutors and their instructor. To access the impact of the platform on the students in terms of collaboration and engagement to see if it has positive or negative effects on the students as against face to face contact, a sample was drawn and questionnaire was designed and used in collecting data from the students. The results obtained showed that the use of facebook in the module has significantly increased impact on student’s collaboration and engagement than face to face contact. Our analysis indicated that students, tutors, and instructor were highly engaged in the learning process in ways that transcended traditional classroom activities. The experimental evidence shows that that social media can be used as an educational tool to help students to collaborate and engage. Therefore, the objective of this study is to investigate the impact of the social media on students, specifically, the level of collaboration between them while using facebook in the module during in and out of classroom.

The paper is organized as follows; section 1 is the introduction, section 2 provides information on students engagement and collaborations, section 3 gives the challenges faced by the FIT1540 class, section 4 explain the solution approach, while sections 5 and 6 gives the research goal and methodology respectively. Section 7 presents the research results and discussions while section is the paper conclusion.

2 Student Engagement and Collaborations

Student engagement is of the buzzword identified in the educational sector in 1996 and is considered a major topic in higher education [11]. The phrase is frequently used to denote the readiness, need, desire and compulsion of students to actively participate in everyday school activities involving things like attending classes, adherence to instructor’s directives in the class, and submitted required course works or assignments [10,11]. It is aimed at achieving success in the learning process as well as promoting high-level thinking for lasting comprehension. The term at large is used to describe significant student participation throughout their learning environments as well as in extra-curricular activities in the campus life that binds a school, college or university which are beneficial to their curricular studies.

Student engagement is usefully a term considered to be ambiguous since it includes both psychological and behavioral component. In one way, it be can view as the way students behaves and in other way, it can viewed as a psychological investment in learning in order to understand their studies material and incorporate them in to their lives. Many researches have been carried out on student engagement in the literature and analysis showed it is critical to the quality of the system. For instance, one study suggested that student engagement could be used as teaching quality indicator of an institution. Other have defined it in terms of effort, motivation, time-on-task with a suggestion that there is a casual relationship between the engaged times and academic achievement [7]. For student engagement to be established and sustained, it requires that instructors or teachers actively seek to create the conditions that foster this reaction.

Accordingly, for the past decades till date, collaboration has played a critical role in the success of teams, organizations, to mention but a few. In the education circles, educators have recognized the value of collaborative learning. They widely recognize that students do not learn well when they are isolated and collaboration has to be fostered. Indeed, students must overcome isolation in order to collaborate in their learning such as peer review workshops, collaborative research assignments, group presentations, collaborative papers, discussion groups, and so on for active learning to exist. With this act, students are opportune to become more deeply engaged with learning, and with one another [4]. In general, collaboration between students leads to a better understanding of the learning activities which is evidenced in many existing empirical studies. Collaboration can be achieved in many ways. Social network services (SNS) such as Facebook, Skype, Twitter, MySpace, etc. are among such ways. These platforms can be used to host events, debates, reviews, aggregate resources, support courses and reading circles as well as providing space for discussing ideas for learning.

Our intuition is that when students are allowed to actively engage and collaborate, it will make whole lots of difference in achieving their academic successes. Based on the challenges faced by our science foundation programme which drastically affects the level of student engagement and collaborations, our goal here is to evaluate the use of Facebook that tries to bridge the gap created. We aim to evaluate the daily activities inside and outside the classroom to see the level of engagement and collaboration between student’s communities, tutors and their lecturers in the teaching and learning process in FIT 1540 module.

3 Challenges Faced by FIT Class

In our foundation programme, the main drive in the use of Facebook blog is the large-enrolment atmosphere that resulted to having large classes in small rooms. One immediate consequence of this large class is that students often become disengaged or cut-off from the class. In addition, interaction between students and the lecturer is difficult to achieve. This impending challenge emanates from the fact that in large classes, though some students may show good peer group adjustment and social interaction ability with the lecturer, but they may display communication anxiety when asked to answer questions, presentation, or engage in an activity that can be evaluated. Individual response to lecturer impromptu questions is limited and
sometimes the students feel intimidated. Another important issue is the collaboration between students when carried out their course work. As we know, collaboration plays a vital role of helping students to understand learning as a process, learn from one another and increase their sense of mastery of what is often a complex and difficult task. Like we know, the best way to learn something is to teach it. Also with the large class, the issues of passing information from time to time for some changes such as assignment submission date, time table change, cancellation of lecture or test dates, corrections of marks, etc. to all students at the same time poses also poses a big challenge. Due to the above mentioned challenges, we decided to use Facebook to deal with these challenges through a device the student used the most in class or outside the classroom which is the mobile cell phones.

