GUIDED ASSESSMENT OR OPEN DISCOURSE:
A Comparative Analysis of Students Interaction on Facebook Groups

Lenandlar SINGH
Faculty of Natural Sciences Department of Computer Science
University of Guyana, Turkeyen Campus, Greater Georgetwon
GUYANA, SOUTH AMERICA

ABSTRACT

Web 2.0 and specifically Social Networking Software have become ubiquitous tools for communication over the last five years. Across many disciplines, practitioners and researchers have been exploring these technologies with the hope of tapping into their perceived potential. Not least in this endeavor is the field of Education. Educators and Researchers have been engaged in active research on the practical and pedagogical benefits and implications of Web 2.0 and Social Networks.

This paper explores the use of Facebook Groups in the Undergraduate Computer Science Program at the University of Guyana. Specifically, Guided Assessment strategies using Facebook Groups are compared with unguided and non-assessed Facebook Groups. Specifically, this study provides a comparative outline of the usage patterns of two (2) Instructor-Guided and Assessed Facebook Groups with three (3) student-led, non-assessed Facebook Groups that supported a form of Open Discourse. Results suggest that planned and guided, instructor-directed activities provide more focused responses from students compared to Open Discourse. However, information sharing and communication is common among both groups and in similar patterns.

Particularly, students shared links, videos, and blogs with their colleagues. Planned activities are recommended for specific course objectives, while students should be encouraged to evaluate and share information among their peers.

Keywords: Facebook Groups, Web 2.0, Social Networks, Structured Learning, Higher Education.

INTRODUCTION

Web 2.0 and specifically Social Networking Software have become mainstream technologies over the last couple of years.

They have changed the way users engage with the World Wide Web (WWW) and the Internet. Users are now able to create content, share ideas, and generally interact and socialize with other users, from near and far, and across disciplines and cultures, with the click of a button. Online collaboration and sharing have become the norm (Collis & Moonen, 2008) and with Web 2.0 fostering the development of a more socially connected web, users of this space have become important producers of content, thoughts and ideas, as much as they have been consumers (Anderson, 2007).

It has become apparent, and in many cases, implicit, that this version of the web encourages and sometimes even demand participation and interaction if users are to fully explore and benefit from what is on offer (Collins, 2009).

Educators and academics have become enthused and excited with what Web 2.0 brings to the discourse. Lee and McLoughlin (2010) believe that these technologies offer a set of pedagogical tools that focuses on the creation of content and learning experiences, as opposed to the older, static system of content consumption. As a result, Web 2.0 platforms are becoming an integral part of the tool-sets used in Higher Education. Specific tools such as Wikis, Google Docs, Podcasting, Blogs, are already a part of this landscape. Individual Web 2.0 tools are now configured as Social Networks, providing a common space where these tools are accessible, made more manageable and easier to use. Facebook, for example, is one such configuration, where Blogging, Instant Messaging, Notes and Groups are all part of one common space.

However, the ease with which these technologies are appearing in Higher Education does not necessarily correlate with the effective exploration of their true potential. This potential is not yet understood and support from research is limited. Empirical evidence is important for the continued adoption of Web 2.0 in Higher Education, and for effective use.

This paper explores the use of a particular instance of Web 2.0 -Facebook Groups. It examines student's use of this tool in the classroom to support first and second year courses in the Undergraduate Computer Science degree program at the University of Guyana. Specifically, instances where students' groups were closed and monitored versus instances where groups were open and students' driven are compared.

The primary purpose of this paper is to examine and compare students' interaction these two types of groups with their colleagues. Mandatory use of Facebook Groups used for course assessment purposes are compared with Optional Facebook Groups used for general discussion, information sharing and almost any other activity.

The secondary focus of this paper is to explore the use of social media at the University of Guyana and to illicit general feedback on how students in the Education system at the University of Guyana view social media in their student life and education. The literature review that follows outlines work research interest in Web 2.0 in Education. The remainder of the paper outlines the methodology and results, and concludes with a discussion and signpost areas for future work.

REVIEW OF THE LITERATURE

Web 2.0 in Education
Web 2.0 tools were not designed specifically for education but have nonetheless found their way in the teaching and learning environments of many classrooms and other educational spaces.

