

ONLINE FORMAL COURSE MEETINGS

Jon Dron
University of Brighton
Watts Building, Moulsecoomb
BN2 4GJ Brighton
00 44 1273 642480
Jon.Dron@brighton.ac.uk

Judith Masthoff
University of Brighton
Watts Building, Moulsecoomb
BN2 4GJ Brighton
00 44 1273 642490
Judith.Masthoff@brighton.ac.uk

ABSTRACT

This paper discusses the implementation of an online course board, an attempt to conduct formal course meetings using simple web-based threaded bulletin board technologies. This technique seeks to address some of the problems of conventional meetings where individuals can dominate proceedings, most attendees waste much of the time being bored and there is a heavy investment of time and money for little direct benefit. Although it provides solutions to some of the problems of traditional face to face meetings, the online discussion mechanism suffers from a number of weaknesses which negate many of the potential advantages. The paper ends with a glimpse of some potential solutions to these weaknesses.

Keywords

Course Management, Supporting e-learning, Collaborative Filtering, Adaptive Hypermedia

1. CONTEXT

If the process of education is to do with the management of learning, then it is important to look at all parts of the learning process, not just the interactions between students, teachers and learning resources, but the larger context which provides the framework for those interactions, including the feedback processes which stimulate growth and change. This paper considers one aspect of this process, that of formal course boards.

It is rare to find an academic who has not been bored by large course boards. Such meetings are convened to discuss the progress of courses, examination results, learning and teaching strategies, academic standards and many other important issues. Unfortunately, much of the time spent at a given meeting may be on topics of little relevance to most attendees. Meetings may be dominated by individuals with their own axes to

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grind and agendas will usually cover far more areas than are of interest to any one participant. Such meetings are also expensive, with costs such as staff time, rooms, catering, travel and administration.

1.1 The Foundation Degree

Our study looks at the conduct of electronic course boards for a foundation degree in eSystems Design & Technology. The course was developed in 2001 by three FE colleges and the University of Brighton. The colleges and University are spread over an area of around 50 miles with relatively poor road and rail links between them. It was therefore decided early on to use web-based systems to develop, run and deliver the course.

Course modules are developed and run by teams from the colleges, with quality control, management and a custom-built Lotus Domino-based virtual environment supplied by the University. Day to day management is delegated to site leaders at each college. Although all teams involved in module development have met face to face at least once, most coordination of development work is carried out electronically, using the same virtual discussion space that is used to teach. This environment is also used to train teaching staff in the use of online discussion fora to help learners, based on Gilly Salmon's five stage model for building an online learning community [1]

The eSystems degree is run purely as a part-time course. All students have occupations that allow them to practice the subjects taught and all are mature, with an average age somewhere in the mid thirties. The course adopts a blended learning approach, with the bulk of delivery online through its web-based environment, with face-to-face meetings at variable and negotiable intervals. Each college manages the learning of its own students, averaging around seven students per college per year group.

Delivery is mainly through asynchronous threaded discussion fora, supplemented by web pages, a web-based chatroom and various web-based administration tools. Each college maintains a separate discussion area and announcements, but links between the colleges are maintained through staff contact, a shared "café" area, a chatroom and

some announcements and messages which extend across all colleges. The virtual environment is thus the glue that holds the course together and enables shared development of resources as well as the students' learning space.

In the context of this paper it is significant that the course is highly focussed around communication, especially through the discussion fora. The underlying pedagogical framework is structured along lines suggested by Moore's theory of transactional distance [2]. With limited resources and little time for development, the mainly static structured web pages are mostly unsophisticated and the strength of the course lies in dialogue between students and staff. All participants in the system are therefore very familiar with the use of this environment.

2. THE COURSE BOARD

The University of Brighton requires that a formal course board is held at least once per semester. Teaching staff are required to attend such boards, as well as invited student representatives. These are useful events, but are marred by the problems affecting such meetings discussed earlier. Considering the wide geographical distribution of the course board members, the fact that all its students are in full time work and are experienced in online discussion, it was decided to employ the same mechanisms used in the delivery and development of the course to handle its administration. The chat room would have helped to deal with the problems of geographical separation, but would not have solved problems of temporal distance, nor the aforementioned problems of boredom and irrelevance of different parts of the meeting agenda. The first author of this paper (course leader of the degree) therefore proposed the use of online asynchronous course boards to help resolve these problems. There were two overriding requirements:

