Re-Imaging Learning Environments
Proceedings of the European Distance and E-Learning Network 2016 Annual Conference
Budapest, 14-17 June, 2016
ISBN 978-615-5511-10-3
ISSN: 2707-2819
doi: https://doi.org/10.38069/edenconf-2016-ac-0023

EXEMPLARS OF COLLABORATIVE LEARNING DESIGN IN ONLINE COURSES

Afsaneh Sharif, Manuel Dias, University of British Columbia, Canada

Introduction

Many instructors promote and support collaborative learning processes by integrating technology into their curriculums and establishing interactive environments. There is also a growing trend toward student-led collaborative learning where teachers adopt a supportive role and become learning resources (Wheeler, Yeomans, & Wheeler, 2008). Collaborative learning is based on constructivism, which is aimed at getting the students to take full responsibility for working together, constructing knowledge together, evolving together, and of course, improving together (Dooly, 2008). It also can be based on connectivism, which recognizes the impact of technology on society and ways of knowing. As per Siemens (2005) connectivism is "the integration of principles explored by chaos, network, and complexity and self-organization theories" in which learning in not entirely under the control of the individual; rather, it can reside outside of ourselves and occurs through interaction with various sources of knowledge and participation in different group activities and social networks. In this paper, we present different design strategies and innovative pedagogical approaches that foster collaborative learning through usage of a variety of technologies.

Context

The Master of Educational Technology (MET) is a fully online graduate-level program offered by the University of British Columbia that has attracted students from over 35 countries. The program is designed for educators from different levels and diverse contexts such as K–12 teachers, college and university educators, adult/industry educators, and course/instructional designers. In this paper, we present two MET courses as exemplars of collaborative learning and student engagement in case format. Both courses were developed in WordPress, a blogging tool supported by the university, and adopted a similar approach where participants are peers in a professional network and instructors act as fellow peers or facilitators of learning. The content is publicly available with user-restricted access to learning activities.

Case 1 – ETEC 522: Students as Contributors and Reviewers in a Highly Interactive Course

Ventures in Learning Technology is an online immersion in the global learning technologies marketplace with particular emphasis on emerging markets for learning technologies in public and commercial domains. This course is delivered in a case-study modality from a venture and market analysis perspective, where students examine real-world enterprises and markets while acting as venture creators or analysts. The course culminates with a *venture forum* featuring real or possible venture concepts that learners design and *pitch* to the class. This course is designed to operate as a professional network, a place where social networking techniques are applied to foster individual and collective professional advancement. Students are encouraged to participate in different group discussions and evaluate each other's work.

Rationale for Technology Integration

The design team, consisting of the instructor and the instructional designer, foster a scaffolding environment by utilizing different technologies such as Evaluate plugin and voting system. The authoring and reviewing of discussion posts is an important aspect of the course, where the participants are required to publish posts with original value that will have an impact on the community of learners. The intent of a review (reply to a post) is to add distinct value to existing content as a benefit for students and their peers. Reviews are not anonymous and build direct reputation value for their authors. Also, as in a threaded discussion, it is possible to read a review (reply to a review), which allows for a calibration of reviews. The rating of posts and recommending of reviews is another important aspect of the course, where the intent is to collectively identify the most worthwhile content. The rating of posts (Evaluate plugin) uses a five-star rating function (five stars being considered as essential and one star as outdated), and the recommending of reviews uses a one-way voting system (Thumbs-up). Ratings are anonymous, and students are encouraged to be wise and professional in their voting and follow the instructions carefully. Different guidelines are provided for learners on how to get engaged with these activities and how to use different technologies to foster collaborative learning.

Collaborative Strategies

Students participate in Opportunity Forecasts team presentations and contribute to discussion topics on emerging learning technologies presented as Open Educational Resources (OERs) by teams of peers. The intent of discussions is to enable an informal learning benefit for all participants, with collectively generated content. Students need to contribute in a timely manner to the group discussions and avoid posting their thoughts on one group's discussion topic when the next group is already fully underway, to maintain continuity for everyone. The instructor provides clear guidelines to establish effective collaborative learning, as small group work reinforces student interaction and fosters diversity (Bean, 2011). Students can also recommend exceptional contributions through a Thumbs-up voting function. To maintain concise value and allow students to stay on track with all the discussions, digital badges (BadgeOS plugin) are automatically awarded upon completion of a series of required steps

ISBN 978-615-5511-10-3

(publish a post, comment on a post, rate an article, etc.). Students are notified by a pop-up message; they can also click on the badge image to view the list of tasks to achieve. Figure 1 shows students' responses to a discussion activity. The total number of one-way voting (Thumbs-up) is available.