They are thought to possess many characteristics that promote and encourage their adoption in many of these environments (Ferdig, 2007). Students no longer remain static consumers of content but are active producers of content, ideas and other artifacts (Maloney 2007). Computer Science students are no different and are perhaps at an advantage when it comes to technology usage since they interact with, design and develop these technologies on a daily basis.

This is an important dynamic and provides motivation to study how they use these technologies to support their own learning.Web 2.0 is now accessible to virtually all students and they seem to have bought into the idea of using these tools.

This forces educators and academic institutions like the University of Guyana to think about ways in which they can meet students in their digital habitat in order to fulfill the expectations of their students. Students use these spaces to create content, share ideas, socialize and in some cases learn from each other. However, the ability to quickly create content and ideas does not necessarily mean the production of artifacts of high quality. This is a major challenge that Higher Education faces (Hartshorne & Ajjan 2009) and educators must identify and use appropriate pedagogical strategies for effective use of Web 2.0.

Facebook in Education

To date, most of the studies on the use of Facebook are reflective and focuses on users' beliefs, informal activities and general interaction where Facebook was integrated into a course of study as a useful tool but not to support assessed activities.

Selwyn (2007) explored students 'educational-use' of Facebook instead of another learning environment –Blackboard. This study was not experimental but focuses on an analysis of students behavior and power relationships with their social space. Though students interacted and engaged the way undergraduates will do in academia, difficulties with separating social space from academic life was noted. In a similar study, Selwyn (2009) investigated students' use of Facebook for Educational activities and found that students discussed a range of activities on classroom and course logistics to actual academic matters, but not very frequently. Mostly students discussed course requirement and assessment issues. Interestingly, banter was also prominent among students.

The use of Facebook in both instances was informal and therefore allowed for the wide range of topics that were on display as is evident from the content analyses of these studies. O'Rawe (2010) investigated students' perception of Facebook in Education and found that students did not believe that using Facebook groups may not be a beneficial learning tool for them and should not be used for teaching and learning.A small number of studies have attempted however to explore Facebook using more structured and guided methods. Visagie and De Villiers (2010) used Facebook Groups to support the teaching of Information Systems across different groups of graduate students from five (5) countries. They found limited interaction among students, and between students and lecturers. Lecturers generally did not believe that Facebook is a tool for academia. Al-Atabi and Younis (2010) experimented with a Facebook Group in an undergraduate Engineering course.

They used the group for administering voluntary quizzes and to conduct topical course-based discussions. Students found the Facebook group very useful and lamented that it was a good idea. They commented that it helped them to learn about their lecturers since no personal information about lecturers were posted in this group.

De Villiers (2010) experimented with a Facebook group to support a class of distance learners. Students found the tool extremely useful and allowed them to 'meet' fellow students and lecturers that they could not interact with face-to-face. However, aside from social interactions, students were generally unsure about the real value of a Facebook group to their learning.

Singh and Gaffar (2011) used a Facebook group to conduct interactive tutorial development with students in an undergraduate course in Internet Computing. This activity was structured and formed part of the overall assessment of student performance in the course of study. Students did not find the activity interested and believed that the Facebook group has not inspired them to develop their tutorial discussion.

Gaffar and Singh (2011) repeated this experiment with another group of undergraduate students undertaking a course in computer networking. This study revealed a significantly higher level of interaction among students compared to the previous group.

Students reported a high degree of satisfaction with the tool and commented that it supported their learning. However, the performance of students in this study group was not significantly different when compared to the previous study group.

A number of issues and questions arise as a result of inconclusive feedback from previous studies. Structured and unstructured usage has been investigated, with varied results. This study explores students' usage of Facebook groups in both structured and unstructured configurations.

It attempts to provide a short comparative analysis of similarities and differences of usage across the two categories.

METHODOLOGY

Participants
This study was conducted over two (2) academic semesters or one (1) academic year, with five (5) groups of students, each taking one undergraduate course in Computer Science. Two (2) of the five (5) groups were engaged with planned and structured tutorial activities and the other three (3) groups used Face book groups for general participation in the course. Participants were all of the students from the courses under study. The table below provides details about the five (5) study groups.