4 Our Solution Approach

SNSs such as Facebook, Twitter, and MySpace are the typical application of Web 2.0 technology which has gained huge popularity and widespread use among multiple age groups in same or different educational institutions, places, and countries over the past few years. In the educational perspective, students and employees differ in their level of education, access to resources and age group. However, what is common among the two is actually their level of connection and use with the social networks integrated in their phones. In the same vein, teachers and students are not left out. Social networks offer them the opportunities to cultivate the student teacher relationship, which can ultimately create a positive learning experience for both parties [3]. For changes to happen, it will take time for both students and the teacher to develop new skills.

Therefore, our approach is to use the Facebook blog as a means of engaging and collaborating between students and instructors in order to develop new skills and rid the existing challenges. Mobile phones are used to access the Facebook by students in order to enable them directly collaborate, engaged by exchange questions with their lecturer and getting feedback posting on the wall. Furthermore, it will enable them to browse our blog for additional information, and instructions for test and practical.

5 Research Goal

Evaluation plays a significant role in accessing or measuring the effectiveness of processes and products. It has found huge application in all existing disciplines such software engineering, social sciences, engineering, etc. The basis of evaluation is to support effective decision making process. We have introduced the use of Facebook in our science foundation FIT 1540 module and has been used by the students and the instructor for quite some times but we do not know if it is creating the expected impacts on the student lives. In order to make decisions on either to improve it use or discontinue it use, evaluation has to be performed. Therefore, our goal in this study is the measure the level of engagement and collaborations between students, tutors, and instructor in and out of the classroom while using Facebook.

6 Research Methodology

In this section, we shall present the methodology used in performing our study.

6.1 Participants

The target participants of this include all the students offering the FIT 1540 module of the foundation programme at the school of mathematical and natural sciences, University of Venda. The statistics of the participants are 70% female and 30% male. With these percentages, majority of the students were known to come from different places around the Limpopo province while 65% of them are in full foundation programme and 35% enrichment programme. See Table 1.

Table 1: Distribution of Participants (Male and female)

<table>
<thead>
<tr>
<th>Gender</th>
<th>G1</th>
<th>G2</th>
<th>G3</th>
<th>G4</th>
<th>G5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>16</td>
<td>16</td>
<td>3</td>
<td>10</td>
<td>15</td>
<td>60</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
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</tbody>
</table>

6.2 Data collection

As stated above, we designed an evaluation questionnaire which we used in collecting data from the students. The setup of questionnaire was based on a diversified method of finding out the time spend on Facebook inside and outside the classroom, the level of collaboration between students in using Facebook in the FIT 1540/1640 modules during the 2012 academic year. In more details, the questions consisted of information about the participants place of residence (i.e. campus or out of campus), their access to the internet, the type of devices used (Computer or cellphone), their attitudes towards the use of their device to access internet, and finally the use of Facebook in their day-to-day lives and its impact in the module FIT 1540/1640. Some of these questions were to find the needed information and others to elicit suggestion and comments from the students.

The data were collected and analysed by the instructor responsible. A sample of 150 students from both foundation and enrichment offering FIT1540/1640 modules was drawn up from student’s population and used for the study. The genders of students who participate were 90 females and 60 males as shown in the table1 above.
7 Research Results and Discussions

In this section, we present the results obtained from the study which is based on the data collected as discussed above. Results were analyzed and presented in various sections below such as information about participants, program in which they are registered (full foundation or enrichment), the age’s group of participants, type of mobile phones that they are using (normal phone, smart phone or PDA), whether they have a Facebook account and lastly between mobile phone and Computer which device they mostly prefers to use. From answers collected, the students appeared to be very confident especially for most questions regarding the usage of Facebook in their day-to-day life, either inside or outside the classroom.

7.1.1 Participant age group

Today’s young people are called “Digital Native” generation since they can get use to these new technologies Web 2.0, mobile phone technologies, social networks etc in a short time. In this question, we were interested in knowing the age group of these students. As shown from the chart diagram in Fig. 1, majority of the participants were between 15-19 years old of age.

![Figure 1: Age group](image)

7.1.2 Do you have a mobile phone?

Two scales were included in the questionnaire which requires knowing the type or model of devices they owned. For instance, we asked about a mobile phone and which type of mobile phone (e.g. smart phone or normal phone). The chart below demonstrates the result obtained. It shows that 99% of the classroom had a mobile phone and 71% of those devices are smart phone with the capabilities of accessing the internet, send instant message, receive radio or TV programmes, and other applications. This signifies that most of students had a small computer in their pockets, purses and backpacks not only as their primary means of communication but also as a mean of studying and learning.

![Figure 2: mobile phone owners](image)

7.1.3 Do you have a facebook account?

With our study platform, it was imperative to find out the average number of participants that had Facebook account and applications on their mobile phone. As represented in Fig. 3, the data shows that 90% of the participants have Facebook account and 20% do not have and don’t use Facebook for personal reasons.

