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Published in:
Education and Information Technologies

DOI:
10.1007/s10639-015-9436-y

Publication date:
2017

Document Version
Peer reviewed version

A Case Study of Facebook Use: Outlining a Multi-Layer Strategy for Higher Education

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Facebook is one of the largest social networking sites, with over 1.23 billion users. Many students use Facebook as a platform to enhance their learning experience. A growing body of literature reports on the motivation of students and staff to engage with Facebook as a learning platform as well as mapping such activities to pedagogy and curricula.

This paper outlines a Facebook strategy that has been embraced by the student body. Focus groups investigated the use of Facebook, which closely maps to the curriculum. Results show that the Facebook strategy is useful in promoting collaborative learning alongside the face-to-face delivery of content. Participants rebuked the perceived blurring of educational and social purposes, which is prevalent in the literature, with the current structure allowing a clear divide between their different uses of Facebook. The development of further guidelines for the use of Facebook for education is encouraged and recommendations are provided.

Keywords: Facebook, communication, online, student collaboration, social networking, education

Introduction

As the use of social networking sites (SNS), such as Facebook and Twitter, become more prevalent within the student body, there is a growing focus on the appropriation of

such social technologies as an educational tool. Students frequently use Facebook for educational purposes, albeit in an informal manner. This has raised discussion in the literature around privacy concerns of such online interactions and the mapping of these to pedagogy.

This paper reports on a Facebook strategy implemented at the School of Computing, University of Dundee, and outlines student opinions in relation to the use of this tool for educational purposes through the use of a focus group methodology. The results of the focus group were examined through the use of thematic analysis, and are discussed in the context of guidelines available in the literature on the use of Facebook in education (Wang et al, 2014).

Background

Facebook is a social networking site (SNS) and is a platform for building and maintaining a collection of social relations online (Boyd & Ellison, 2007). Facebook has a user base of over 1.23 billion users. Features of the site include allowing people to create virtual "friend" connections, form "groups" and host and use "applications" (Joinson, 2008). These applications may be native to Facebook, or created by third parties. The core user demographic of Facebook is 18-24 year old students, although increases are being seen in other age brackets (Zickukr & Madden, 2012). It has been reported that over 95% of undergraduate students regularly use Facebook (Mori, 1007), and this number is likely to have increased in recent years.

While there has been some exploration of students' educational use of social networking sites such as Facebook (Ellison et al, 2007; Selwyn, 2007), there have been few empirical studies of the impact of Facebook on pedagogy. This may be due to the ethical challenges of conducting empirical studies in an educational environment.

Facebook has a number of desirable qualities required for educational technologies (Selwyn, 2009). For example, Facebook allows peer feedback in an environment that matches the social context of learning, e.g. school, university. Furthermore, Facebook allows students to actively participate in discussion by having the roles of both subject and partner in social interactions (Ellison et al, 2007) and to communicate with other students outside of class (Selwyn, 2009). There is growing evidence that points to an enhanced credibility of lecturers engaged in contemporary student culture (Kabilan et al, 2010) and familiarity though Facebook can make lecturers seems more approachable (Mazer at al, 2007). This can aid in student mentoring (Schwartz, 2010), e.g. staff can interact with students in a more informal manner, which may lead to greater disclosure of relevant personal circumstances than might occur in a face-to-face conversation.

As one of many communication methods available to students, Facebook offers a continuation of informal discourse that typically would occur offline, e.g. over coffee after a lecture. Thus far, this informal use of Facebook has been the typical use case, with students focusing on using the site for informal rather than formal learning Madge et al. 2009). Students appear to favour the use of Facebook at the departmental or class level, e.g. posting notices and setting up discussion groups. In a survey conducted by Madge et al (2009), 10% of students reported that they discussed academic work with other students daily, where only 7% used Facebook as a formal part of learning. When asked to judge the statement "Facebook is helpful to my academic life", 22% of students were in agreement, suggesting Facebook use may be an ad hoc occurrence rather than a daily event. Interestingly, 29% rated this statement as 'neither agree nor disagree', suggesting that the jury is still out on the role that Facebook can play for students in their education.

