Enhancing Student Engagement Through Social Media
A School of Business Case Study

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Abstract

While many universities have been deploying both electronic learning (eLearning) and social media applications for academic purposes, there is currently little research on the impact on their use on students' overall learning experiences and associated learning possibilities. This paper elaborates on several online academic activities, such as Facebook, Twitter and quizzes for one classroom taught school of business undergraduate (UG) module. The similarities and differences discovered across all aspects of this paper's research findings are examined against Chickering & Gamson's [1] seven principles of good practice teaching and Astin's [2] five tenets of engagement. Online activities were tracked over a period of one academic semester (fifteen weeks) and results insinuate that innovative and sustainable social media can indeed be utilised in higher education to enhance student learning and engagement.

1. Introduction

Like it or not, Facebook is everywhere. Rather than sigh as yet another student seems more concerned with their status than your class, why not use SNS to increase their engagement with module material? This paper examines a way to do just that by exploring the use of eLearning and social media applications in higher education, with a particular focus on student learning and engagement. A research gap exists for studies which incorporate both qualitative and quantitative analysis of student engagement. To contribute to this area, a selected UG School of Business student cohort's interaction with MIS20040's social media was conducted over fifteen weeks. MIS20040 is a school of business UG module open to both business and non-business students focusing on contemporary electronic marketing and social media related topics. The findings

were then examined against Chickering & Gamson's seven principles of good practice teaching [1] and Astin's five tenets of engagement [2]. For personal observations and the literature review, the authors formulated and tested the following hypotheses in context of this research:

- H1: The use of social media as part of a module's structure will improve communication and level of engagement between academics and students.
- H2: Using SNS & eLearning applications will improve students' overall learning experience as it allows for deeper learning.
- H3: Simply adding SNS and/or eLearning applications to a module will not improve student's overall learning experience in higher education.

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2. Literature Review

2.1 Student Engagement

Influential research conducted by Chickering & Gamson [1] list seven principles of good practice in UG education [3], [4], [5]. These are:

1. Encouraging student-faculty contact
2. Encouraging cooperation among students
3. Encouraging active learning
4. Giving prompt feedback
5. Emphasising time on task
6. Communicating high expectations
7. Respecting diverse talents and ways of learning

Student engagement has become a focus of many authors with one of the greatest influences on students' learning and personal developing being the amount of time a student will allocate to educationally beneficial activities [6]. A student's level of engagement with a topic has been proven to have behavioural and cognitive impacts on their learning [7]. Their engagement level will influence how a student feels about their peers, their school environment and their overall satisfaction [5], [7]. Astin [2] developed five tenets of engagement. These are:

1. *Engagement refers to the investment of physical and psychological energy.*
2. *It occurs along a continuum (some students are more engaged than others and individual students are engaged in different activities at differing levels).*
3. *It has both quantitative and qualitative features.*
4. *The amount of student learning and development associated with an educational program is directly related to the quality and quantity of student engagement in that program.*
5. *The effectiveness of any educational practice is directly related to the ability of that practice to increase student engagement.*

(Cited Junco, [8], pp. 164)

These are beginning to be applied to student engagement via SNS. Junco [8], Glowatz & O'Brien [9] and McEwan [10] agree that SNS can lead to greater instances of student engagement in some areas. While it is debatable that Astin's five tenets [2] can be applied to all learning theories, it best fits into social constructivist learning. Bangert [3] explains that social constructivism supports all seven of the good practice principles in virtual environments. Constructivist models allow learners to actively develop their own understanding of knowledge and draw meaning from their personal experiences [3]. Subramanian [11] notes that students who learn in a social constructivist environment obtain more '*diversified knowledge*' than students who are taught using the traditional learning theories. This is due to peers contributing their thoughts and relating their individual experiences to the topic of discussion as well as the teacher [9], [11].

2.2. Social Media

The popularity of social media amongst students is a global trend and its potential educational purposes has become of interest to many academics [3], [4], [9], [10], [12], [13], [14].

Facebook is the most popular social networking site (SNS) reaching over 1.3 billion monthly active users worldwide [15], an increase of 21% year-over-year [16]. Twitter has over 241 million monthly active users [17]. There have been several case studies exploring the various beneficial applications of Twitter in higher education [4], [18], [19], [20]. With regards to overall social media usage, McEwan [10] concludes that "*Facebook use appears to be nearly ubiquitous on college campuses*". The '*anytime, anywhere*' nature of SNS, not to mention the increase in mobile data usage, facilitates greater communication possibilities. SNS provide new channels of communication between a student, their peers and their teachers, both inside and outside of the classroom [10], [12], [21].

