

The Effect of Social Media on Student's Engagement and Collaboration in Higher Education: A Case Study of the Use of Facebook at a South African University

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ABSTRACT The goal of the study was to investigate the impact of the use of social media on student learning, specifically, the level of engagement and collaboration between them while using Facebook. Students enrolled for the module 'Foundation Information Technology (FIT)' at one South African University were exposed to the Facebook social network as a platform for various academic activities. Grounded in the quantitative paradigm, a semi-structured questionnaire was administered to the students at the beginning of the course to find out their familiarity with Facebook and at the end of the module to measure impact. The results obtained showed that Facebook use has a significantly increased impact on student's collaboration and engagement. This paper concludes that social media can be used as an educational tool to help students to collaborate and engage and recommends that universities embrace the uses of social media for teaching and learning..

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 (Kaplan and Haenlein 2010). Social media is known to play an 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 (Jan and Hermkens 2011). This technology exists in different forms such as internet forums, web-logs, social-blogs, micro blogging, wikis, podcasts, rating, social bookmarking and social networks (Mazer et al. 2007). This study looks at the use of Facebook at one South African university. Before moving

on to look at the use of social media in general and Facebook in particular for engagement and collaboration it is essential to unpack the concepts of engagement and collaboration.

Student Engagement

Strydom and Mentz (2010: 4) attribute the origins of student engagement research to Tyler's focus on the importance of time on academic task in the 1930s, through to Astin's research on student involvement in 1984, Tinto's research on social and academic integration in 1987 and research by Chickering and Gamson on good practices in undergraduate education (1987). They argue that each of these fields of investigation has informed the emergence of the field of student engagement led by Prof George Kuh since 1998.

The term student engagement is used by some in the literature 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 (Coates 2006; Kenny et al. 1995). Ivala et al. (2013) define student engagement as the amount of physical and psychological energy that students devote to educationally purposeful activities. For Kuh et al. (2008), student engagement repre-

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sents both the time and energy students invest in educationally purposeful activities and the effort institutions devote to using effective educational practices. Wawrzynski et al. (2012) add that the policies and practices that institutions use to induce students to take part in these educationally purposeful activities should be included in the definition of student engagement. Thus, as Strydom and Mentz (2010: v) show, “Student engagement has two components. The first of these is what students do – the time and energy that they devote to educationally purposeful activities. The second is what institutions do – the extent to which they employ effective educational practices to induce students to do the right things”. Similarly, according to Tarantino and McDonough (2014), student engagement represents both the time and energy students invest in interactions with others through educationally purposeful activities. Nelson et al. (2014) extend the definition of student engagement to non-academic activities when they argue that student engagement includes both the academic and non-academic activities of students’ university experiences likely to generate high quality learning.

Many researches have been carried out on student engagement in the literature and analysis shows that it is critical for student success (for example Krause 2005; Kuh et al. 2008; Strydom and Mentz 2010; Wawrzynski et al. 2012; Ivala et al. 2013). In their work on student engagement, Bulger et al. (2008) conclude that there is a casual relationship between the level of engagement and academic achievement and that for student engagement to be established and sustained, it requires that instructors or teachers actively seek to create the conditions that foster engagement.

Collaboration

According to Gokhale (1995: 1) the term “collaborative learning” refers to an instruction method in which students at various performance levels work together in small groups toward a common goal. The students are responsible for one another’s learning as well as their own. Brindley et al. (2009:3) contend that in a collaborative learning environment, knowledge is shared or transmitted among learners as they work towards common learning goals, that knowledge is co-

created and shared among peers, not owned by one particular learner after obtaining it from the course materials or instructor and that the learning process creates a bond between and among learners as their knowledge construction depends on each other’s contribution to the discussion.

In a meta-analysis of over 150 studies representing diverse disciplines and class sizes, Johnson et al. (1998) cited in Hershock and LaVaque-Manty (2012: 1) found that students demonstrated significantly greater learning gains, in terms of recall of basic knowledge and critical thinking, when collaborating than when working independently. Students also reported greater motivation and persistence regarding problem-solving tasks when working collaboratively.