Facebook use can promote a collaborative model of learning (Mason, 2006) and is an attractive technology due to the ease of interactions and user familiarity with the system (Selwyn, 2007). It has been reported that students enjoy the convenience of Facebook (Irwin et al, 2012) as they are often on the site. This regular use of Facebook has the potential to affect students' work by causing a distraction (Wise & Williams, 2011; Cassidy, 2006). However, it is not always the case that students who spend more time on Facebook also spend less time studying and achieve lower grades (Kabre & Brown, 2011). This lends credence to the notion that students are using Facebook to inform their education, albeit in an informal way, and dispels the myth of Facebook propagating procrastination.

There is clear evidence in the literature that students perceive a distinct divide between an online learning space and an online social space (Jones et al, 2010). However, Hewitt and Forte (2006) reported that 70% of students surveyed felt comfortable with faculty being on Facebook. This familiarity with faculty has led to debate around privacy and the sharing of personal information on Facebook. Many students are aware of the possible consequences of sharing their personal information, such as identity fraud, but are, nonetheless, comfortable with sharing this information (Govani & Pashley, 2005). In a study investigating if the awareness of privacy concerns would increase the precautions taken to shield personal information (Young & Quan-Haase, 2009), evidence was presented that students are aware of the risks, and that education on these risks, does not result in significant reductions in online information revelation. The same study also found that the amount of information revelation was positively correlated with the size of a students' personal network. However it is not clear if this behaviour is exclusive to student users, or if it is also prevalent in the wider group of Facebook users.

In the literature, only one paper to date provides guidelines for the use of Facebook in educational settings (Wang et al, 2014). While these guidelines have yet to be evaluated, they may form the initial basis of practical advice for educators, including examples of best practice. This paper aims to expand upon this seminal work through a case study of practice within the School of Computing, University of Dundee. This includes the identification of successes and relevant gaps in the guidelines that may be dependent on the attitudes and processes in place at different institutions. The results of focus groups that investigated the experiences and opinions of students relating to their use of Facebook for educational purposes are reported.

Institutional Context

The University of Dundee is based in the East of Scotland and currently has more than 17,000 students and 3000 staff in total[1]. In the School of Computing, there are approximately 350 students and 26 academic staff. Students in the School of Computing, typically undertake 6 modules of study per year. Each module has a module co-ordinator who has responsibility for scheduling classes and examining students through coursework assignments and a final exam.

As is typical for a UK institution, students who study within the School of Computing are all expected to graduate with a degree in a computing-related subject.

[1] http://www.dundee.ac.uk/about/facts-and-figures

Case Study

Previous Online Communications

In previous years, the teaching staff at the School of Computing have attempted to foster online discussions through the use of a Virtual Learning Environment (Blackboard). Blackboard has a discussion forum available to users, with staff posing questions on the forum and inviting discussion, both for teaching purposes and to provide an online social space for students. However, this has not been successful for a number of reasons. Firstly, navigating to the forum can be time consuming when compared to other online interactions, requiring a minimum of six clicks after logging into the VLE. This meant that students were reluctant to engage in the online discussions, and so interaction was minimal. Staff members were also unduly encumbered by the poor usability of the VLE and so were less inclined to promote such online discussion forums.

With the potential benefits of discussion and peer learning clear to educators, an alternative to the VLE was sought. With large proportions of students signed up to and using Facebook, this was explored as a potential technology. The initial use of Facebook in the School of Computing was one group, which has grown organically and spawned many other groups. The current use of Facebook is described below.

Current Strategy

Currently, the School of Computing has a holistic view to educational technology and employs a similar educational strategy to that outlined by Hrastinski & Aghaee (2012). There are three elements that combine to form the educational experience of students, as shown below in Figure 1.