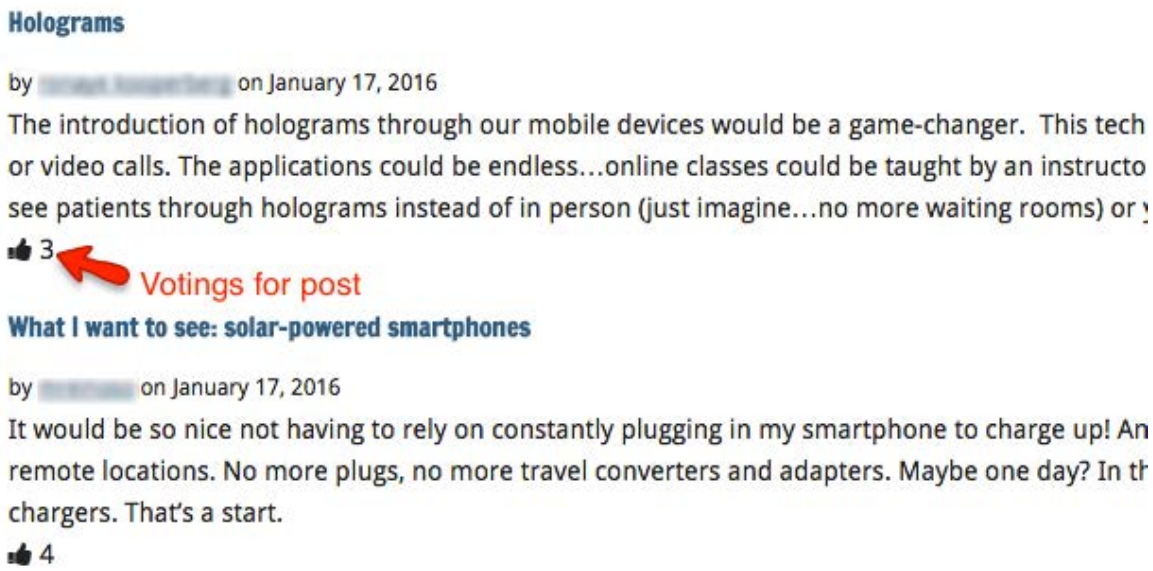

Figure 1. Voting system

High-Rated Posts are available on the sidebar, which displays the five high-rated posts (see Figure 2). The information is updated automatically.

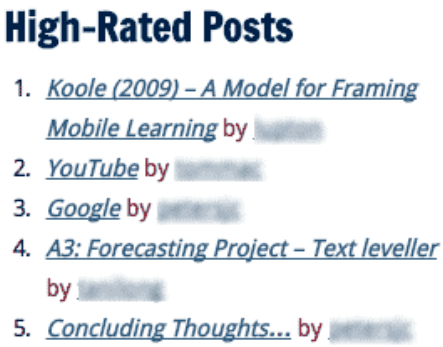

Figure 2. Top five high-rated posts

As per Dillenbourg (1999), the degree of interactivity among peers is not defined by the frequency of interactions but by the extent to which these interactions influence the peers' cognitive processes. In the examples above, learners construct their knowledge by connecting with others and reading postings, rating them, and commenting on them.

ISBN 978-615-5511-10-3

Case 2 – ETEC 565M: Facilitating Student Collaboration through a Social Medium

Mobile Education is an evolving online course that is examining the impact of mobile technologies on knowledge systems. This course is an experiential immersion in the proven and emerging potentials of mobile technologies and open learning. It is designed to be mobile oriented with the use of a social medium (PulsePress) for short messaging, allowing more efficient communication among learners. Students become proficient with the theory and strategy of mobile education through collective critical analysis of existing technologies, applications, and trends in the global mobile culture specific to knowledge acquisition, generation, and dissemination. Collaborative learning occurs in the forms of collective feedback and curation utilizing different technologies and strategies such as PulsePress and BadgeOS™ plugins.