Educators recognize the value of collaborative learning. They widely recognize that students do not learn well when they are isolated and collaboration has to be fostered. Hillyard et al. (2010), argue that frequent use of group work in the classroom enhances students’ motivation, self-confidence, self-esteem and success. 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. Brindley et al. (2009) conclude that quality learning environments which include opportunities for students to engage in interactive and collaborative activities with their peers have been shown to contribute to better learning outcomes, including development of higher order thinking skills.

Collaboration can be achieved in many ways and social network services (SNS) such as Facebook, Skype, Twitter, and MySpace 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. Tarantino and McDonough (2014) argue that participation in social media creates a more collaborative and communicative learning environment for students by providing opportunities for discussions and interactions with their peers. The researchers intuition is that when students are allowed to actively engage and collaborate, it will make a whole lot of difference in achieving their academic success.

THE USE OF SOCIAL MEDIA FOR ENGAGEMENT AND COLLABORATION

Social media has found huge application in many areas and higher education is one of the beneficiaries. Social network services such as Facebook, Twitter, and MySpace are the typical applications of Web 2.0 technology which have gained huge popularity and widespread use in higher education among multiple age groups in same or different educational institutions, places, and countries over the past few years. This study reports an evaluation of the use of Facebook to promote engagement and collaboration at one South African university. According to Tarantino et al. (2013: 3), the rapid development of information and communication technologies has sparked the creative incorporation of social media into current pedagogical applications and processes. This is corroborated by Badge et al. (2012: 2) who argue that social networks are rapidly moving beyond their original purpose and are inevitably becoming part of the learner experience. Several definitions of social media are abound in literature (for example, Heiberger and Harper 2008; Cole 2009; Junco 2012; Esteves 2012; Friedman and Friedman 2013). Citing Ellison et al. (2006), O'rawe (2010: 3) defines social networking tools as "online spaces that allow individuals to present themselves, articulate their social networks, and establish or maintain their connections with others." For Friedman and Friedman (2013: 4), the so-called social media technologies – often referred to as Web 2.0 – encompass a wide variety of web-related communication technologies such as blogs, wikis, online social networking, virtual worlds and other social media forms."

The argument for adoption of social media for teaching and learning in the literature is quite convincing (Minocha 2009; Badge et al. 2012; Muñoz and Strotmeyer 2010; Leece and Campbell 2011). Badge et al. (2012) contend that by encouraging engagement with social media, students develop connections with peers, establish a virtual community of learners and ultimately increase their overall learning and that by participating in a community of learners, students become more engaged with the course content which increases the achievement of popular learning outcomes, such as critical thinking and individual student development. In the same vein, citing two research studies Junco (2011)

reports that the two studies have found a positive relationship between the use of social networking websites and student engagement in higher education adding that frequent users of social networking websites participated more often and spent more time in campus organizations than less frequent users. Social networks as demonstrated by Mazer et al. (2007) also offer opportunities to cultivate the student teacher relationship, which can ultimately create a positive learning experience for both parties. McNut (2014) however cautions that while there is enormous potential for Web 2.0 and associated social media tools to expand engagement, the design of such initiatives must recognize that in digital environments influence is earned through social reputation, not bureaucratic authority.

PROMOTING STUDENT ENGAGEMENT THROUGH THE FACEBOOK SOCIAL NETWORK

According to O'rawe (2010) in 2010 Facebook had well over 400 million active users globally. Citing studies by Hargittai (2008), Jones and Fox (2009) and Matney and Borland (2009), which show that between 85 and 99% of college students use Facebook, Junco (2012) concludes that Facebook is most popular social media website for college students. Junco (2012) further notes that recent data, collected by the EDUCAUSE Center for Applied Research (ECAR) from a sample of 36,950 students from 126 U.S. universities and one Canadian university, showed that of the 90% of students who use social networking websites, 97% said they used Facebook. Lane and Lewis (2013) report that in September 2012, Facebook revealed that it had over 1.01 billion monthly active users.