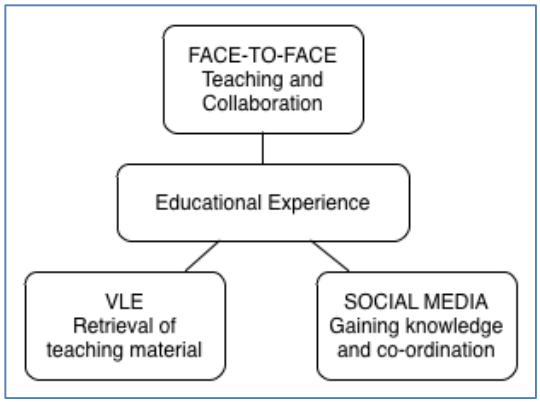

Figure 1. An Educational Triad

The first element is use of the VLE. The VLE is used as the primary means of communicating electronically with students (e.g. announcements are transmitted via email) and as a repository of resources including lecture slides and additional reading materials.

The second element is face-to-face teaching and collaboration, such as lectures, tutorials and laboratory sessions.

The third element is the use of social networking sites, which has been developed over the last 5 years and is based on student feedback gathered during this time. A number of Facebook pages and groups are in existence and are administered by both staff and students. An overview of these is shown in Figure 2 and is outlined below.

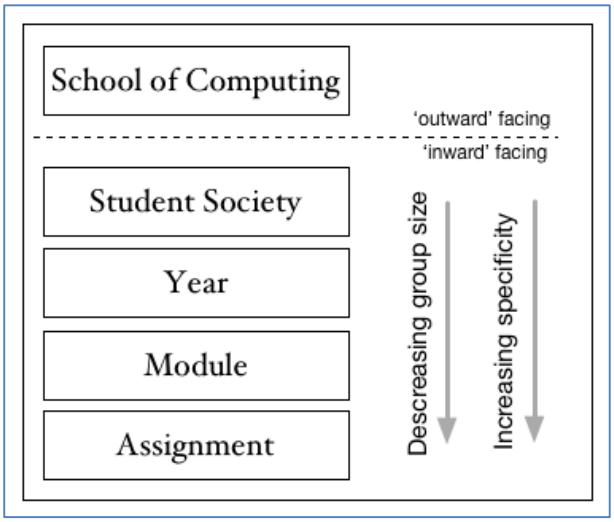

Figure 2. Overview of the Facebook hierarchy used within the School of Computing

There is a School of Computing Facebook page, which is administered by the University's marketing team with the help of a member of faculty, and is used as a means of communication with potential students, alumni and interested members of the public. This page is currently used to advertise open days and outreach events, promote successes such as awards won, and to interact with local news channels. A more detailed discussion of the School of Computing page is outside the scope of this paper.

Alongside the outward facing page, a number of groups have been set up to facilitate discussions and the sharing of information between students and staff. Groups[2] have been selected as the desired structure (rather than a page[3]) due to the enhanced interaction that is possible. These groups closely mirror the learning structure of the School. Within each year, students will undertake a number of modules (typically six), and as part of each module there will be a number of group assignments. The number of group assignments will differ between modules depending on the content and

[2] https://www.facebook.com/help/162866443847527

[3] https://www.facebook.com/help/174987089221178

assessment requirements. Descending the levels of the hierarchy, each group is smaller in size and is focused on a more specific task or purpose. For example, the ‘Year’ group will be used to discuss items applicable to an entire year group, such as a lecture describing careers or internship talks that a student might attend; an ‘Assignment’ group will focus on a given assignment within a module and may only contain members involved in that assignment team.

Each year group selects a class representative, who will interact with staff members and present issues raised by the year group in staff-student committees. In addition, there is a student president who is elected to represent the School of Computing at a university level. These students, in conjunction with the second author, created a set of ‘rules’ over a period of two months, which students are expected to abide by while using the university focussed Facebook groups. This involved regular meetings and discussion of the rules with the wider student body. Students are reminded of these rules each year during the induction process. An example is shown below which pertains to the “School Society” group. These rules are posted within the group and can be seen by all members.

> This group is for everyone who is interested in the Dundee University Computing Society. It is a fun place to post questions, thoughts and anything related to the society or university life. We want everyone to be involved :) The only thing we ask is that you don’t post any comments worded in a way you wouldn’t be willing to show your mum. In other words, no bad language, racism or sexism. Failure to abide by these rules will in the first instance receive a warning. If the behaviour continues you will be removed from the group.