The informal nature of SNS like Facebook and Twitter [10] allow a different learning environment to be created for students - a hybrid learning experience of formal and informal learning. Many authors report that the informal tone of SNS environments will increase student engagement with module content [11], [12], [14], [22].

Reasons for this are that students prefer to use digital communication compared to face-to-face methods [10], [18], students enjoy using SNS as part of their learning experience as it contributes to course satisfaction [11], [21] the nature of SNS environments facilitate the development of online academic communities [13], [23], the majority of students are already active on FB [24] and students prefer to use SNS over a University's Virtual Learning Environment (VLE) compared as Blackboard as outlined by previous research conducted in this field [9], [12], [14], [18], [21] 21. The use of SNS for educational purposes allows students the opportunity to gain deeper knowledge on a module's content as they are likely to discuss topics with peers and receive information from a variety of different mediums [9], [11], [12]. Schouten [25] lists the various different educational uses SNS provide such as: news feeds, conducting

classwork, holding meetings with geographically scattered colleagues, sharing information and building a sustainable community both digitally and in real life.

There is a need for staff within the academic community to familiarise themselves with SNS [8], [9], [21], [24], [25]. Selwyn [12] and Griffiths & Wall [21] explain that a disconnect between staff and students exists, which creates frustration. Subramanian [11] and Bosch [22] claim that Gen Y students desire more than the traditional lecture-based-teaching approach offers, feeling this approach is not fitting for this day and age. Many authors point out that some students do engage with a university's VLE, however, main activities are limited to passively downloading information [9], [12], [18] [21]. Booth & Esposito [23] commented that in their experience, using SNS did not add to their workload and at times reduced it.

While there have been a lot of positive consequences shown from mixing academia and SNS, there are also some concerning issues. The lines between professional and social can become blurred if students and teachers connect on these sites. This can lead to privacy issues and anxiety for students as outlined by Muñoz & Towner [24]. While some studies have shown that students are comfortable connecting with staff on SNS [24], others find that some students prefer not to interact with staff online [10]. Another concern is that using SNS will have a negative impact on students' ability to communicate in the real world [10]. Students who spend a lot of time may have a high level of digital literacy but consequently, may have skill deficiencies in more formal communication, critical reading and analysing [10], [22]. Other studies have found that using FB can be detrimental to students' grades as they will spend too much time on line when they would otherwise be studying [8], [9]. Regarding Astin's [2] tenets of engagement, many authors [9], [9], [21] agree that learning occurs along a continuum; some students will always be more engaged than others and different students will be engaged by different things. Moule [26] raises the issue of computer literacy; some students may not have the skills or technology available to them to use SNS or eLearning applications.

A gap in the literature on eLearning and the use of SNS exists regarding the application of SNS to the structure of classroom-taught university modules. Currently there are relatively few case studies exploring the use of social media in this type of academic setting [4], [14], [22]. Even fewer provide extensive quantitative data as to how students interact with academic content and eLearning applications over SNS [4], [12], [24]. Also, the impact of assigning participation marks for student engagement with a classroom-taught module's SNS [8], [27]. When researching

this area, it is important to consider discussion on participation. Ford et al. [18] mention it was immeasurable for them track the number of messages read by their students via SNS. This can be a large problem in gauging the success of student engagement with a module's SNS, however just because it cannot be counted does not mean it does not add educational value.

The extensive literature review resulted in the following three hypotheses to be formulated and tested as part of this research:

- H1: The use of social media as part of a module's structure will improve communication and level of engagement between students and academics..
- H2: Using SNS & eLearning applications will improve students' overall learning experience as it allows for deeper learning.
- H3: Simply adding SNS and/or eLearning applications to a module will not improve student's overall learning experience in higher education.

3. Case Study

This case study focusses on an "eMarketing & Social Networking" module (MIS20040) offered to UG students at University College Dublin's (UCD) School of Business. MIS20040 is an elective module and had 210 student enrolled during the 2012/2013 academic year. The module's descriptor, available to students prior to making respective module elective choices, states that:

"This module discusses the concepts and specific skills related to electronic Marketing (eMarketing), Social Networking & Web2.0. We will evaluate eMarketing opportunities and investigate implications of Social Networking on different industry sectors. This practical oriental module also requires students to design and implement an online marketing strategy for an organisation as part of the International Google Online Marketing Challenge (GOMC)." (UCD, [28]).