Table: 1
Case Study Groups

Group	Course	Campus	Type of Activity	Number of Students
1	CSI 22 -Client-side Internet Computing	Berbice Campus, University of Guyana	Structured Tutorial Development	11
2	CSI 213-Computer Networking	Berbice Campus, University of Guyana	Structured Tutorial Development	16
3	UGC 110 omputer Literacy 1	Berbice Campus, University of Guyana	Unstructured Course-related activities	10
4	CSI 222-Software Engineering	Turkeyen Campus, University of Guyana	Unstructured Course-related activities	50
5	CSI 225 Client-ide Internet omputing	Turkeyen ampus, University of Guyana	Unstructured Course-related activities	50

Instrument
Facebook Group is the main instrument used in this study. Individual Facebook Groups were created for each of the five courses under study. Students were invited to join their respective Facebook Group. Permission was granted by the Administrator of the Group once some form of student identification was recognized. Students completing assessed activities in the form of tutorials were provided with guidelines to on how to develop their tutorials. Topics for tutorials were selected from the recommended course outlines, discussed with the lecturer, approved, or rejected with suggestion for improvement. Once tutorials topics were approved, tutorial development commenced. Assessment weighting and marking schemes were provided to students.

Students were allowed up to 14 weeks to develop their tutorials. Tutorial development included answering questions asked by fellow students, ask questions of other students' tutorials and communicate with class lecturer. The main researchers conducted observations on a weekly basis and reminders and constant encouragement, where deemed necessary was provided by the researcher. At the conclusion of the tutorial development, students' tutorials were assessed and assigned an overall mark. This mark contributed to their final coursework score and subsequently final course grade. Data on number of own posts, number of responses to posts by others, and the number of questions asked and answered were recorded and assigned a grade. In the final analysis, notes of the quality of students' posts, relevance to their topics and proper citations, were also assessed.

The Open Groups allowed students' to lead any discussion or information sharing as they see fit for the course.

Students were encouraged to participate by posting links to important course-related resources, start discussions on course issues and ideas discussed in class and post feedback on classroom discussions, and generally interact with each other. No restrictions were placed on what could be posted.

However, students were reminded to keep the Group free from profanity and vulgarity. Periodic observations on groups' usage were documented.

Specifically, comments and posts deemed important to the course discussion were noted. Reminder to engage discussions on course related matters were encouraged by the researcher using a weekly reminder strategy.

The researcher/lecturer engaged with students in the open groups by posting relevant links, asking questions and providing answers where questions related to the course of study was asked. Students were also encouraged to highlight general classroom issues they were facing with the lectures and seek clarity from their colleagues and lecturers.

Questionnaire

A pre study and a post study questionnaire were administered to all five groups of students. The pre-study questionnaire solicited internet access and usage patterns of students and their Web 2.0 and Facebook background.

The post-study questionnaire sought to identify students' perceived usefulness of Facebook Groups in their tutorial development, issues and problems they encountered, and their own general views on the value of Facebook Groups in Education.

RESULTS

Pre-Study Questionnaire

Questionnaires were distributed to all participants of the five groups. A total of 137 questionnaires were distributed to the 5 groups with 120 students responding. The results show that over 90 percent of students were already existing Facebook users. Five percent of those who were not became members in order to participate in the activities. Approximately 85% of the respondents were below the age of 25 and used the internet for various reasons on a daily basis. A further 10% used the internet at least once per week. Sixty five percent of the students have access to the internet at home while the remaining 35% accessed the internet at work, school or internet cafes and by friends. Approximately 75% of the students had a personal computer or mobile phone with internet access. Only a small number of students (approximately 7%) use other social networks and Web 2.0 tools on a regular basis.

Facebook Group Usage

Closed Class Groups

All except 1 student started and completed their tutorial development for the structured, assessed classroom activity. In Group 1, on average, students made 5.6 posts, asked 0.8 questions and answered 1.8. The total number of posts in all group activities was 62. The average grade obtained by each student at the end of assessment was 63%. In Group 2, In Group 1, on average, each student made 7.3 posts, asked 5 questions and answered 7 questions. The total number of posts made by all participants was 152 the average grade obtained by each student at the end of assessment was 61%. There were a significantly greater number of posts made in the Group2, more questions were asked and answered, compared to Group 1, more questions however, and the final assessment grades were not significantly different (63% compared to 61%).

Open Groups

All of the students from Group 3, Group 4, and Group 5 joined their respective Facebook Groups. The total and average number of posts made by students from Group1, Group 2, and Group 3 were approximately 72 and 6, 100 and 3, and 75 and 2, respectively. Even though Group 4 and Group 5 had significantly more students, not all members of these groups posted. Approximately 40% of all group members were mainly lurkers.