Student representatives, the school president and members of the society are involved in the administration and moderation of the groups, and are encouraged by staff to take appropriate actions, such as deleting posts when needed in order to maintain a friendly atmosphere in the groups. A member of School staff is available on each group to assist if and when required.

Student Society

The student society group is a central resource for all students and interested alumni in the School to share relevant and noteworthy information. Since this is the main means of communication for the society, all students at the university must be able to join the group in order to adhere to University regulations. In practice, however, the vast majority of the group are either faculty or a student at the School of Computing.

This was the first Facebook group created by the School. It is a closed group to ensure that membership is monitored and to reduce the amount of nuisance postings. The primary uses of this group are indicated below with examples:

- To share links or relevant information: e.g. *"Thought this might interest some people"*
- To post notices related to academic or logistic matters: e.g. *"If anyone has resits you should check your emails"*
- Arrange social events: e.g. *"Night out Friday. Who's up for it?"*
- Ask for help with general issues: e.g. *"Hey, does the society/the school have any wifi/ethernet shields for Arduino that I can use?"*
- An alternative communication: e.g. *"Anyone else having problems with the email?"*
- General 'chat: e.g. *"So there's a snake in the lab 1 vending machine. Am I missing something or …"*

The other groups in the hierarchy have been created as a result of the success of this group. Aside from the increasing numbers, students reported a desire to compartmentalize different topics, and so groups were created for different years and modules in order to discuss more specific topics.

Year

For each incoming year to the undergraduate degree program, a group is created. Typically these are named "Class of …". The same group is therefore used throughout the undergraduate degree. Key staff members and the year representative are administrators of the group. The group focuses on issues pertinent to each individual year group. For example, in the final year there is a focus on graduation: *"BCS forms due on Friday 9th … We get our certificates after the graduation ceremony"*. Interestingly, students sharing information amongst the members of the group make up the vast majority of posts. Posts by staff have been limited to making timetabling announcements or providing encouragement, e.g. *"Congratulations to you all. I was extremely proud of you today"*.

On completion of the degree and after graduation the groups remain an active community, although the focus has shifted from education to employment. Posts focus on sharing jobs posted by current employers or CPD opportunities. In addition, the group is used to share interests, projects and achievements, e.g. *"I have just had my first App published on the Apple App Store"*.

Module

The implementation of Facebook groups for modules is dependent on the level of involvement of staff. In some cases, staff members are confident Facebook users who will create a group for their module. Typically, the staff member and lab tutors (usually

postgraduate or later-year undergraduate students) will be administrators. The use of this level of group includes asking for help on a particular topic or providing and sharing further online resources. Usually, the student body answers or discusses such posts in a collaborative manner, but staff (and other administrators) can step in if there has been a misunderstanding regarding the taught content. In order to further mitigate this risk, after a burst of activity in the group, e.g. a number of posts relating to the same topic, this is covered in the next lecture to ensure that the discussion has been resolved and that students have been presented with complete and correct information. While this may take additional time, the benefits and rich discussion that such sessions generate are considered to be worthwhile.

Conversely, when there has been limited activity in the group, the staff member may seed a conversation by posting open questions or wonderings to spark discussion, e.g. *"How is the last day of revision going? Any burning questions or stresses?"* More often than not, this does trigger a fruitful discussion.

In some cases, the staff member responsible for the module does not use Facebook. In this case, the class will usually create a group by themselves, solely as a means of communicating about that module. While this lacks the benefits of staff input, it does speak to the desire of students to collaboratively learn in an online environment and may afford them additional freedom in their discussion.

Assignment

Assignment groups are created and managed solely by students, and are used for communications relating to a given assignment. These are created on an ad hoc basis and may be repurposed for future assignments where appropriate.