Facebook is defined by Heiberger and Harper (2008: 19) as a synthesis of many Internet based communication tools previously in wide but disconnected use. "It integrates static user-designed Webs (personal pages), synchronous (instant messages) and asynchronous chats (wall posts), picture uploading, group formation, event hosting, Web development tools, dynamic searches, RSS feeds (news feeds), blogs (web logs), mass and individual messaging, and e-mail, plus two unique qualities: networks and friends." Heiberger and Harper (2008) explain that the networks and friends qualities of Facebook give users a one-of-a-kind online socialization

experience, allowing them to limit the visibility of their content based on school affiliation, region, and friends.

Given that Facebook continues to be popular among college students, and that universities are interested in engaging and retaining students, Junco (2012) advises those working in higher education to familiarize themselves with Facebook (and other such technologies) and to design and support interventions that meet students where they are in order to help them get to where they are going. Similarly, Gewerc et al. (2014) argue that students are already present in social networks with their relationships and interests, and this offers an opportunity to make learning more attractive by joining informal and formal channels together. Reporting on an experiment with Facebook (FB) as a teaching and learning tool with a group of students, Esteves (2012: 6) reveals that:

- ♦ Students initiated and participated in discussions through FB's "Discussions."
- ♦ Students asked questions related to the course topics by posting on the Group's wall and received answers through "Comments" from the other members of the class.
- ♦ Students shared new media like videos, websites, comic strips, podcasts related to web design and publishing, distance education and FB as used for learning.
- ♦ Students used the "Chat" feature to discuss class-related topics or simply chat casually with their classmates and Faculty-in-charge.

Furthermore, Ratneswary and Rasiah (2014) aver that the advantage of using Facebook as opposed to the discussion forums in the Learning Management Systems (Moodle or Blackboard), is that Facebook is real-time and has a platform that provides a sustainable social collaboration environment away from campus, that a majority of the students are already very familiar with as they are habitual users of Facebook and that Facebook allows students to intersperse both their social and academic lives, unlike the discussion forums in the University's Learning Management System

This above is indeed is plain demonstration that Facebook and other social network services can be used to promote student engagement and collaboration. Caution however needs to be exercised as the literature shows that social network services might also negatively affect learn-

ing. In a study by Welch and Bonnan-White (2012), they found that many students had difficulty with the technology due to lack of familiarity and that some students were reluctant to adapt to unfamiliar technology and classroom expectations. They conclude that use of social services would be problematic in any university where students do not have universal access to technology in the classroom. Comments made by students in the open-ended portion of the survey by Welch and Bonnan-White (2012) indicated that, smartphone usage was not universal and many did not own mobile devices to utilize in the classroom.

Even where availability is not the issue, social media can still cause other problems. Junco (2011: 60) argues that miscommunications often occur because of the limited context available in digital communication and that also, "since the lack of face-to-face contact involved in using social technologies leads to limited context, it is incredibly easy, and takes very little ego investment, to propagate rumours and harassing content quickly and easily across the Internet."

THE PRESENT CASE STUDY

The Foundation Information Technology (FIT) or simply FIT1540 is a module offered at the Science Foundation Unit at one University in South Africa (SA). The foundation programmes are an intervention by the Department of Higher Education and Training to promote student success. According to the Department of Higher Education and Training (2012), higher education performance patterns show that the majority of students who are at risk because of disadvantaged educational backgrounds are being admitted into universities. A key role of foundation provision is therefore to support these educationally disadvantaged first entering students who are un/underprepared despite meeting minimum admission criteria by enabling them to be placed on an extended curriculum lasting up to an extra year that will give them the academic foundations for successfully completing their studies. It is within this context that this module was introduced at the university.

The FIT1540 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 critically for their education or professional development. However, the main challenge faced by the programme is high student numbers making it difficult getting students to collaborate and engage inside or outside the classroom since the University does not yet have an e-learning platform.

In order to mitigate this 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. Mobile phones and laptops were used to access the Facebook by students in order to enable them directly collaborate, engage and exchange questions with their lecturer and get feedback posting on the wall.

To assess the impact of the platform on the students in terms of collaboration and engagement and to see if it had a positive or negative effect on the students a questionnaire was designed and used in collecting data from the students.

