

Using Etherpads as Platforms for Collaborative Learning in a Distance Education LIS Course

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Abstract

This poster presents findings of a project which explored the online collaborative learning experiences of distance education (DE) students undertaking an undergraduate information studies. The School of Information Studies (SIS) at Charles Sturt University (Australia) is a leader in the provision of library and information studies education by distance. A recent review of undergraduate and postgraduate courses resulted in greater integration of Web 2.0 technologies to support DE teaching and learning. This included the redesign of the collection management course which serves approximately 100 undergraduate students per year. The aim of this project was to encourage greater communication and collaboration between students to address the challenges of isolation and lack of student community reported by previous cohorts. The researchers found the use of a collaborative document sharing platform, Etherpad, an effective tool in developing students' skills in critical thinking and collaborative practice, leading to an enhanced DE learning experience.

Keywords: distance education, online collaboration, group-based assessment, etherpad, collaborative document sharing

Introduction

Within Australia, one of the largest providers of distance education is Charles Sturt University (CSU). With 20,000 students enrolled in DE courses, it has a commitment to excellence in the development and delivery of online education (Charles Sturt University, 2012a). The university, like many others, also aspires to produce well-rounded graduates who have the capacity to not only contribute to their chosen professional field but also more broadly to the wider community through the implementation of CSU's 'Statement of Graduate Attributes for Undergraduate Courses' (Charles Sturt University, 2012b).

One of the leaders in online distance education (DE) at CSU is the School of Information Studies (SIS), which has offered DE courses for nearly 30 years. A review of SIS programs was undertaken during 2008/9, and as a result new courses (all offered only in DE mode) were introduced to take advantage of the affordances offered by the online, particularly Web 2.0 environment (Hider et al, 2011). Distance education, by definition, creates a number of challenges for lecturer and student in building and maintaining connection and commitment. The challenges that need to be overcome include communication difficulties, lack of student motivation, high drop out from courses, provision of support at a distance, and a sense of isolation or lack of student community (Crease, Pymm & Hay, 2011). Moody (2004) highlights issues such as the mode of delivery, difficulties in establishing a learning community, and a loss of personal contact which combine to diminish the value of distance learning and contribute to high attrition rates.

Bearing these challenges in mind, a number of strategies have been developed and implemented since 2010 when the revised courses were first made available, to help 'connect' students more fully to their cohort and their studies more broadly. One of these strategies, the use of the collaborative document sharing software Etherpad, was introduced into a large undergraduate course with the broad aim of encouraging greater communication and collaboration between these geographically dispersed students. In addition, the use of such software facilitated the introduction of a group-based assignment, traditionally more challenging to implement for distance students but bringing benefits in terms of collaborative learning (Timberlake, 2010).

Etherpad enables participants to simultaneously update a document, providing a tracking mechanism in the form of a “time-slider” to enable the reader to move back and forth over the life of the document – a particularly useful tool for faculty in assessing contributions to the evolution of the finished document. It also enables each author’s contribution to be shown in a different colour, thus again, providing a ready way for faculty to see who has contributed what to the document. Adjacent to the text document, Etherpad also provides a Chat function sidebar which captures a record of conversation between group members while collaborating on document content.

Etherpad is open-source with the code freely available for download and installation (Etherpad Foundation, nd). This was the approach taken at CSU where the software has been installed on a local server, requiring minimal support in-house.

The Research Question

The aim in making use of the Etherpad software was broadly two-fold: to encourage greater communication and collaboration between distance students in order to help develop their capacity to meet a number of the University’s graduate attribute outcomes; and to provide the opportunity to undertake an authentic collaborative learning task that would support discipline specific learning as well as develop more generic skills. The research therefore aimed to assess how well these goals had been achieved.

Methodology

For two years, 2010 and 2011, participants in an undergraduate collection development class (each year comprising around 100 students) were given a collaborative assignment to undertake using Etherpad. Each year students were randomly allocated to groups of four, given the link to a blank Etherpad document, and asked to work together in examining a particular collection development policy, commenting on its strengths and weaknesses. They were also encouraged to break down the policy and negotiate the allocation of workload within their group so that each person was responsible for a specific aspect. All discussion regarding the planning and management phase of the group task was to be undertaken in the Chat sidebar of Etherpad, although the final (assessable) evaluation was to be created as the Etherpad document itself. Students were assessed individually for their overall contribution to the final response, with a mark allocation given for leadership and organization as indicated through the Chat discussions.