1. any solution had to be simple and quick to implement and use
2. University of Brighton requirements for formal course boards had to be met

The first requirement was met by using the same technologies that were used for delivery of the course, with some minor modifications. There was little time to develop more sophisticated solutions and the team were confident that users would be able to transfer their existing skills. The second requirement caused more trouble. After prolonged negotiation and discussion with administrators and academics with a lot of experience of conducting course boards, the following solution was reached:

- The course board is implemented as an asynchronous threaded discussion using a Lotus Domino teamroom;

- Course boards are held over the course of a week;
- Agenda items are implemented as categorised discussion threads modelled on the agendas and minutes of other traditional face-to-face course boards;
- The course leader acts as moderator to the discussion, summarising discussions and suggesting actions. As actions are proposed, participants may respond with postings with affirmative/negative votes or continuing with further discussion;
- At the end of the week, the course leader summarises the discussions in the form of traditional minutes the University requires;
- Attendance is registered by posting a message affirming the fact.

The course board discussion area (figure 1) provides simple navigation support with which the students are already familiar, allowing the viewing of messages by thread, by date, by category (the agenda items) or by poster, along with a search facility. In addition to this, we provide a threaded view of each agenda item. To help provide an overview of the discussion, threads are initially shown collapsed, and participants may either expand a single thread or choose to see all threads expanded for the agenda item, which is the view shown in figure 1.



Figure 1. Screenshot of the course board

2.1 Positive Outcomes

The asynchronous course board has been run three times so far. Notable positive outcomes include:

- Issues have been discussed in depth and actions taken as a result;
- The need to type messages makes the effort involved in contribution greater than that of face to face meetings, so participants tend to concentrate more on issues at hand and meander less;

- The archival permanence of posted messages provides an instant and unequivocal record of the proceedings;
- Participants can drop into and out of discussions, secure in the knowledge that it will be possible to catch up at any stage.
- The forum has an equalising role, reducing the divisions between staff, senior staff and students;
- We may have been lucky in the selection of student representatives, but they are noticeably more active in discussions than those on many other course boards within the University.

2.2 Patterns of Use

Figure 2 shows page accesses for the course board throughout the eight days of its most recent run. It shows a typical pattern of use: a slow start, a dip after a fairly busy weekend and a significant rise on the last day. Note that the actual page impressions shown are inflated due to the design of the teamroom, but we are only interested in the relative usage per day. Many participants browsed pages at the end of the week, probably to ensure that they had not missed anything, although the results are slightly skewed by the fact that there is a correlation between the number of messages and the number of page requests needed to view them all.

The relatively high levels of attendance over the weekend (November 9-10) is symptomatic of the part-time nature of the course. This was also the most common period for people to contribute postings (figure 3). Presumably this was due to having more time to reflect on the issues and carefully compose replies, though there are also probable effects due to reaching a critical mass of messages and the stimulation of other messages causing a small positive feedback loop.

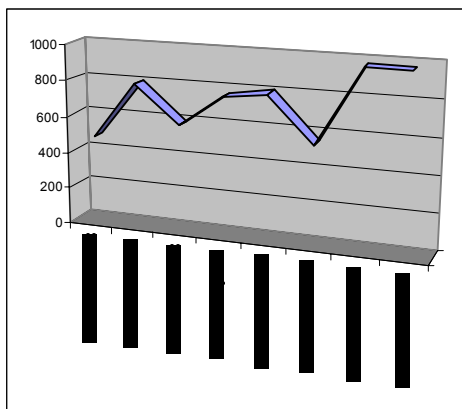


Figure 2. Page impressions per day

Despite more apparent visits shown in figure 2, the number of contributions on the final day (figure 3) was small and included several participants registering their attendance. This suggests that the discussion was largely played out by this time, indicating that the decision to limit the meeting to a single week was reasonable.