Objectives of the Study

The objective of this study was to investigate the impact of the social media on students, specifically, the level of collaboration between them while using the Facebook social media in the module in and out of classroom. The study sought to specifically answer the following objectives;

- ♦ Evaluate the rationale for using Facebook in an academic context
- ♦ Evaluate the potential of the Facebook social network in academia and how it affects student learning.
- ♦ Examine the attitudes of university students of the use of Facebook for teaching and learning
- ♦ measure the level of engagement and collaborations between students, tutors, and instructor in and out of the classroom while using Facebook.

RESEARCH METHODOLOGY

Premised on the quantitative research paradigm, the study used a questionnaire with semi-structured questions and opinion statements to

collect data. Basically, quantitative research can be conducted by using a multiplicity of approaches or methods of numerical data collection that can include surveys and mini surveys called also informal surveys using the questionnaire. Aliaga and Gunderson (2000) define the quantitative method as one that explains phenomena by collecting numerical data that are analysed using mathematically based methods.

Population and Sampling

The target participants of this study include all the students enrolled for the FIT 1540 module of the foundation programme at the school of mathematical and natural sciences, at one South African university. The group comprised 150 students comprising 70% female and 30% male.

Data Collection and Analysis

An initial questionnaire was given to the whole class of 150 students before the start of the experiment to find out if they owned mobile devices and Facebook accounts. Those who did not have smart phones were encouraged to use the university laboratories while those without Facebook accounts were encouraged to open them. While initially some students were slow in opening Facebook accounts when they learnt from colleagues how they were easily accessing class material on Facebook, they managed to create one for themselves. During the pilot programme, daily activities on the Facebook blog were monitored to find out the extent of use of the blog for engagement and collaboration between student's communities, tutors and their lecturer. Just before the end of the semester, an evaluation questionnaire was used to collect data from the students. The questionnaire sought information about participant's age and gender; type of mobile phones used; whether they had a Facebook account; which device they mostly preferred to use between mobile phone and Computer and student perceptions on the use of Facebook and its impact on their engagement. For data analysis closed questions and opinion statements were aggregated into frequency tables and charts for interpretation.

RESULTS

In this section, the results of the study based on the data collected are presented. Results are

analyzed and presented in various sections below namely; information about participants age and gender; type of mobile phones used; whether they had a Facebook account; which device they mostly preferred to use between mobile phone and computer and student perceptions on the use of Facebook and its impact on their engagement.

Participant Gender and Age

Sixty of the participants were male while 90 were female. In terms of age, as shown on Table 1 the, majority of the participants were between 15-19 years of age.

Table 1: Ages group of respondents

<i>Ages group of respondents</i>	
20-24	15-19
30%	70%

Do You Have a Mobile Phone?

This question required participants to indicate if they had a cell phone and if so which type (for example, smart phone or normal phone). As shown on Table 2, 99% of the participants had a mobile phone and 71% of those devices were smart phone with the capabilities of accessing the internet, sending instant messages, receiving radio or TV programmes, and other applications.

Table 2: Mobile device ownership

<i>Mobile device ownership</i>	
<i>99% of the Students Own a Phone</i>	
Smart phone 71%	Normal phones 29%

Do You Have a Facebook Account?

With our study platform, it was imperative to find out the average number of participants that had Facebook accounts and applications on their mobile phone. As represented in Table 3, the data shows that 90% of the participants had a Facebook account and 10% did not have and did not use Facebook for personal reasons.

Table 4: Facebook access on mobile device

<i>Facebook access on mobile device</i>			
<i>Everyday</i>	<i>Few times some day</i>	<i>Few times a week</i>	<i>Hardly on facebook</i>
73%	17%	7%	3%

Table 3: Facebook account ownership

<i>Participants with Facebook account</i>	
<i>Yes</i>	<i>No</i>
90%	10%

How Often Do You Use Your Mobile Phone for FIT 1540/1640 Facebook Blog?

This question was directed at finding out how often students used their mobiles to access Facebook for class-related matters. Table 4 illustrates the results obtained from the participants.

As shown in Table 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 (7%) a few times a week. 3% indicated that they were hardly ever present.

Have You Ever In-boxed or Posted to Colleagues or Lecturer Facebook Blog?