Focus Group

Two focus groups were held to explore the experiences and opinions that students have regarding their use of Facebook for educational purposes at the School of Computing, University of Dundee. Data collected during these focus groups was analysed using thematic analysis (Ryan & Bernard, 2003). This study was subject to departmental ethical review and was considered to pose no ethical risks.

Participants

A total of 11 (6 male, 5 female) participants took part in two focus groups. Four participants (3 male, 1 female) participated in the focus group. Participants were aged 20 to 29 years and all were students in the School of Computing. Seven participants (3 male, 4 female) took part in the second focus group and were aged 17-22 years.

All participants reported that they contributed to Facebook at least once per day. The main purposes were keeping in touch with friends, finding information related to their personal interests and sharing these interests. Educational purposes were also reported, with finding information for studying, and exchanging files noted as regular use cases. In addition, all participants used the VLE on multiple days per week.

Participants used a variety of technology devices for personal and educational use. This included laptops, desktop PCs, tablet devices and mobile phones.

Materials

Both focus groups were held at a common venue on campus that was easily accessible to all students. Care was taken to ensure that no interruptions would occur throughout the session. The ‘Voice Memos’ application on an iPhone 5S was used to record the

focus group. Transana[4] was used to transcribe the audio recording after each focus group.

Procedure

Participants were invited to take part in a focus group, which was organised outside of scheduled class time. The lead author facilitated both focus groups. On arrival, participants were invited to read an information sheet about the study and complete the relevant consent form.

Participants were made aware when audio recording began. The researcher did not take notes during the interview in order to interact wholly with the participants. Open questions were posed by the researcher to begin discussion, and followed up with further questions where relevant. Example questions used in the focus group are:

- Would anyone like to share their experiences of using Facebook for their university education?
- Why do you think people join Facebook groups at university?
- Do you have any negative experiences of using Facebook?
- What role do you think the university should play in managing Facebook groups?

The group was encouraged to respond to points raised by other participants, and to share their own experiences as much as possible. The focus group lasted 45 minutes.

Analysis

To analyse the results, the researcher firstly transcribed both focus groups. Following this, thematic analysis was utilized (Ryan & Bernard, 2003) to extract themes from the

[4] https://www.transana.org/

transcript. Strategies recommended by this method include identifying repeating topics, noting the use of metaphors and analogies, identifying linguistic connectors (e.g. "because") and recognizing indigenous topologies or categories. To record and analyse themes, Framework, a "matrix based method for organising and synthesising data" (Ritchie et al, 2003) was used.

Results

There were seven main themes arising from the analysis of the transcript. These are:

(1) A social and education divide
(2) Uses of Facebook
(3) Hierarchy of groups
(4) Familiarity of Facebook
(5) The usability of Facebook
(6) Moderation of groups
(7) Privacy

A social and education divide

There has been a gradual shift from Facebook being a social only site to including elements of the site for educational purposes. As a student, social and educational situations can become blurred, e.g. through societies and group study, and Facebook is no different in this respect. Participants noted that there were some situations where they liked to have a clear separation of their university study. This was focused on ensuring that their posts were directed to the most appropriate audience and that they did not "annoy" friends by posting study-related materials to their timeline. The use of Facebook groups was noted to be of benefit in ensuring this divide as the membership of each group, and thus the recipients of a post, can be limited to a relevant audience.

Overall, the use of Facebook was simultaneously viewed both as procrastination and motivation. Students could be distracted while on Facebook, but they were also encouraged to tackle assignments when they saw their fellow students posting about them.

Uses of Facebook

Participants consider university emails and VLE announcements to be the primary means of communication with staff members for "official" communications but were enthusiastic about the benefits of informal communication with faculty on Facebook. Uses of Facebook provided by students were posting assignment questions, revision groups, file sharing and organising events for studying. These events might be a time to meet up in person, or might be a time when all students in the group are online.

The online revision groups were considered to be particularly beneficial, as they offered students opportunities to work together in real-time to solve problems and to engage in discussions with their peers about class content in a closed environment. All participants indicated that Facebook was a valuable platform for revision purposes. It was noted that the use of Facebook for studying is useful as it accommodates different learning styles. For example, one student may wish to study in silence, while others may wish to be in a busy environment where they can converse. With Facebook, all students can communicate online regardless of their location, particularly if they are geographically distant or otherwise unable to attend.