The transcripts of Etherpad Chat sessions of 113 student groups were collected across four teaching sessions in 2010-2011. A selection of group conversations were analysed for discrete themes and attributes, with the following five themes emerging as the predominant functionality of the Etherpads as an online collaborative platform:

- The use of Etherpad as a knowledge and values building platform to support the development of discipline-based knowledge (library and information science concepts, principles and practices) and knowledge and values of global citizenship (national and international perspectives, inclusivity, sustainability);
- its use as a social platform (getting to know each other; sharing details of their lives);
- its use to provide affective support (helping with anxiety, stress, fear, uncertainty, reassurance);
- its use as a problem solving platform (students helping each other understand concepts and issues, solve problems, working together to critically evaluate and analyse policy content and issues); and
- its use as a project management platform (dealing with the logistics of the group-based assignment; negotiating task allocation; organizing meeting times).

The university-wide *Graduate Attributes* document was also used to identify additional attributes which resulted in the development of a coding schedule comprising 15 specific behaviours. Table 1 overleaf presents the scope of each behavior code and the grouping of these codes according to the above five (5) functions as platforms.

All 113 transcripts were then analysed according to these codes.

Results

Analysis of the sessions showed there was a high level of social interaction engendered through the Chat function with most students quickly building a rapport within their group as a result of being task-focused. The majority of groups used the requirements and demands of the shared task to readily establish a community of practice approach that supported collaborative decision making. Only a handful of groups had difficulty with this initial community building phase of the group process. This was either due to individuals within a group misunderstanding what was required to effectively build a sense of collaboration and community within their group, or remaining members of a group who had to be merged with other individuals whose group size had diminished due to course attrition early in the session.

The number of postings per team to the Chat sidebar varied greatly, from 0 to 584, with a median of around 68 postings. With the majority of postings being of a social nature, this generated a supportive environment which clearly assisted in problem solving and helping group members 'stay on task'. It greatly increased the personal contact between individual students within the class, in comparison to courses not utilising group-based tasks or synchronous communication. Overall, the groups' conversation captured in the chat transcripts suggests an improved sense of connection with others, and with the course more generally. Whether this will transfer to greater identification and commitment to the program is yet to be determined.

Results related to each theme are summarised below.

As a knowledge and values building platform. Students were assigned randomly to groups so that it was quite likely that within a group there could be a member with considerable experience or knowledge, or someone with absolutely no knowledge other than that gained from the course. Thus building specific discipline knowledge through sharing was a widespread occurrence. Examples of comments included:

"what performance measures/statements have been included in the policy to allow for public accountability. e.g. How can the public measure if the policy is being met."

"Well if you need help with anything, just ask via email. I've been in academic libraries for a few years now."

"I guess we didn't discuss the importance of the conspectus and perhaps made assumptions. Big learning curve for working in groups!"

Evidence of thinking more broadly and linking to wider graduate values and attributes was less commonly expressed. This could be due to limited or less explicit presentation of values-based content or lack of learning tasks dealing with values within the course. That said, comments below suggest that there was *some* consideration of these aspects.

"No no, it's fine we'll all need to learn about it because it will be/effect every aspect of the policy."

"Hi I work in a public library in Sydney. The only difference is that this library has a big collection of community language. "

"The policy mentioned 3% population is indigenous Australian but the policy does not mention service to meet this community's needs."

As a social platform. Overwhelmingly, this collaborative work served to provide a foundation for extensive social interaction. From the initial introductions to each other, through discussions on the novelty of this learning approach, to consideration of the assessment requirements, over 50% of groups exhibited a high level (40+ messages) of friendly, social interaction. Thus comments representing building of rapport and familiarity between group members such as these were common:

"Time for my bedtime..getting old.lol. Nice chatting with you. Catch up with you later.",

"yeah I was just reading. I'm glad you guys haven't been doing much either"

"Everyone knows everyone!!! which is good in some ways! Next time you see xxx please tell her I said Hi and hope she is feeling better."

The comments varied in range and intensity across groups but for the high level 'interactors', this positive, friendly tone was engendered at the beginning and continued throughout the assessment work.