As a follow up to the percentage of the students who daily accessed the Facebook blog on Table 4 (73%), it was important to find out the contribution of the student while accessing the blog to ascertain the number of students who were just visiting and those who were not participating at all. The results are presented on Table 5.

Table 5: Chatting with others or lecturer on Facebook

<i>Chatting with others or lecture</i>		
<i>Regularly</i>	<i>Sometimes</i>	<i>Never did</i>
57%	27%	17%

A comparison of Tables 4 and 5, shows that not all the students were participating in discussion even though they were accessing the Facebook. The result shows that 57% managed to

regularly chat to other students and the lecturer, 27% sometimes did and 17% never did.

Students' Perceptions of Facebook Use Benefit

Students were asked to specify their level of agreements or disagreements on a scale to measure their attitudes and perceptiveness vis-à-vis the use of Facebook integration using mobile phone in learning for this module and in general. The results are presented on Table 6.

On the information accessed on the Facebook blog, as shown on Table 1, 87% either agreed or strongly agreed that the mobile phone helped them to get the needed information in our Facebook blog, while 13% either disagreed or strongly disagreed.

Similarly, 87% of participants agreed that the use of the Facebook network on mobile phones helped them to interact and get feedback from the lecturer as against 13% who disagreed. Another result from the data (Table 6) is that 87% of the participants accessed the class Facebook blog using their mobile phone and found this helpful while 13% disagreed. On ease of communication (Table 6 item 4) 82% of participants found it easy to communicate with the lecturer and other students as against 18% who disagreed.

On the issue of usefulness of Facebook for engagement (Table 6 Item 5) a large number of 83% of the participants believed that the technology helped them to engage and be informed about the module in and outside the classroom. 17% disagreed. On whether or not the Facebook social network use should be extended to other modules in the programme (Table 6 Item 6), 80% of the participants agreed that the tech-

nology must be used in the entire foundation programme.

DISCUSSION

Ownership of Cell phone and Facebook Accounts

The initial results which sought to find out if students had cell phones and Facebook accounts before the experiment could be conducted revealed that indeed most of today's higher education students possess state of the art cell phone technology in their pockets and are the "Digital Native" generation since they can get used to these new technologies Web 2.0, mobile phone technologies and social networks in a short time. The 99% cell phone ownership in this study signalled the feasibility of introducing social media networks for teaching and learning. As Zur and Zur (2011) show, digital natives speak and breathe the language of computers and the culture of the web into which they were born. The importance of determining student access to eLearning facilities is underlined in a study on accessibility to eLearning facilities by students at the Zimbabwe Open University where Chiome (2012) found that 40.5% of the students forfeited their rights to e-learning owing to the fact that they had no access to e-learning facilities.

As shown in the results section 90% of the participants had a Facebook account and 10% did not have and did not use Facebook for personal reasons. From answers collected, the students appeared to be very confident regarding the usage of Facebook in their day-to-day life, either inside or outside the classroom. The statistics of this study correlate with those of Junco (2012) who cites researchers from the Pew

Table 6: Students' perceptions of the usefulness of the Facebook social network

		<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
1.	Was the information in our Facebook blog helpful to you in this module by using your phone?	17%	70%	5%	8%
2.	The use of Facebook social network help me to interact and get feedback from the lecturer	7%	80%	10%	3%
3.	The FIT 1540/1640 Facebook blog was helpful using my phone	2%	85%	2%	11%
4.	I find it easy to communicate with the lecturer and other students on Facebook using my phone	5%	77%	13%	5%
5.	I was engaged and informed about the module with my mobile phone in and outside the classroom	4%	79%	3%	14%
6.	It will be good to use this technology for other modules	7%	80%	3%	10%

Internet and American Life Project who found that between 67% and 75% of college-aged young adults (who may not necessarily be enrolled in college) use social networking websites. The 10% that did not have Facebook accounts in this study simply indicated that this was for personal reasons without specifying the reasons. Some of the reasons could be, as Welch and Bonnan-White (2012) found in their study, that many students have difficulty with the technology due to lack of familiarity.