Hierarchy of Groups

Participants appreciated that the different groups reflected the School structure of learning, which helped them to determine the most appropriate group, and so the most appropriate audience, for interaction. Different groups were used at different times,

depending on the topics to be discussed. This was useful as it allowed students to break their Facebook communications down into different groups, as it could be overwhelming if all communications were in one place.

Familiarity of Facebook

Since the participants already have Facebook accounts, and would likely be on the Facebook website already, this meant that they did not have to go to a different site for study-based communication. Furthermore they enjoyed the familiarity of Facebook, and understood the features available to them. This meant that limited time was required to become acquainted with the system.

The Usability of Facebook

All participants used the VLE, but this was considered to be a one-way system, with the teaching staff posting study information, such as lecture slides, and logistical information, such as timetable changes, to be received by students. This lack of interactivity was reported as a negative aspect of the system.

The usability of Facebook was considered to be much better than the VLE. For example, participants noted that they could contribute to Facebook discussions with much fewer clicks than those on the VLE. However, some challenges were noted. Participants had to spend some time organising groups into 'favorites' to ensure that they were visible on the left sidebar at all times. Facebook only shows six groups, and so participants felt they often "forgot" about groups that they could not regularly see, despite notifications alerting them to new content. Clear labelling was needed for groups to make clear their purpose and the use of icons were recommended to distinguish between groups.

Moderation of Groups

The role of faculty and students in moderating Facebook group content yielded much discussion. Participants noted that clear rules were useful to ensure that students were confident enough to delete posts from groups. The participants commended having both faculty and students as moderators, as this meant that students gained ownership over the discussions that occurred. The lack of intonation in online postings often resulted in misunderstandings and could led to arguments, which was a frequent reason for moderation. There was an element of concern that such online arguments might spill over into face-to-face interactions, but participants trusted that faculty would intervene before the situation had escalated, and could post in the group to provide clarity in such discussions. The role of the staff member was welcomed in these situations, but was not viewed as a necessary intervention.

Privacy

Participants were largely unconcerned by privacy. They considered that the "blurring" of their social and educational uses of Facebook was a "trade off" between sharing personal information while gaining educational benefit. The privacy settings available on Facebook were considered sufficient for ensuring that not all profile information was available for public viewing. Participants strongly felt that each student had a high level of responsibility for ensuring that they had the correct privacy settings activated, but noted that education was important. Participants expected staff members to direct them to the privacy settings and noted that regular reminders about privacy were useful to keep such issues at the forefront of students' minds.

Reflection on Current Guidelines

Overall, the participants were positive in their opinions about the use of Facebook for educational purposes.

The use of Facebook in the School of Computing is to provide a moderated space for informal educational discussions to occur between students with the inclusion of faculty in a supporting role. The use of Facebook by students for social purposes is widespread and this is now expanding into the education domain. As these two uses become more frequent, there is potential for the line between social and educational use to become blurred, a concern which is widely mooted in debates on privacy and the erosion of boundaries. This has clearly been considered in the guidelines presented by Wang et al (2014) with recommendations being made that participation in educational use is not based on "friending" and instead is based upon a "group" structure. However, the informal nature of such interactions does inevitably lead to increased familiarity, which can provide invaluable opportunities for mentoring students (Schwartz, 2010) and increasing the approachability of faculty (Mazer at al, 2007). Participants noted this "trade off", with a clear focus on the responsibilities of the student to ensure that privacy concerns were considered and safeguards implemented. The role of staff in such activities was considered to be limited (beyond a useful reminder), to directing students to the privacy settings being sufficient. However, this may be a reflection of the computer literacy of participants in this study. Wang et al (2014) suggest ensuring that "all members of the group have the necessary basic competence and aptitude to use Facebook". Specific training is not considered necessary for students in the School of Computing, but is partly addressed in induction sessions each year, when the rules of group use are reinforced.

