FACEBOOK IN THE CLASSROOM: INTEGRATION OF ONLINE AND CLASSROOM DEBATES INTO COURSES

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INTRODUCTION

New internet technologies have facilitated many changes to the traditional learning environment in the tertiary education sector. For example, new resource location tools (i.e. search engines and electronic libraries) have been developed – pedagogical tools that can fundamentally change the learner experience, and communication tools that support new modes of information exchange. In addition, the decreased importance of physical distance because of widespread access to the internet means distance education is likely to be an even more important area of growth in tertiary education provision in the next decade. Work by Krantz (2000) suggests some learners actually prefer taking courses online rather than attending traditional lectures. A vast amount of literature has been developed that describes best practice in online pedagogy and some of the benefits and pitfalls of the online environment.

The aims of this guide are fourfold: (i) to identify benefits of online discussion within a course context; (ii) to identify best practice when integrating online asynchronous debates into a course based on previous experience; (iii) to identify implementation issues particularly relevant in the course design process; and (vi) to identify relevant reference material that can be consulted to help implementation.

This guide initially discusses some of the benefits of incorporating a mixture of online discussions and traditional classroom discussions (or oral presentations) into an undergraduate course called PHYS316 – Geophysical Fluid Dynamics. A brief discussion identifying relevant reference material that may be of use in implementing online instruction strategies is included, along with a discussion of implementation issues experienced.

MOTIVATION

My initial motivation for this practice was a desire to enhance learner engagement in a course as I felt that the subject matter (Climate Physics) detailed a fast-paced area of Applied Physics and was also important from a societal perspective. As setting assessments focused on current research in the area failed to show the dynamic nature of the field and students

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also struggled with the level of the material, I decided to include a discussion component focused on collaborative learning. I hoped this discussion component would allow the students to gain an appreciation of current knowledge in this area.

BENEFITS

This guide is a product of ongoing consideration of several years of experience using networked computing and communications technologies in the tertiary education sector. The benefits are supported by evidence collected from recent evaluations of the course and customised questionnaires completed by students to provide specific feedback on the online discussion and assessment portion. Analysis of these data sources indicates the following benefits:

- 'collaborative' learning opportunities
- improved learner engagement
- enhanced student–faculty contact
- encouragement of active learning
- a mechanism for timely feedback on assessed material

As an example, responses to course and teaching surveys in the 2007 PHYS316 class showed a significantly improved score of 4.7 out of 5 for the level of interest stimulated by the course compared with the level of interest in the previous year, which was 3.9 out of 5 – only slightly above the College mean. Positive comments from UCTL surveys included: *Facebook debate sections of assignments were a refreshing and unique approach to course work* and *debate was a good reason to dig deeper*. I have also received positive comments from peers, and discussed uptake of this practice.

Research has shown that 'collaborative' learning strategies and opportunities can improve learner engagement and learning outcomes (Lea, 2001; Schellens & Valcke, 2006; Kreijns et al., 2007). These studies propose that setting up asynchronous computer-mediated discussions as one component of course assessment is a natural mechanism to encourage 'collaborative' learning. The importance of the 'social' element of learning in these environments is detailed in Kreijns et al. (2007).

Another significant benefit is both online discussions between the instructor and students and peer-to-peer discussions form useful reference frameworks in addition to formal lecture notes. One resource on the internet suggests online discussion effectively provides 'Virtual office hours'. I'd add to this that these office hours have the additional benefit of automatic dissemination of the individual discussion to every other member of the class!

I have found the online component encourages students to research online, enhances 'collaborative' learning, and develops literacy skills. The flexibility of engaging in an online asynchronous debate also allows both participation after some preparation and, hopefully, research (this should be encouraged in grading schemes) and much more collaborative time to contribute than would be available via classroom-only debates. However, supporting classroom debates allow the learning goals to be underlined and additionally develop oral presentation skills.

IMPLEMENTATION

Using online discussion groups in learning environments is becoming a well-developed technology and a large quantity of literature now focuses on online

pedagogy. I have examined a number of ways to implement combined online and classroom debates over the last few years. However, experience and feedback from students has suggested the following strategy worked most successfully in my context:

- Initial online debate
- Supporting group oral presentations
- Follow-up online debate
- Final class oral debate

Initial online debate: online discussions between the instructor and students and peer-to-peer allow the development of learner-selected topics that naturally enhance learner engagement.

Supporting group oral presentations: group presentations allow specific topics selected by the instructor and students to be examined in more detail. Setting up groups to present information from opposing viewpoints ensures a well-rounded view of any subject area. I have found that group rather than individual oral presentations are preferable to continue the theme of collaborative learning.

Secondary online debate: a second online debate allows the inclusion of additional topics and the development of material based on content identified by learners.

Final classroom debate: a summary debate is a good way to finish the lecture series and also provides an opportunity to test the class's understanding. I have recently set up this debate as a set of learner-selected debate topics in which the entire class debates with an expert (the instructor or other expert). User feedback from specialist surveys suggests students relish this challenge – it also provides an entertaining challenge for the instructor.

In my experience the combination of online and classroom discussion/debate works better than online discussion alone. I have found that a combination is optimum because subtle points that might have been lost in the large volume of material produced in the online debate can be effectively reiterated in a class setting.

IMPLEMENTATION ISSUES

When developing an online discussion forum as part of a course, the following issues are particularly important:

- Assessment strategy
- Instructor participation
- Subject matter
- Understanding the medium
- User interface

Assessment strategy: clear guidelines and criteria for grading are particularly important because of the novelty of the instructional strategy. The assessment of online asynchronous discussion should initially focus on participation and include a social aspect. This allows the student to gain a level of assurance with the technology and reduces the natural anxiety associated with expressing opinions to an expert and peers. Feedback within the discussion forum can then guide students toward resources that help them gain a deeper understanding or expand their points of discussion.