Frequency of Visits to Facebook Blog

The potential of Facebook use for pedagogic purposes is evident in this study as almost three quarters of the students frequently used their mobile phones every day to see the update in our Facebook blog. In a similar study by Junco (2012) results show that students spend a great deal of psychological energy using Facebook, checking Facebook, and engaging in a variety of Facebook activities. Another study by Martínez Alemán et al. (2012) found that students spent significant time using electronic media and concluded that strategies that leverage social networking sites hold unique promise for engaging these otherwise difficult-to-reach students when they are outside the classroom. In a study by Erdem et. al (2014) students underlined that Facebook allowed much easier access as it had already become part of their lives and that with the increasing popularity of smart phones, Facebook was within their fingertips since everyone used it every day.

While a significant number of students accessed the Facebook blog daily, not all of these did so for the purpose of participating in the learning process. Only 57% managed to regularly chat to other students and the lecturer. In this regard, O'rawe (2010) advises that academics should exercise caution in moving into a social networking space that students clearly feel is "theirs" for social rather than academic purposes.

Students' Perceptions of Facebook Use Benefit

From the students perceptions on the use of Facebook for learning the results reveal that indeed the majority of students (87%) were aided by this innovation to get the needed information in our Facebook blog. In a similar study by Esteves (2012) students indicated that using

Facebook was a good experience and they would continue to use it after the class to stay in touch with their classmates.

On the issue of interaction, it emerges from the findings that the majority participants (87%) agreed that the use of the Facebook network on mobile phones helped them to interact and get feedback from the lecturer. In this regard, Ratliff (2011) recommends that to communicate effectively with students, higher education professionals must embrace new technologies and explore opportunities to implement a social media presence.

Facebook use according to findings of this study (82% agreed) enhanced ease of communication with the lecturer and other students. This agrees with findings from a study by Esteves (2012) who reports that students asked questions related to the course topics by posting on the Group's wall and received answers through "Comments" from the other members of the class. Furthermore in a study done by Ellison (2010) cited in Jennes (2011), undergraduates reported using Facebook to coordinate face-to-face study group meetings, to manage group projects, and to seek help from classmates to aid their understanding of specific concepts or assignments. In the same vein, a study by Ratneswary and Rasiah (2014) revealed that Facebook was perceived as an innovative and effective tool in a student-centered learning environment that enriched students' educational experiences, increasing the relevance of the subject matter and encouraging students to collaborate effectively with their peers and faculty.

On the issue of usefulness of Facebook for engagement, 83% of the participants believed that the technology helped them to engage and be informed about the module in and outside the classroom. This finding complements a finding by Tarantino et al. (2013) who report that by participating in a community of learners, students become more engaged with the course content which increases the achievement of popular learning outcomes, such as critical thinking and individual student development. In the same vein, recent research by Junco (2012) indicates that Facebook use can, in some cases, be a positive predictor of student engagement. Junco (2012) concludes that, "while Facebook might not be a "magic cure" to foster engagement, it may be harnessed in certain ways that complement existing good practices for engaging, and

retaining, students". Students in a study by Erdem et al. (2014) underlined that Facebook should be used for communication and interaction, giving immediate feedback and motivation whereas, the online environment should be used for sharing content, homework / projects and providing the belonging of the course.

Participants in this study (80%) recommended the extension of the Facebook social network use to the entire foundation programme. In response to a similar opinion statement in a study by Esteves (2012) on using Facebook as teaching tool, 75% of the students excitedly embracing the idea.

CONCLUSION

The results of this study show that the use of Facebook in the module has significantly increased impact on student's collaboration and engagement. Our analysis indicates that students, tutors, and instructor were highly engaged in the learning process in ways that transcended traditional classroom activities. The experimental evidence shows that social media can be used as an educational tool to help students to collaborate and engage. 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.

LIMITATIONS OF THE STUDY

Some limitations can be identified for this study. The study was conducted with a small group of students enrolled for only one course and this might limit the generalizability of the findings to the whole university. Larger studies involving students across all schools and year levels could be conducted to enable generalisation. The aim of the study was however not generalisation but an action research project to integrate information communication technologies in teaching and learning with this particular group of students.