The usability of Facebook was considered to be largely superior to the VLE currently used, a sentiment which is echoed strongly in the literature (Selwyn 2007;

Selwyn 2009). There are clear reasons for the use of VLEs, such as in-house control of settings and presentation, and the provision of staff training. While it is outside the scope of this paper, there is a case for further research into the abandonment of such technologies, and whether lessons can be learned regarding students' supposed preference for the familiar environment of Facebook. It may be argued that the gradual development of Facebook over time is due to the vast user numbers in volumes that VLEs are unable to replicate.

Overall, the social and informal benefits of Facebook are evident in the feedback received from participants and it is clear that students value the opportunity to be involved in the development of the Facebook strategy at the School of Computing. Continued student involvement is expected to further develop the Facebook strategy in the coming years.

Recommendations for Guidelines

While no formal evaluation of the guidelines presented by Wang et al (2014) was conducted, the focus group discussion was considered with regards to the guidelines. Consequently, this paper provides support for the further development of such guidelines. The work conducted would point towards the validity of the guidelines in their current form. However, some issues have been raised, inclusion of which would be of further benefit.

A clear moderation policy should be determined at the outset of use, outlining the individuals responsible for moderation. In many cases, this could solely be staff but in the example outlined in this paper, students are frequently involved in such activities. Indeed, their inclusion has been key to the success of the Facebook groups. An expansion of guideline 9 ("Have a clear policy on what constitutes misuse") should include responsibilities for the application of sanctions. For examples, Facebook use

should be considered within the wider teaching behavioural policy. In such cases, final responsibility for sanctions would lie with faculty staff.

The use of groups is recommended in the guidelines, but there is no provision for how multiple groups may be implemented. Such decisions are rooted in the pedagogy of individual curricula and, as such, the use of Facebook for educational purposes should be explicitly noted in the teaching policy and strategy of each institution. The rapidly changing nature of Facebook and similar online communications should also be considered. Practical advice such as how to expand and adapt to the changing online landscape would be useful, e.g. what is the best way to break down one group into smaller groups?

It is also important that there is consistency in the use of Facebook. Currently, the use of Facebook in Higher Education is dependent on the experience and confidence of the instructor. This means that many students can be unsure if a group exists for a given class or not.

Furthermore, the involvement of staff should be clearly specified. The guidelines so far, focus primarily on the student experience, but an equal importance should be placed on the staff experience. For example, staff should be clear whether they expect to have any direct involvement in the group, e.g. will they answer questions, and at what time of the day? This is important, as it ensures that staff are able to maintain a work-life balance and boundary as they wish.

Limitations and Future Work

The research reported in this study uses a small sample size (n=11) and therefore the results obtained, whilst promising, cannot be generalized to other students. There are currently plans to replicate this study with a larger sample, which allows generalization across a wider group. Therefore, further questions can be explored, for example whether

the structure reported in this paper can help students bridge possible geographical gaps (e.g. for team-work, absent students and cross-institution collaborations).

This study is also limited by the fact that all student participants had existing Facebook accounts and were familiar with the social network. As CS students it is possible that the participants may understand social network systems to a more technical level. Other student groups (e.g. not CS students) may have different knowledge, opinions and concerns.

Finally, all participants in the focus group were students, so staff users are hitherto under-represented.

Conclusion

This paper outlines a Facebook structure at the School of Computing, University of Dundee that has been implemented by staff and embraced by the student body. The Facebook structure maps to the learning structure utilized in the school and maps closely to the student experience. Positive feedback from students indicates that this structure is useful in promoting collaborative learning and discussions, whilst supplementing the face-to-face delivery of curriculum content. In addition, students report that they enjoy using the Facebook structure as an educational and organizational medium, as it allows for a manageable divide between educational and social activity. Taken together, these results are aligned with previous work which points to the potential of social networking in education.

This work adds to a growing body of literature on implementations of social media within educational settings, focusing on the benefits of a student-led approach. Further investigation of these issues across a number of subject areas would allow for these findings to be generalized to a wider student group and provide further evidence for a cohesive Facebook strategy in Higher Education.