MIS20040's dedidacted Facebook fan page and Twitter account were set up during the first week of term and enrolled students were informed about those initiatives both in class and through eMail. It was not mandatory to engage with either initiative as no grades were awarded for student contributions on these platforms. 43 students '*followed'* the Twitter account and 190 students '*liked'* the Facebook fan page in total.

Student engagement with MIS20040's Facebook fan page was recorded using Facebook Insights. This provided staff

with analytical tools. The majority of links posted on MIS20040's SNS were shortened using Ow.ly link shortener. This allowed click tracking to be used for all applications. This data exported to Excel 2010 workbooks.

The module coordinator and workshop tutor incorporated innovative eLearning tools and social media initiatives when making announcements about assignments, posting supplementary articles relating to the module's topics and posting weekly online quizzes. The supplementary articles were all from non-academic sources and covered a wide range of eMarketing topics. It was made clear to students that they could contact staff through social media as well as traditional methods, namely electronic mail (eMail) and face-to-face meetings. The tone of all staff posts via SNS was informal.

Weekly online quizzes were published via FreeOnlineSurveys.com to MIS20040's SNS after each lecture. There were no participation marks assigned to these quizzes; they were purely supplementary content for students. Figure 1 outlines a sample quiz.

Figure 1. Sample online quiz for students

Scores were displayed on screen after completion. This allowed students to monitor the progress of their own learning and understanding of module content. The tutor reviewed the overall scores and addressed any 'problem areas' in the next tutorial.

This module has been included as one of UCD's overall Teaching & Learning show cases and more information can be found at the following link: http://bit.ly/1lB3Uvt

4. Method

In addition to collecting Facebook and Twitter analytics with Facebook Insights and Owly, the authors used FreeOnlineSurveys.com to design and administrate an online questionnaire for this study's primary data collection [27]. The questionnaire consisted of 25 questions grouped into four sections relating to this study's objective. The Section 1 covered demographic information. Section 2 enquired about students' general online behaviour. Section 3 focussed on MIS20040's social media and Section 4 requested for improvements/recommendations on using SNS in higher education. The survey used various types of questions, including open-ended, closed-ended and Likert-type scales.

The survey was administered to 210 students by email on 22nd April 2013 and was open for two weeks. Participants responded to the survey anonymously. Seventy-six (n=76) students completed it by 5th May 2013.

5. Data Analysis and Discussion

5.1 Social Analytics Data

The authors tracked students' interaction and engagement with MIS20040's SNS over a fifteen-week period. This included a two-week mid-term break and a study week prior to the final exam. The types of content posted to the SNS included general module announcements, supplementary articles, links to the weekly quizzes.

Throughout the data selection period, MIS20040's Facebook fan page received 60 comments, 55 private messages, 215 'likes' and two 'shares' from students. Staff posted content to the Facebook page an average of six times per week, while only posting content twice-a-week on Twitter. The MIS20040 Twitter account only received three direct tweets from students and one retweet.