RECOMMENDATIONS

In light of the conclusions above the following recommendations are advanced

- ♦ In order to reach today's digital natives, academics should seriously consider embracing social media in teaching and learning as

this is the media students use in their daily lives

- ♦ Although current students possess the easy familiarity with information communication technology, some may not be as familiar and therefore instructional scaffolding is required before introducing such technologies into teaching.
- ♦ The university under study consider moving to eLearning through purchase of a learner management system into which social media could then be integrated
- ♦ Further research on the association between Facebook use and student engagement and collaboration be conducted in other settings

RECOMMENDATIONS FOR FURTHER STUDIES

Opportunities exist for further studies in this area. While this study isolated Facebook as a case study, studies could be carried out of the impact of other social media on student learning, for example, Youtube, Twitter and Whatsapp. It would also be interesting to conduct a study on how social media could be integrated into learner management systems (LMSs) such as blackboard. In addition, a study could be conducted on how universities in poor communities could embrace and support eLearning.

REFERENCES

- Aliaga M, Gunderson B 2002. *Interactive Statistics*. New Jersey: Prentice Hall.
- Badge JL, Saunders NFW, Cann AJ 2012. Beyond marks: New tools to visualise student engagement via social networks. *Research in Learning Technology*, 20(1): 1-14.
- Brindley JE, Walti C, Lisa M, Blaschke LM 2009. Creating effective collaborative learning groups in an online environment. *The International Review of Research in Open and Distance Learning*, 10(3): 1-18.
- Bulger ME, Maye, RE, Almeroth KC, Blau SD 2008. Measuring learner engagement in computer equipped college classrooms. *Journal of Educational Multimedia and Hypermedia*, 17(2): 129-143.
- Coates H 2006. Student Engagement in Campus-based and Online Education. From <<http://www.cqu.eblis.com.ezproxy.cqu.edu.au/EBLWeb/patron/>> (Retrieved on 10 October 2012).
- Cole M 2009. Using Wiki technology to support student engagement: Lessons from the trenches. *Computers and Education*, 52: 141-146.
- Department of Higher Education and Training 2012. *Foundation Provision in Ministerially Approved Programmes*. Pretoria: DoHET.