As a platform for affective support. This was strongly evidenced across the majority of groups illustrating the desire of DE students to both give and receive affective support as part of the study experience:

“ Yes hopefully I will get faster at my work, I lack confidence , its all a bit overwhelming! its been a long time since I studied.”
 “I've just read both of you paragraphs so far, wow! I'm impressed!”
 “I meant it when I said i thought you did a good job on your article :-)”
 “ I'm all done people. I had fun with this. Good luck to you all :)”
 “no, of course you are not here, its four days later! Muchos apologies colleagues , I will log on tomorrow evening.”

As a problem-solving platform. Numerous enquiries were made regarding use of the software, interpretation of the assessment task and generally seeking reassurance that everything was on the right track. Thus comments such as those below were common place.

“Q: do we have to evaluate in to 300 words; A: think it is 250 approx. You have 500. :)”
 “ no submission. It just closes 22nd and then bob follows link checks it out. you cant submit it via Easts anyway”
 “ I have downloaded it but still figuring out how to use it!! Can you put the actual references in or just the citation?”

Furthermore, discussion between students in a number of the groups illustrated the contribution of the individual to a group's development of critical and reflective judgement.

As a project management platform. While task-oriented groups used the Etherpad efficiently as a project management platform, a high level of social interaction in some groups hindered more direct, organizational type discussions. Overall, discussions on the selection of a policy to study, methods of presenting the discussion, and responding to the lecturer's directions, tended to be highly democratic, seeking input from all. While it was unusual for one person to take a directive tone, it was common for one or two students to emerge as 'leaders' in the early stages of community building with the group, with leadership styles being inclusive as opposed to a dictatorial approach. Across all 100 or so active groups, none included any strong directive discussions. Typically comments were couched to be helpful in progressing the project but to avoid being 'pushy'. Thus:

“Yes, xxx, I agree with you. I think you can work on collection management, weeding, acquisition, etc. Hope you can make up your mind.”
 “ That's us settled then! A: Government publications, P: Digital resources, J: Retention & withdrawals, and B: Popular culture. Is that right? If so, let's get started!!!”
 “are we all happy to leave it as is? or does anyone want to organise it? i don't mind either way”

Conclusion

A major aim of developing this collaborative assignment task was to encourage engagement, communication and critical thinking amongst students studying at a distance who traditionally have found group work challenging; and to assist in making those vital connections to help form a sense of engagement with their peers and their course. The researchers concluded that the nature of the task, together with the technology employed, made a considerable positive impact on those involved, increasing their sense of being part of a cohort, encouraging a questioning, supportive environment and making them feel more at ease with group work. Further analysis will be undertaken into the wealth of data collected in the Chat Rooms to help reveal the extent of the connections made and ongoing study should reveal the degree to which this has translated into improved student retention and identification with the program.

This experience has demonstrated the power of such an approach to community building for DE students as confirmed by this student:

“Hi! A, B and C Just finished my etherpad(part 1 & part 2).it was great working with u all.all the best with rest of the course.”

Table 1: Coding schedule according to types of platforms and behaviours

Knowledge & value building platform		Social platform		Affective support platform		Problem solving platform		Project management platform	
LIS	demonstrate a broad overview of their field, i.e. LIS discipline knowledge	CH	For incidental chat, e.g. hello, bye, etc	AFF	use of etherpad chat to provide affective support, e.g. fear, concern, anxiety, happiness, satisfaction, etc	AS	demonstrate analytical skills, including the exercise of critical and reflective judgment	PM	project management tasks & discussion on planning tasks, e.g. dealing with the logistics of the group-based assessment task, who has done what, who hasn't done what, task allocation, etc
COM	communicate effectively using the language of the discipline, e.g. discussion of collection development concepts, issues etc	SO C	Social conversation incl. getting to know each other as people outside university study, sharing details of their life/work/family/partying			PS	address unfamiliar problems; conversations where students help each other solve problems, gain an understanding of a concept or issue	ASS	Assessment related discussion in terms of task requirements, management & completion
VALUES	demonstrate an understanding of, & commitment to, values-driven practice in their field of study					IT	Technical difficulties related to Etherpad & other software	PL	Peer learning, e.g. acknowledgment that they can learn off each other
INT	demonstrate a national and/or international perspective					ETH	Discussion on use Etherpad incl. its features & functionality	LEA D	Examples of student leadership of group

Poster presentation

A copy of the poster presentation is available at
<http://studentslearn.wordpress.com/presentations/iconf2013/>

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