Facebook Insights monitored the amount of daily page views and MIS20040's 'consumptions'. Figure 2 shows the number of daily unique visitors and number of daily page views for MIS20040's dedicated FB page. The dates shown on the X-axis correspond to the date of weekly lectures. While there is a spike on these dates in most cases, there is still a reasonable level of unique users visiting the fan page and engaging with its content throughout the week.
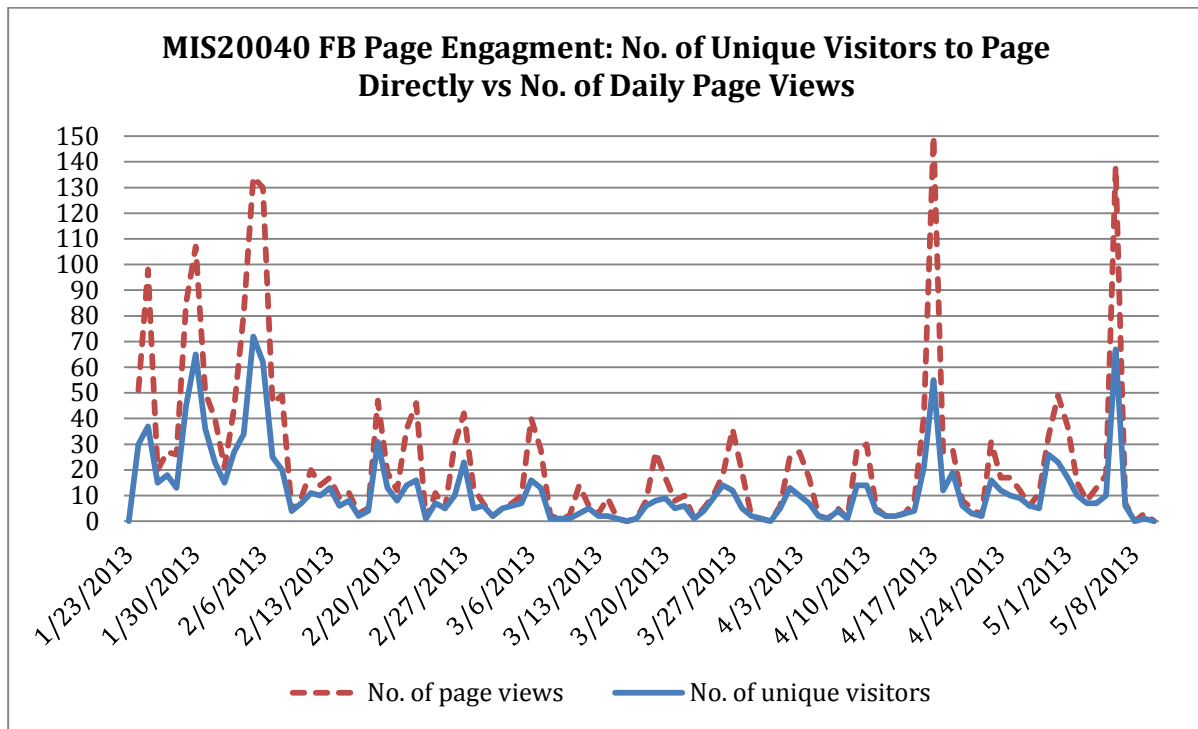
Figure 2. Number of unique visitors to MIS20040's Facebook page compared to total page view