Patterns of Contribution in Both Groups

As expected, the structured groups provided more course-specific posts. Discussions for the most part related directly to topics centered on the course materials.

On the other hand, the unstructured groups converse on a more diverse set of topics. Students in the unstructured groups developed conversations ranging from personal affairs to course specific course-related topics. However, even though the unstructured groups started discussion topics that were course related, deep discussions were not evident. Both groups posted links with relevant course related materials. In the case of the unstructured groups, there was no tangible evidence that students interacted with the links as demonstrate

Post-Study Questionnaire

A post-study questionnaire was administered to capture students' views on the use of the Facebook Groups during their course. Both categories of student d by the limited responses on those threads. Groups expressed interest in using Facebook groups for their courses. Both groups claimed that they learnt a lot from their colleagues but were skeptical about the openness of their responses to an entire group. However, there were some important distinctions.

The Closed Groups felt pressured into responding to questions and comments made by their colleagues. They also indicated that the presence of the lecturer was intimidating and may affect their confidence in posting their ideas and thoughts because they were conscious about the assessment activity. Further, some students have expressed disgust at having to wait an indefinite amount of time before their colleagues responded to questions they have asked.

Generally both groups indicated an interest to learn from their colleagues but the unstructured group had a lower level of expectation.

In the Open Group students indicated that Facebook Groups were 'great for catching up on points missed in class' but were quick to point out that the 'distraction by whatever else is happening on the general FB community' could be a hindrance to their participation. This 'distraction' was highlighted by over 50% of all participants. 40

DISCUSSION AND CONCLUSION

Researchers and Practitioners are relentlessly exploring how they can make best use of plethora of emerging Web 2.0 and Social Networking Technologies.

Facebook and Facebook Groups in particular have been explored as alternative option to facilitate networking in education, teaching and learning activities, and general team building among groups of students.

However, to effectively use these tools, sound pedagogical approaches are required. Empirical evidence is necessary to motivate and encourage educators to adopt these technologies. Of particular interest to educators and administrators is the relatively low start-up cost to access and use these technologies. For Higher Education Institutions such as the University of Guyana, this low start up cost provides a viable alternative to traditional modes of content and education delivery. It is also an opportune time for institutions that are beginning to join the E-Learning bandwagon to explore alternative ways to deliver education online. In this regard the University of Guyana in particular and the Education System in Guyana, in general, perhaps is presented with a great opportunity to explore Social Software in Education.

This article examines the usage pattern of students when a structured and guided approach to the use of Facebook Groups are deployed compared to open and unstructured approaches. The findings show there was no significant difference between the two approaches in terms of the rate at which students interacted with the groups. However, the structured and guided groups provided more course-specific discussions and were more focused.

This could be mainly explained by the assessment value of the tutorials that students were developing, and the guidance that was provided in the pre-activity checklist.

Conversely, the open, unstructured groups provided a wider range of discussion topics, some of which were more social in nature, as was expected. However, since participation was optional, many students choose not to participate in any visible activity, even though they joined the groups. Lurking was the pre-dominant mode of 'interaction' for students. However, lurking may have benefitted some students but no tangible evidence is available.

Both groups expressed confidence in Facebook groups to support their learning. However, tangible evidence of students' actual participation does not appear to support such claims (Hartshorne & Ajjan 2009).

In both instances students appear reluctant to engage in deep discussion on course-specific topics. Some students in the structured groups have indicated fear of being incorrect and uncertainty as major hurdles to their participation.

However, in the unstructured group, a similar pattern emerged even though students' participation was not closely monitored. This could be explained partially by students' current perception of Facebook. Many students have indicated that they still believe Facebook is mainly a social tool best used for personal engagements. This perception perhaps prevents students from being flexible in their thinking about other potentials of Facebook and therefore provides little motivation for activities outside of their social engagements. Indeed, students have lamented the distractive nature of Facebook. And even though Facebook Groups are fairly closed and private, the fact that students are on Facebook, may be all the motivation students need to be distracted from any activity that is not socially-oriented.

41

The task therefore is for Educators and Researchers to uncover activities and pedagogical approaches that are more suited for social environments such as Facebook. As more students inhabit these spaces, the opportunities to meet them in their habitat will increase but choosing appropriate methods and activities to engage students will be the primary challenge for educators.