- Erdem M, Pinar Kibar PN 2014 Students' opinions on Facebook supported blended learning environment. *The Turkish Online Journal of Educational Technology*, 13(1): 199-206.
- Esteves KK 2012. Exploring Facebook to enhance learning and student engagement: A case from the University of Philippines (UP) Open University. *Malaysian Journal of Distance Education*, 14(1): 1-15.
- Friedman LW, Friedman HH 2013. Using social media technologies to enhance online learning. *Journal of Educators Online*, 10(1): 1-22.
- Gewerc A, Montero L, Lama M 2014. Collaboration and social networking in Higher Education. *Comunicar*, 42(21): 55-62.
- Gokhale AA 1995. Collaborative learning enhances critical thinking. *Journal of Technology Education*, 7(1): 1-7.
- Heiberger G, Harper R 2008. Have you Facebooked Astin lately? Using technology to increase student involvement. *New directions for student services*, 124: 19-35.
- Hershock C, LaVaque-Manty M 2012. Teaching in the Cloud: Leveraging Online Collaboration Tools to Enhance Student Engagement. CRLT Occasional Papers No. 31. From: <http://www.crlt.umich.edu/sites/default/files/resource_files/CRLT_no31.pdf>. (Retrieved on 10 March 2013).
- Hillyard C, Gillespie D, Littig P 2010. University students' attitudes about learning in small groups after frequent participation. *Active Learning in Higher Education*, 11(1): 9-20.
- Ivala E, Gachago D, Condy J, Chigona A 2013. Enhancing student engagement with their studies: A digital storytelling approach. *Creative Education*, 4(10): 82-89.
- Jan HK, Hermkens K 2011. Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons* (54): 241-251.
- Jenness SE 2011. Rethinking Facebook: A tool to promote student engagement. *Journal of the Australia and New Zealand Student Services Association*, 38: 53-62.
- Junco R 2011. The Need for student social media policies. *Educause Review*, 46(1): 60-61.
- Junco R (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. *Computers and Education*, 58(1): 162-171.
- Kaplan AM, Haenlein M 2010. Users of the world, united! The challenges and opportunities of social media. *Business Horizons*, 53(1): 59-68.
- Kenny G, Kenny D, Dumont R 1995. *Mission and Place: Strengthening Learning and Community Through Campus Design*. Westport: Oryx Press.
- Krause KL 2005. Understanding and Promoting Student Engagement in University Learning Communities. *Paper Presented as a Keynote Address 'Engaged, inert or Otherwise Occupied?: Deconstructing the 21st Century Undergraduate Student' at the James Cook University Symposium, Sharing Scholarship in Learning and Teaching: Engaging Students at James Cook University, Townsville/Cairns, Queensland, 21-22 September 2005.*
- Kuh GD, Cruce TM, Shoup R, Kinzie J 2008. Unmasking the effects of student engagement on first-year college grades and persistence. *The Journal of Higher Education*, 79(5): 540-563.
- Lane SD, Lewis TN 2013. The "Digital Divide," social media, and education-related outcomes. *The Online Journal of New Horizons in Education*, 3(2): 39-50.
- Leece R, Campbell E 2011. Engaging students through social media. *Journal of the Australia and New Zealand Student Services Association*, 38: 10-15.
- Martínez Alemán AM, Rowan-Kenyon HT, Savitz-Romer M 2012. Social Networking and First-Generation College Student Success: A Conceptual Framework for "Critical" Engagement and Persistence Efforts. From <<http://www.compact.org/wp-content/uploads/2012/05/Technology-Martinez-and-Romer.pdf>> (Retrieved on 8 November 2013).
- Mazer JP, Murphy RE, Simonds CJ 2007. 'I'll See You On "Facebook": The effects of computer mediated teacher self-disclosure on student motivation, affective learning, and classroom climate'. *Communication Education*, 56 (1): 1-17.
- McNutt K 2014. Public engagement in the Web 2.0 era: Social collaborative technologies in a public sector context. *Canadian Public Administration*, 57(1): 49-70.
- Minocha S 2009. A Study on the Effective Use of Social Software by Further and Higher Education in the UK to Support Student Learning and Engagement.. From <<http://kn.open.ac.uk/public/document.cfm?docid=12120>> (Retrieved on 10 March 2013).
- Munoz FM, Strotmeyer KC 2010. Demystifying social media. *Journal of Student Affairs Research and Practice*, 47: 123-127.
- Nelson K, Clarke J, Stoodley I, Creagh T 2014. Establishing a Framework for Transforming Student Engagement, Success and Retention in Higher Education Institutions: Final Report. From <<http://studentengagementmaturitymodel.net/>> (Retrieved on 15 June 2014).
- O'Rawe M 2013. Can we be "friends"? Social networking and student engagement in an academic environment. *Turkish Online Journal of Distance Education*, 14(1): 35-43.
- Ratneswary R, Rasiah V 2014. Transformative higher education teaching and learning: Using social media in a team-based learning environment. *Procedia-Social and Behavioral Sciences*, 123: 369-379.
- Ratliff AF 2011. Are They Listening? Social Media on Campuses of Higher Education. *Journal of the Australia and New Zealand Student Services Association*, 38: 65-69.
- Strydom JF, Mentz M 2010. *Focusing the Student Experience on Success through Student Engagement*. Pretoria: CHE.
- Tarantino K, McDonough J 2014. Effects of Student Engagement with Social Media on Student Learning: A Review of Literature. From <<http://studentaffairs.com/ejournal/Summer>> (Retrieved on 15 June 2014).
- Wawrzynski MR, Heck AM, Remley CT 2012. Student Engagement in South African Higher Education. *Journal of College Student Development*, 53(1): 106-123.
- Welch BK, Bonnan-White J 2012. Twittering to increase student engagement in the university class-

room. *Knowledge Management and E-Learning: An International Journal*, 4(3): 325-345.
Zur O, Zur A 2011. On Digital Immigrants and Digital Natives: How the Digital Divide Affects Families,

Educational Institutions, and the Workplace. Zur Institute - Online Publication. From <http://www.zurinstitute.com/digital_divide.html> (Retrieved on 8 November 2013).