Data collected via Hootsuite and Ow.ly focusses specifically on students' engagement with the supplementary articles and quizzes. Ow.ly links track the number of daily clicks by unique users. However, it does not count the total amount of daily clicks nor does it exclude users who have clicked on a link in the past, provided it was not done so on the same day. Users who click on the same link, on the same day – whether it is posted on Facebook or on Twitter – will only be counted once. Figure 3 shows the total number of unique user clicks on any supplementary article throughout the semester.
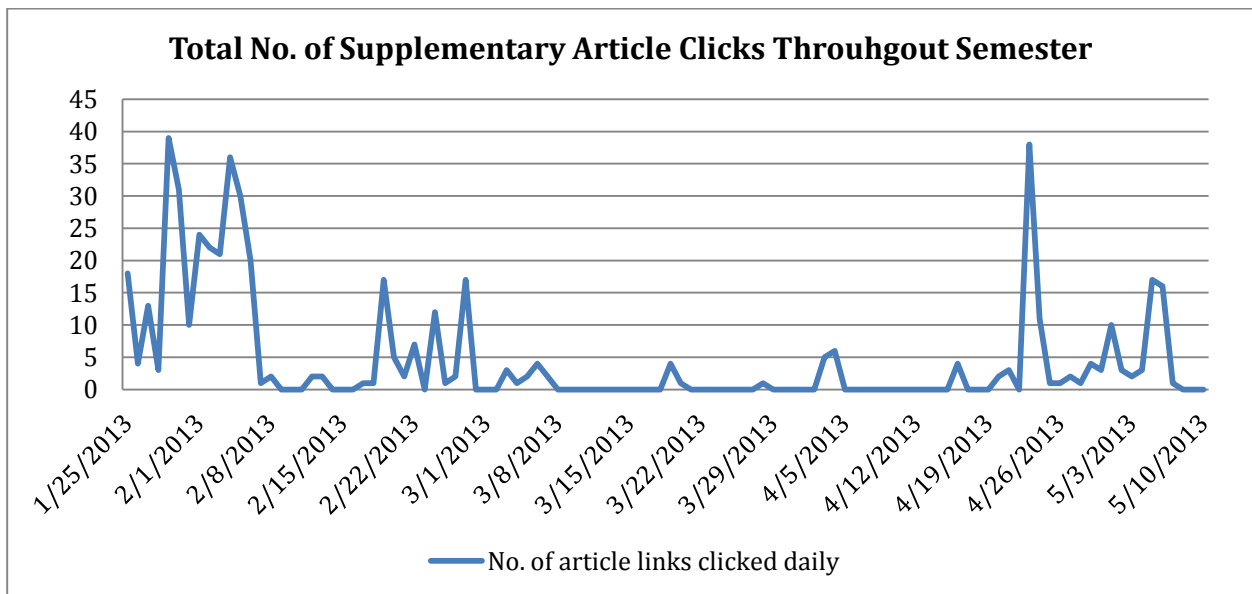
Figure 3. Total daily unique clicks completed throughout the semester
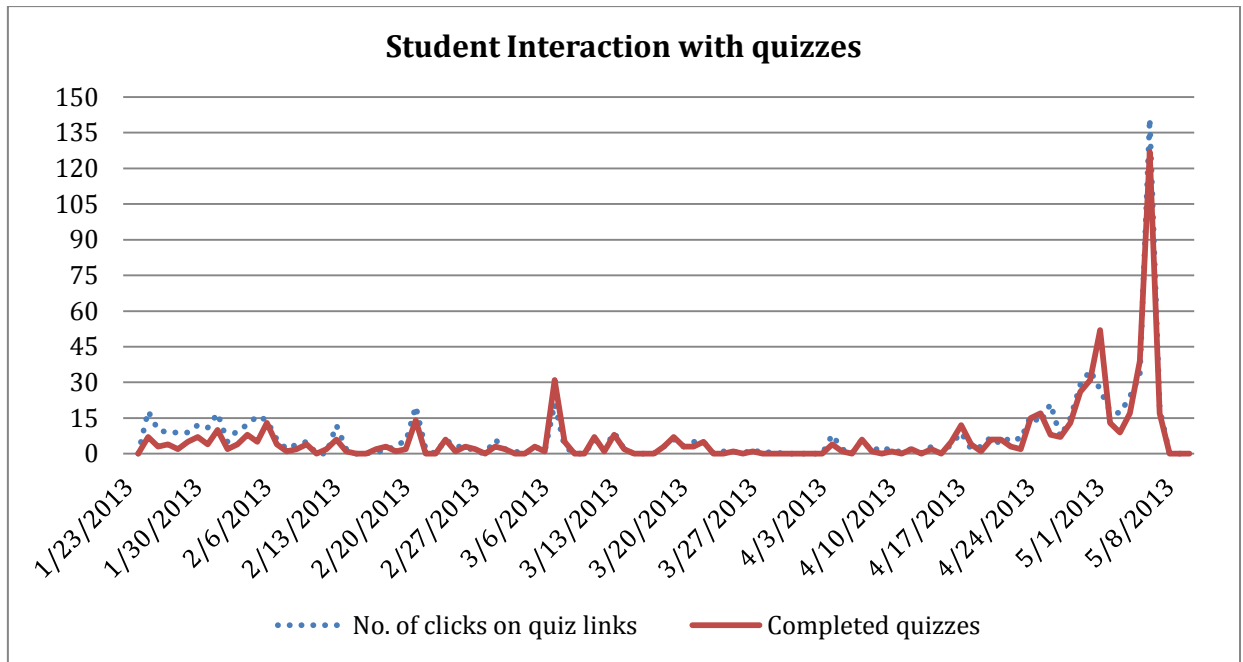
Figure 4. Total number of quizzes completed throughout the semester

Above Figure 4 outlines the compiled daily clicks on any quiz links compared to the compiled number of completed quizzes.

The sharp activity drop as shown in above figures (06/03/2013 – 20/03/2013) is due to the two week mid-term break and the spikes in the week 01/05/2013 - 08/05/2013 is due to the final exam schedule. Figures 3 and 4 can be used to prove there was regular student engagement with MIS20040's supplementary content between lectures and tutorials. Despite the aforementioned spikes and drops, there is a relatively stable pattern of engagement with the additional content. Initially, there was a higher click-through-rate with the supplementary articles but this soon sharply declines, resulting in intermittent activity. However, the rate of engagement with the quizzes and FB page remains at a reasonable level, with the exception of the huge spike on the days leading up to and including the day of the final exam. There was a four-week gap between the Week 7 and Week 9 quizzes' publications due to the mid-term break and students needing to focus on their GOMC projects. 661 quizzes were completed over the semester.

5.2. Questionnaire Data

The majority of the respondents (n=76) were Irish (n=59). 89% of respondents were permanent UCD students with 11% exchange students from different partner universities.