![Figure 3: People having Facebook account](image)

7.1.4 How often do you use your mobile phone for FIT 1540/1640 Facebook blog?

This question was directed at finding out how often students use their mobiles to access Facebook for class-related matters. The diagram below illustrates the results obtained from the participants.

![Figure 4: Facebook access on mobile](image)

As shown in Fig. 4, about 73% of the students who offered FIT 1540/1640 used their mobile phone every day to see the update in our blog as opposed to 17% who used it a few times a day and the rest is 7% a few times a week or hardly ever represent by 3%.
7.1.5 Have you ever inbox or post to colleagues or lecturer of FIT 1540/1640 facebook blog using your mobile phone?

By seeing the percentage of the students who accessed our Facebook blog in Fig. 4, you will notice is 73%. This was important to find out the contribution of the student while accessing the blog. This forms the basis of the question which is to know the number of students who were just visiting and those who were not participating at all. Below is the result.

![Chatting with others or Lecturer](image)

Figure 5: Chatting with others or Lecturer

By comparing Fig. 4 and Fig. 5, the result shows that not all the students were participating in discussion even though they were accessing the Facebook. The result shows that 57% manage to chat to other students and the lecturer, 27% sometime use to do that and 17% never done that.

7.2 Other findings

Participants were asked to indicate whether they stay in or off campus to see the impact of this study in assisting students with information about the module and feedback for their tests, practical and assignments. Since you know student who stay inside the campus may have more advantages in term of getting information on time and the ability to see the lecturer during the class and after the class than those who stay outside the campus. The finding here show that 62% of the foundation students were staying outside campus and only 38% were staying inside the campus, it is clear that student did benefit in term of assistance from the course. This will be confirmed in the next section which is about the attitude of the students toward using Facebook in the module.

7.3 Students’ attitudes

As said previously for other changes to occur, it will take time for both students and the teacher to develop new skills. By using this technology the students were asked to specify their scale of agreements or disagreements to measure their attitudes and perceptive vis-à-vis the use of Facebook integration using mobile phone in learning for this module and in general.

The result is presented in Table 2 in the appendix and it displays the attitude of the participants toward the use of their mobile in learning. This result is basically what students have experienced by using this technology during FIT module. With the result, 70% agreed that the mobile phone help them to get the needed information in our Facebook blog, 7% disagreed. Accordingly, 80% of participant agreed that the use of mobile help them to interact and get feedback from the lecturer as against 10% who disagreed with them. One interesting fact is that 85% of the participants used their mobile phone to access the class Facebook blog which was helpful and 2% disagreed in that fact. It is also shown that 82% of participants found it easier to communicate with the lecturer and other students as against 13% who disagreed.

Furthermore, a large number of about 83% of the participants believed that the technology helped them to engage and be informed about the module in and outside the classroom and 3% disagreed in that fact. Finally, 80% participants believe that the technology must be used in the entire foundation and enrichment programme while 4% disagreed. By comparing the data in Table 2 and Fig. 5, you will notice that 87% of the class participants were actually engaged.

8 Conclusions

The use of social network has dominated our life in the 21st century. Despite the widespread use of social media by students and its increased use by instructors, very little empirical evidence is available concerning the impact of social media use on student collaboration and engagement. In this paper we have demonstrated how Facebook can be used among student population offering a particular module can get engaged and collaborate effectively. We demonstrated this by using students of University of Venda at the foundation level. With the result obtained, it shows that majority of the students had mobile phone to access the Facebook which helped them to engaged and collaborated with peers, tutors, and lecturer. We therefore conclude that, social media could be an effective tool for students to engage and collaborate as well as succeed in their academic activities. At this point, we recommend that further research have to be carried out to validate this claim.

9 References


Bulger, M.E., Mayer, R.E. Almeroth, K.C & Blau, S.D (2008), Measuring Learner Engagement in Computer Equipped College Classrooms. 17(2), 129-143


Table 2: Student’s Attitudes

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Was the information in our facebook blog helpful to you in this module by using your phone</td>
<td>17%</td>
<td>70%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>2. The use of mobile help you to interact and get feedback from the lecturer</td>
<td>7%</td>
<td>80%</td>
<td>10%</td>
<td>3%</td>
</tr>
<tr>
<td>3. The FIT 1540/1640 Facebook blog was it helpful using your phone</td>
<td>2%</td>
<td>85%</td>
<td>2%</td>
<td>11%</td>
</tr>
<tr>
<td>4. I find it easy to communicate with the lecturer and other students using your phone</td>
<td>5%</td>
<td>82%</td>
<td>13%</td>
<td>5%</td>
</tr>
<tr>
<td>5. I was engage and inform about module with my mobile in and outside the classroom</td>
<td>4%</td>
<td>83%</td>
<td>3%</td>
<td>14%</td>
</tr>
<tr>
<td>6. It will be good to use this technology for other module</td>
<td>7%</td>
<td>80%</td>
<td>4%</td>
<td>13%</td>
</tr>
</tbody>
</table>