Grading strategies should also be designed to encourage cooperation between students, but still value independent research. When identifying a grading scheme it is useful to encourage collaborative learning by allowing students to start their own discussions on topics. This is also an excellent way to identify to students' core areas for discussion (areas that the instructor administers and contributes to heavily) as opposed to non-core areas of interest (areas where the instructor passes administrative responsibility to a learner).

The grading scheme below met my requirements for the online discussion forum:

'Each contribution I believe to be based on a good argument earns you 5 marks. A contribution with reasoned arguments making use of good references (from the internet, New Scientist, *a book or preferably a journal article) earns you 8 marks. Starting a new discussion topic altogether to which others contribute and in which you act as discussion leader earns you 20 marks. An amusing contribution (i.e. makes me laugh) earns 10 points. Arguments that are purely philosophical earn you 3 marks. Back of the envelope calculations based on some correct physics earns you 8 marks.'*

Instructor participation: a key point that needs careful consideration is that the online discussion environment needs to be led by an active online instructor. The online instructor plays a vital role in guiding the discussion. In this context, the instructor provides student motivation, guides collaboration, and navigates discussion away from tangents. In my experience, without significant participation by the course supervisor debates will not move forward successfully because a high-level of expert knowledge is required to focus debate. Responses to discussion items also need to be clear – in my context if there are good physical reasons against an argument provision of a reference is ideal, and instructor participation therefore needs to provide focused feedback (rationale here not clear).

Subject matter: my initial attempts at using classroom and online discussions occurred in an advanced electronics course focused on Instrumentation (PHYS319). Discussion of issues in class helped with overall understanding, but in general it was difficult to engage students and motivate them to learn more through examination of the literature. In retrospect this partial success was partly due to a lack of imaginative material. For example, perhaps discussion of the vital role of signal processing in robotics or other 'exciting' subject matter should have been used as a focus for online discussion. Currently, I use asynchronous online discussion to focus on issues associated with Climate Change. The breadth of information available on the different aspects of this issue naturally lends itself to online discussion since it is generally possible for learners to find a specific issue that interests them. However, feedback from questionnaires did suggest the instructional strategy was perceived to be of significant value and lent itself to other topics.

Understanding the medium: online debates/discussions are asynchronous and this means discussion momentum needs to be maintained – and this is one of the key roles of the instructor. In addition, while long, detailed posts and responses clearly demonstrate student understanding, the value of shorter posts with relevant links, images (especially graphs in scientific disciplines), and other media are equally valid and potentially more useful to the

collaborative learning experience. The different ways learners assimilate information should be borne in mind and the ability to use different media (video or audio files for example) should be considered.

User interface: my initial experience of forming online discussion groups was disappointing, and I believe one of the major factors for initial failures was associated with technological issues, the most important being the ease of use and user familiarity with the discussion interface. Initial discussion group forums developed using the University of Canterbury learning management system performed their function adequately, but the interfaces were not intuitive and I felt provided a 'false' environment. After discussion, a colleague suggested a social networking site that allowed the formation of discussion groups might provide better results. Facebook, which is a popular social networking site among students, was selected as an online interface. This had has several benefits. In particular, the majority of students in classes had experience with Facebook and were comfortable with the interface. In addition, their previous experience on this social networking site created an informal environment that helped start-up. As students automatically consider Facebook to be a non-judgemental environment, they were more prepared to express their opinions.

A distinct benefit of Facebook for the instructor is that initial development of discussion groups is intuitive, includes a range of useful templates, requires no specialist software, and also offers significant potential for the production of instructor-developed content. Facebook group templates generically contain a discussion tool, digital image and video viewers, a news facility, and a message board. The development of a simplistic computer-supported learning environment is therefore easy and potential uptake is extremely high. The ability to write specialist content is also achievable and could provide significant opportunities for more advanced implementations.

FURTHER REFERENCE

Given that the main novel aspect of this practice is the development of online discussions, it is most natural to find relevant resources on the internet. The following web sites, which I have used in the development of this guide, have proved to be valuable hubs for discussion on online pedagogy:

The ERIC (Education Resources Information Centre) web portal: **http://www.eric.ed.gov/**

The "Teach Online" Pedagogy & Techniques by Michigan State University. **http://vudat.msu.edu/pedagogy/**

Educational Resources from the Illinois Online Network. **http://www.ion.uillinois.edu/resources/**

The works by Krantz (2000), Maroulis and Reushle (2005), and Schellens and Valcke (2006) were of considerable value. I also found that the principles of good practice indicated by Chickering and Gamson (1983) were invaluable.

REFERENCES

Chickering, A.W. & Gamson, Z.F. (1987). Seven Principles for Good Practice in Undergraduate Education. *AAHE Bulletin, 39*: 3-7

Krantz, C. (2000). Students make time to learn online. *Community College Week, 13*(4), 2–7.

Kreijns, K., Kirschner, P.A., Jochems, W. & van Buuren, H. (2007). Measuring perceived sociability of computer-supported collaborative learning environments, *Computers and Education, 49*, 176–192.

Lea, M. (2001). Computer Conferencing and Assessment: New ways of writing in higher education, *Studies in Higher Education, 26*(2), 163–181.

Maroulis, J. & Reushle, S. (November, 2005). Blurring of the boundaries: Innovative online pedagogical practices in an Australian Faculty of Education. Paper presented at the 17th ODLAA Conference: Adelaide, Australia.

Schellens, T., & Valcke, M. (2006). Fostering knowledge construction in university students through asynchronous discussion groups, *Computers and Education*, 46, 349–360.