A surprising behaviour emerged while analysing the UG data set. Although, the majority of students spend a subtantial amount of time on any social media platform, they revert back to traditional eLearning platforms, such as Blackboard, to avail of general module-related information before referring back to social media applications (Figure 5). This supports H3.
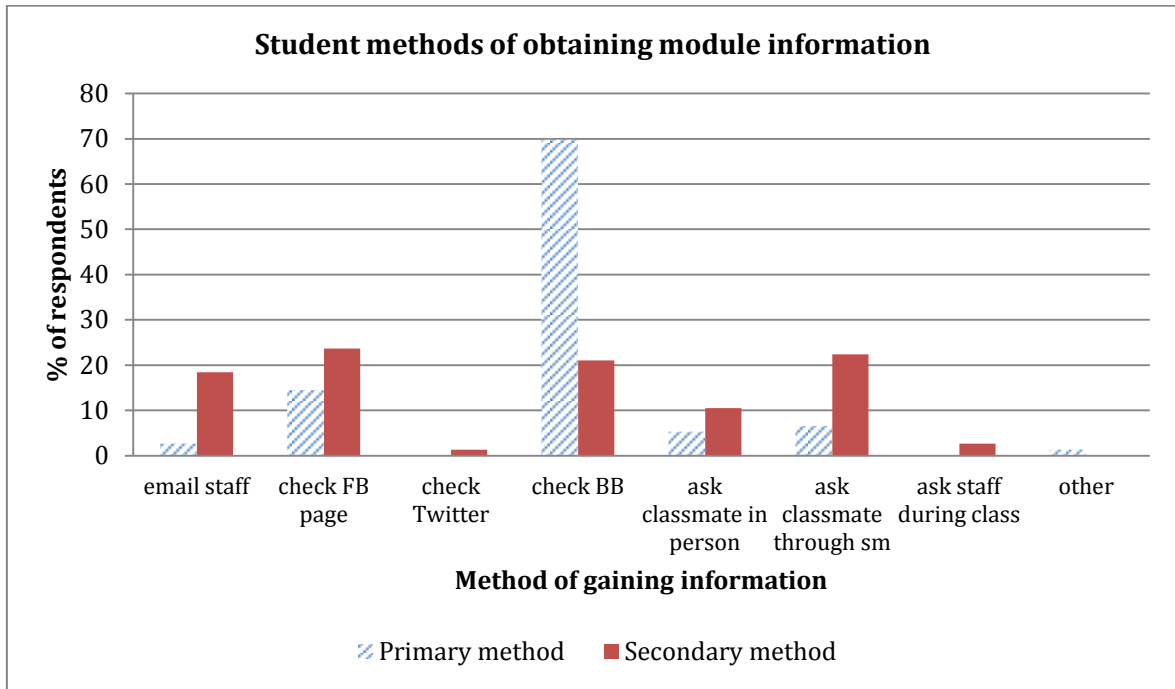
Student methods of obtaining module information

Figure 5. Student's preferred way of obtaining module information

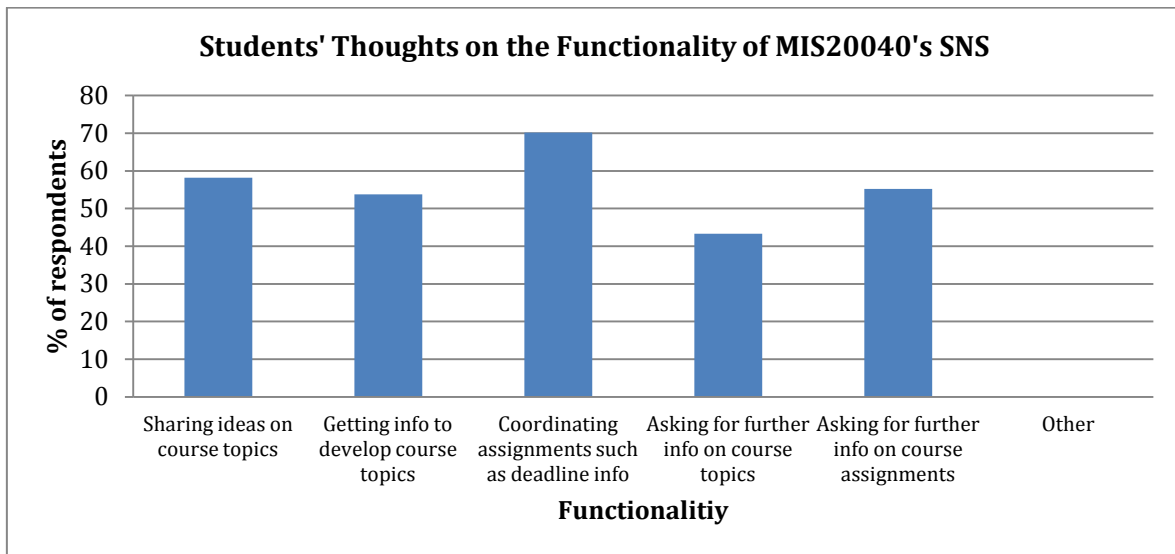**Students' Thoughts on the Functionality of MIS20040's SNS**

Figure 6. Students' thoughts on the functionality of MIS20040's SNS

When asked "*What do you see the functionality of course's social media sites as?*" (n=67) students provided the following information (Figure 6).