BIODATA and CONTACT ADDRESSESS of the AUTHOR

Lenandlar SINGH is a lecturer in the Department of Computer Science at the University of Guyana. He has over 11 years experience teaching Computer Science and Information Technology at the Tertiary level. He is also the current Assistant Chief Examiner for CAPE Information Technology with the Caribbean Examinations Council (CXC). His research interest is centered in the areas of User Interface Design and Evaluation, Computer Science Education and E-learning, and Social Networks in Education. Mr. Singh has supervised over 50 undergraduate computer science research projects and has presented and published a number of articles. He is also the co-author of a book. His latest scholarly work focuses on the Use of Social Networks in Education.

Lenandlar SINGH
c/o Faculty of Natural Sciences
Department of Computer Science, University of Guyana
Turkeyen Campus, Greater Georgetwon
GUYANA, SOUTH AMERICA
A, Cotton Tree Village
West Coast Berbice, GUYANA, SOUTH AMERICA
Phone: 592 222 4926 (work)
GSM: 592 639 203711
Email: lenandlar.singh@uog.edu.gy

REFERENCES

Al-Atabi, M., & Younis, O., (2010). Use of Facebook to support module delivery for undergraduate engineering programmes. *Proceedings of the 2010 AaeE Conference*, Sydney. Last accessed 11th July 2011. Available frmthe page of http://aaee.com.au/conferences/AAEE2010/PDF/AUTHOR/AE100155.PDF.

Anderson, P. (2007). What is Web 2.0? Ideas, technologies and implications for education Media and Technology. *JISC Technology and Standards Watch.* Last accessed 11th July 2011. Available from the web page http://www.jisc.ac.uk/media/documents/techwatch/tsw0701b.pdf .

Collins, C. (2009). Web 2.0 Technology and Education. *Issues and Trends in Educational Computing.* Last accessed 11th July 2011 Available from the page http://www.villanova.k12.nf.ca/ccollins/537/portifolio/web2.0.pdf

Collis, B., & Moonen, J. (2008). Web 2.0 tools and processes in higher education: quality perspectives. *Educational Media International,* 45 (2), pp.93–106.

De Villiers, M.R. (2010). Academic use of a group on Facebook: Initial findings and perceptions. *Proceedings of Informing Science & IT Education Conference (InSITE). 2010. pp.*173-190, School of Computing, University of South Africa.

Ferdig, R. (2007). Examining social software in teacher education. *Journal of Technology and Teacher Education*, 15 (1), 5-10.

Gaffar, K., & Singh, L. (2011). Supporting Computer Science Education Using Web 2.0 and Social Software: Students' and Lecturers' Usage and Perception. *Presented at the "Science, Technology and Sport: Bridging the Gap between Research and Practice"*, 8-10 June 2011, Kingston, Jamaica.

Hartshorne, R. & Ajjan, H. (2008). Examining student decisions to adopt Web 2.0. *Journal of Computing in Higher Education*, 21(3), pp.183-198.

Lee, M. J. W., & Mc.Loughlin, C. (2010). Social software as tools for pedagogical transformation: Enabling personalization, creative production, and participatory learning. In N. Lambropoulos, & M. Romero (Eds.), *Educational Social Software for Context-Aware Learning: Collaborative Methods and Human Interaction* (pp. 1-22). Pennsylvania: Information Science.

Maloney, E., 2007. What Web 2.0 can teach us about learning?. *Chronicle of Higher Education*. 25 (18), B26.

O'Rawe, M. (2010). Can we be "friends"? Social networking and student engagement in an academic environment. Last accessed 11th July 2011,Available: http://www.shannoncollege.com/wpcontent/uploads/2009/12/THRIC-2010-Full-Paper-M.ORawe2.pdf.

Selwyn, N. (2007). "Screw blackboard...do it on Facebook!": An investigation of students' educational use of Facebook." Presented at the "*Poke 1.0 – Facebook Social Research Symposium*" , 15 November 2007, University of London.

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

Singh, L., & Gaffar, K. (2011). Using social software to support computer science education: A case of using Facebook Groups. *E-journal of the Caribbean Academy of Sciences (CAS)*, 5 (1), pp.1-12. Last accessed 11th July 2011. Available from http://ojs.mona.uwi.edu/index.php/cas/article/viewFile/2188/2260

Visagie, S., & De Villiers, C. (2010). The consideration of Facebook as an academic tool by ICT lecturers across five countries. *SACLA'10, June 2010, South Africa.*