Rationale for Technology Integration

ETEC 565M is designed as a *professional network*, a place where social networking techniques are applied to foster individual and collective professional advancement. The experimental nature of this course necessitates the use of PulsePress, a plugin similar to Twitter, which allows short and immediate interactions and, combined with the Evaluate plugin, replaces the traditional comment experience. PulsePress enables better forms of collective feedback and curation along with the digital badge integration. Given the number of students in the course and the volume of discourse collectively generated, students need to focus on being deliberately concise and distinctly valuable. They can also participate in their group discussions from their mobile devices.

Students also need to collectively identify the most worthwhile contributions, by proceeding to the rating of posts (five-star rating) and recommending of reviews (Thumbs-up).

Digital badges (BadgeOS™) are used to illustrate the full depth and breadth of students' abilities and skills developed throughout the course by the completion of required steps. The instructor is able to track student overall activity in the course and verify that students earn a badge. Figure 3 gives an example of one of the digital badges, Peer Badge, within the course.

Figure 3. Peer badge

ISBN 978-615-5511-10-3

Collaborative Strategies

Peer review and content curation are the two design strategies used in this course. Students participate in *Movable Feast* team presentations and contribute on special topics in mobile education produced and delivered by different groups. Their contributions to the discussion topics must be completed in a timely manner to maintain continuity and engagement. This continuity is also reinforced by digital badges (*Badge*OS™ plugin), which are awarded upon completion of required steps, such as the publishing and rating of posts in a particular discussion topic. The instructor can also track the completion of the different steps (log entries) and consult the list of students who earn a specific badge.

The following example shows a student post with the five-star rating function indicating the average score. The participants' reviews are available at the bottom of Figure 4, made using the one-way voting system (Thumbs-up).