When asked "*Do you find the course's use of the social media sites effective?*" 100% said "*yes*" (n = 66). A sample of students' feedback from this question is as follows:

- *"Accessible lecturers and information in a quick and informal fashion"*

- *"It always had information on when assignments were due and also had many sources throughout the semester to help us, like articles etc"*

- *"It delivers a more modern and realistic medium to staff/student communication"*

Students were asked to rate statements about MIS20040's use of SNS and its impact on learning based on how true or untrue they felt them to be. Figure 7 shows their responses (n = 66).

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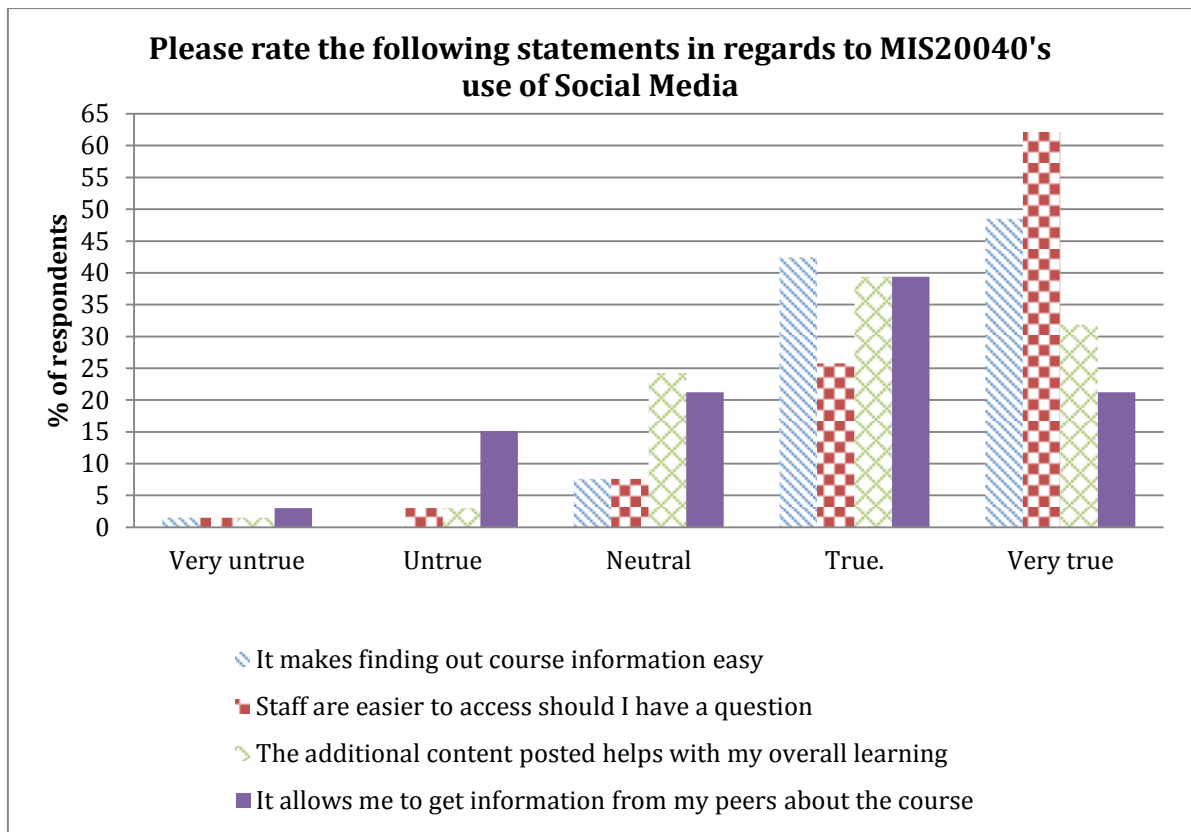
Figure 7. Students' thoughts on MIS20040's use SNS and its impact on learning

When asked *"Do you find the supplementary articles helpful with your overall learning experience?"* (n = 64), an overwhelming 91% of respondents stated *"yes"*.