Acknowledgements

The authors would like to thank all participants of the focus group, as well as other members of staff for insightful discussion on the subject matter.

References

Boyd, D. and Ellison, N. (2007) Social network sites: Definition, history and scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210-230.

Cassidy, J. (2006) Me media. New Yorker, 82(13), 50-59.

Ellison, N., Steinfield, C. and Lampe, C. (2007) The benefits of Facebook "friends": Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, 12, 1143-1168.

Govani, I. and Pashley, H. (2005) Student awareness of the privacy implications when using Facebook. Carnegie Mellon, City, 2005.

Hewitt, A. and Forte, A. (2006) Crossing boundaries: identity management and student/faculty relationships on the Facebook. *CSCW'06 Conference* Canada, November 4-8, 2006, Banff, Alberta, Canada.

Hrastinski, S. and Aghaee, N. (2012) How are campus students using social media to support their studies? An explorative interview study. *Education and Information Technologies*, 17, 451-464.

Irwin, C., Ball, L., Desbrow, B. and Leveritt, M. (2012) Students' perceptions of using Facebook as an interactive learning resource at university. *Australasian Journal of Educational Technology*, 28(7), 1221-1232.

Joinson, A. (2008) Looking at, looking up or keeping up with people?" Motives and use of Facebook. *SIGCHI Conference on Human Factors in Computing Systems, CHI' 08* New York, NY, USA, 2008. ACM,

Jones, N., Blackey, H., Fitzgibbon, K. and Chew, E. (2010) Get out of MySpace! Computers in Education, 54(3), 776-782.

Kabilan, M., Ahmad, N. and Abidin, M. (2010) Facebook: An online environment for learning English in institutions of higher education? *Internet and Higher Education*, 13, 179-187.

Kabre, F. and Brown, U. (2011) The influence of Facebook usage on the academic performance and the quality of life of college students. *Journal of Media & Communication Studies*, 3(4), 144-150.

Madge, C., Meek, J., Wellens, J. and Hooley, T. (2009) Facebook, social integration and informal learning at university: 'It is more for socialising and talking to friends about work than for actually doing work'. *Learning Media and Technology*, 34(2), 141-151.

Mason, R. (2006) Learning technologies for adult continuing education. *Studies in Continuing Education*, 28(2), 121-133.

Mazer, J., Murphy, R. and Simonds, C. (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*, 5(1), 1-17.

Mori, I. (2007) Student Expectations Survey. *Coventry: Joint Information Systems Committee*.

Ritchie, J., Spencer, L. and O'Connor, W. (2003) Carrying out Qualitative Analysis. Sage, City.

Ryan, G. W. and Bernard, H. R. (2003) Technique to identify themes. *Field Methods*, 15, 85-109.

Selwyn, N. (2007) Screw blackboard... do it on Facebook! An investigation of students' educational use of Facebook. *Pole 1.0 - Facebook social research symposium*, University of London.

Selwyn, N. (2009) Faceworking: exploring students' education-related use of Facebook. *Learning, Media and Technology*, 34(2), 157-174.

Schwartz, H. (2010) Facebook: the new classroom commons? *Education Digest: Essential Readings Condense for Quick Review*, 75(5), 39-42.

Wang, R., Scown, P., Urquhart, C. and Hardman, J. (2014) Tapping the educational potential of Facebook: Guidelines for use in higher education. *Education and Information Technologies*, 19, 21-39.

Wise, L.Z., Skues, J. & Williams, B. (2011). Facebook in higher education promotes social but not academic engagement. In G. Williams, P. Statham, N. Brown & B. Cleland (Eds.), *Changing Demands, Changing Directions. Proceedings ascilite Hobart 2011*. (pp.1332-1342)

Young, A. and Quan-Haase, A. (2009) Information revelation and internet privacy concerns on social network sites: a case study. *Fourth international Conference on Communities and Technologies*, 265-274. ACM,

Zickuhr, K., & Madden, M. (2012) Older adults and internet use. Washington, DC: Pew Internet & American Life Project.

Figures