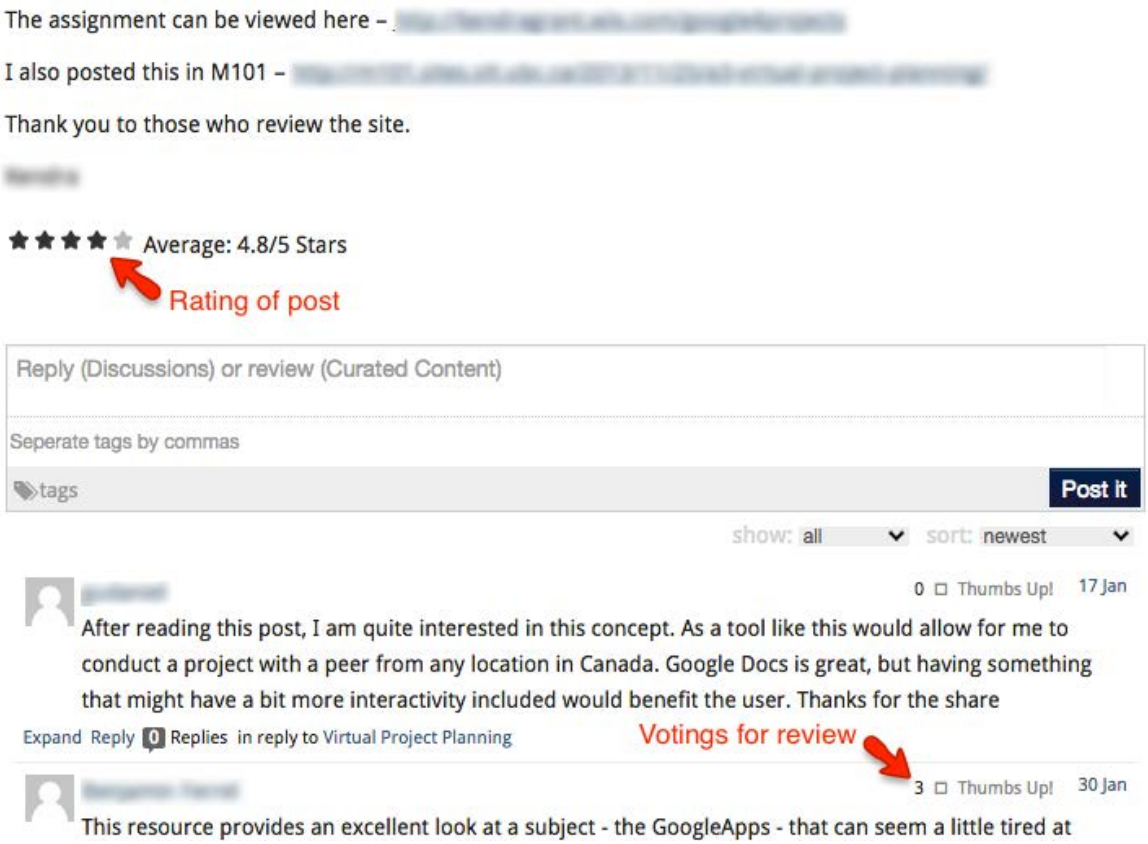

Figure 4. PulsePress rating and voting

Conclusion

With any new technology integration, a new set of instructions and guidelines need to be provided for learners. Students need to be aware of any new testing or technology integration, and an alternative plan should be in place in case the piloting does not go well. In our cases presented above the data for every course are collected and can be analyzed in different aspects. However, the data storage per course takes a lot of server space; this needs to be considered for future developments.

ISBN 978-615-5511-10-3

Despite best efforts in course design and instruction, a group might have low participation by some group members and low quality outcomes in terms of the interchange and the final result. It is important to recognize that there are a number of factors that can contribute to a lack of participation and dysfunction in group activities in an online course. Group projects require that learners be present on a particular schedule and participate in their group discussions within specific timelines, reducing the flexibility and convenience factor in online study and possibly causing anxiety, particularly if the purpose of the group work is not clear and the group experience is not positive. Another factor can be the complexity of the technologies and strategies used; in our examples different guidelines and instructor presence overcome those challenges.

Finally, the dissatisfaction and reluctance that students express over mandatory participation in group projects often result from a sense of not having full control over the quality of the assignment and the subsequent grade assigned, particularly when someone in the group is less active than others. This may be a good reason for not placing emphasis on grading as much as helping students to learn the skills of collaboration. In our cases, the instructor used the badging system instead of grading to motivate the learners and engage them in their group activities. If the right environment is created, both high-performing and low-performing students are able to reflect on and articulate their opinions about their experiences and the outcomes of their learning. That being said, it is important to acknowledge the extra time and special skills required of instructors to ensure the effectiveness of group activities and new approaches. Research appears to confirm that small group collaboration needs careful design and management by the instructor (Swan, Shen, & Hiltz, 2006). A collaborative activity may not go smoothly right away, but it can be seen as a goal to strive for that evolves and improves constantly. Dooly (2008) emphasizes that students who learn most are those who give and receive elaborate explanations about what they are learning and how they are learning it. Some of the pedagogical benefits of collaborative learning in these two courses are co-creation of knowledge and content, reflection, development of critical thinking skills, and transformative learning (Palloff & Pratt, 2005).

References

1. Bean, J. C. (2011). Engaging ideas: The professor's guide to integrating writing, critical thinking, and active learning in the classroom. John Wiley & Sons.
2. Dillenbourg, P. (1999). What do you mean by 'collaborative learning'? In P. Dillenbourg (Ed.), *Collaborative-learning: Cognitive and computational approaches* (pp.1-19). Oxford: Elsevier. Retrieved on January 29, 2016, from http://tecfa.unige.ch/tecfa/publicat/dil-papers-2/Dil.7.1.14.pdf
3. Dooly, M. (2008). Constructing knowledge together. In M Dooly (Ed.), *Telecollaborative language learning. A guidebook to moderating intercultural collaboration online* (pp. 21-44). Bern: Peter Lang. Retrieved from http://www.peterlang.com/index.cfm?event=cmp.ccc.seitenstruktur.detailseiten&seitentyp=produkt&pk=50408

ISBN 978-615-5511-10-3

4. Palloff, R. M., & Pratt, K. (2005). *Collaborating online: Learning together in community*. San Francisco, CA: Jossey-Bass.
5. Siemens, G. (2005). Connectivism: Learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning, 2*(1), January 2005. Retrieved January 26, 2016, from http://www.itdl.org/Journal/Jan_05/article01.htm
6. Swan, K., Shen, J., & Hiltz, S. R. (2006). Assessment and collaboration in online learning. *Journal of Asynchronous Learning Networks, 10*(1), 45-62.
7. Wheeler, S., Yeomans, P., & Wheeler, D. (2008). The good, the bad and the wiki: Evaluating student-generated content for collaborative learning. *British Journal of Educational Technology, 39*(6), 987-995. doi:10.1111/j.1467-8535.2007.00799.x

ISBN 978-615-5511-10-3