Furthermore, 95% of respondents (n = 64) said *"yes"* to the question *"Do you find the weekly quizzes have helped with your learning?"*

The findings show that MIS20040's use of SNS, particularly Facebook, was very well received by students. It placed information in a virtual space which students frequently occupy outside of lecture time. The students believed that the module's communication was improved. Its informal tone was an important factor in this, suggesting it may not have been as successful if a more formal approach were taken. Those findings support both H1 and H2.

Bofin's study [27] shows students are highly active on social media in their day-to-day lives and appreciated the module's presence on less academic platforms. One student commented *"Yes, it was a good way of keeping in touch with the subject beyond the once a week lectures and tutorial. It was also somewhat less intimidating and informal than emailing a lecturer"*. This goes on to support

H1 as MIS20040's SNS has encouraged students to engage with it throughout each week. Data from Facebook Insights and Hootsuite also support this hypothesis. They reveal that a large number of students interacted with the module's SNS throughout the week, rather than just on lecture- or tutorial-days. The data also showed that students either actively sought out module information by visiting the fan page directly or passively received information by seeing it in their Facebook newsfeed. Figure 5 shows that Facebook was the most popular 'secondary method' of obtaining module information.

6. Discussion

The majority of students agreed that these initiatives had a positive impact on their exam preparedness and overall learning. The analytics data showing regular interaction with the weekly quizzes and supplementary articles supports this. This reflects Chickering & Gamson's [1] principle of active learning, emphasising time on the task and communicating high expectations as students were asked to dedicate non-gradable efforts outside of class. It also fulfils Astin's [2] tenets that *"the amount of student*

learning and development associated with an educational program is directly related to the quality and quantity of student engagement in that program" and that engagement *"has quantitative and qualitative features"*. Given that not all students engaged with MIS20040's SNS each week, it justifies the tenant that engagement *"occurs along a continuum."* This supports H2: *Using SNS & eLearning applications will improve students' overall learning experience as it allows for deeper learning*

Throughout the questionnaire, the theme of improved communication occurred. The topics of formality and speed arose repeatedly around this. Students expressed that by using social media, the staff removed a barrier to communication while also encouraging engagement with course content outside of the lectures and tutorials. This shows that informal SNS learning environments facilitate easier interaction between all parties, allowing for online discussions to occur. This finding supports the arguments covered in the literary review on how informal learning environments can improve students' experiences. It aligns with Astin's tenet [2] that *"engagement refers to the investment of physical and psychological energy"*. This supports H1: *The use of social media as part of a module's structure will improve communication and level of engagement between students and academics.*

The data has shown that being present in a digital which is currently occupied by most students, makes them more likely to interact with module content than if it remains solely on universities' VLEs such as Blackboard. Students indicated that the Facebook page made it easier for them to find out information because they did not have to sign into Blackboard [27]. They are also more active on Facebook thus receiving module announcements sooner than if they just relied on checking Blackboard or college emails. Despite students' strong favouring of Facebook for the MIS20040's SNS, the majority check Blackboard for information first. This suggests that SNS can act as good support for VLEs however students still rely on a formal virtualised educational platform. While this also supports H1, it proves H3: *Simply adding SNS and/or eLearning applications to a module will not improve student's overall learning experience in higher education.*

Staff made it clear that students were allowed to contact them via SNS. Staff-student interactions happened consistently throughout the semester as well as some student-student interactions. These findings meet three of Chickering & Gamson's [1] principles: encouraging student-faculty contact, encouraging cooperation among students, giving prompt feedback. Qualitative data from MIS20040's students revealed that many students enjoyed

learning from each other [27]. Given the positive feedback and consistent engagement throughout the semester, MIS20040's initiatives appear to adhere to Astin's tenant [2] that *"the effectiveness of any educational practice is directly related to the ability of that practice to increase student engagement".*

7. Conclusion and Future Research

This study has shown that the integration of innovative social media initiatives into higher education meets all of Chickering & Gamson's [1] and Astin's [2] criteria for good UG teaching practices and student engagement. However, as this research focusses on a narrow cohort of UG full-time students, we recommend that further research should be undertaken to overcome any limitations in our study, such as conducting similar research for other cohorts in the higher education sector, conducting similar research analysing social media-driven student engagement for non MIS modules or comparing findings with similar studies completed in other internationally recognised business schools.

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