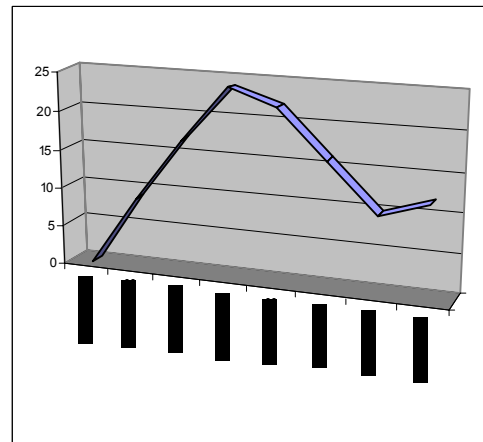


Figure 3. Messages posted per day

2.3 Issues Arising

2.3.1 Non-Linear Parallel Discussions

It was very hard to summarise the discussion to provide the necessary formal minutes. A threaded discussion is by its nature non-linear and parallel. In a traditional meeting it is relatively simple to document the discussion because agenda items occur one at a time. It is common that several threads of asynchronous discussion might span the entire length of the course board. Worse still, although threads provide some measure of organisation they are notoriously weak at capturing the other links between messages [3]. This leads to comments like the following appearing in messages (our italics):

"These points got lost somewhere in the discussion (they featured as responses from Jon in an earlier thread from Fitz I think) I'll repeat them with my responses:"

"Most of the issues have been commented on elsewhere, I think."

"Perhaps our weekly module introduction pages, which are a little too detailed and prevent us getting straight to the work (see thread in Web site feedback), could be consolidated into one overview of the module page"

Messages form more of a web than a hierarchy, but this is not captured in the structure of a traditional threaded discussion.

To make matters worse, it is common for a single message to deal with multiple issues, some of which may relate to different threads. If a single

issue from such a message is discussed, it is not by default clear that this is so from the title of the message. This often leads to an undifferentiated mass of message titles which may point to postings discussing quite different topics. After the experience of the first course board clear guidance was given in the introduction to the course board that separate points should be raised in separate messages, and for changes of thread to be signalled in new titles for postings. This was only partially successful, not just due to carelessness on the part of the participants, but as a natural consequence of engaging in such discussions. In any complex discussion, there will be branches, changes of tack and changes brought about by misunderstandings [4].

2.3.2 Time Consuming to Catch Up

Catching up with the discussion was often time consuming for those who did not contribute constantly. The key benefit of being able to cherry pick specific areas of interest was partially lost due to the need to read sufficient threads to ensure that contributions were genuinely new. This requirement also acts as a disincentive to irregular contributors to participate which, in less active discussions, can result in a negative feedback loop leading eventually to an inadequate critical mass and hence failed online communities [5, p. 91].

2.3.3 Fun

One of the site leaders commented:

"Whoever suggested that an online course board was less time-consuming than a face-to-face one was wrong - even taking into account travel time! It is more fun, though!"

This reflects a general feeling the participants have found it much more engaging than traditional meetings. As participants are able to choose when and where they make their responses there is little of the flagging interest and boredom that afflicts traditional face to face meetings.

2.3.4 Archival Nature of the Discussion

A perfect record of the discussion to refer back to is clearly useful. However, this prevents contributors from using the option to not have a comment minuted which is available to most traditional face to face meetings. Knowing that messages will persist forever changes the nature of discussion and inhibits some kinds of posting, leading to more carefully considered comments.

Some time was spent deciding whether or not authors of messages should be allowed to delete them or make retrospective changes. We have disallowed deletion as this would destroy coherence in threads, but have left it to the good sense of contributors to avoid making radical

changes while allowing correction of minor errors and categorisation mistakes.

2.3.5 Investment of Time

For the course leader acting as moderator and for the site leaders (whose contribution has been especially large as all are module leaders too) the amount of time taken up by the course board is greater than time spent in a traditional meeting, even taking travel into account. However, for most participants it is a far less onerous task than attendance at a site far from home, at a time which may be inconvenient to spend a lot of time listening to discussions of little relevance to them.

2.3.6 Reaching Consensus

Online discussions commonly tend to drift around a point without reaching a conclusion [4]. Although this can be beneficial in allowing multiple perspectives to be fully explored, meetings often need to reach decisions. For questions requiring simple yes/no responses, the method we have employed for capturing votes which requires the posting of an undifferentiated message makes it difficult to easily identify conclusions of discussions. Further, it is not encouraging for those who might vote but for whom the process is possibly not worth the effort. Worse still, it relies on the course leader to identify that a potential conclusion has been reached, often drawing together threads from several different places or which have split along the way.

2.3.7 Late arrivals

The parallelism of a threaded discussion means that the most interesting points are often reached towards the end of a course board. Figure 2 shows that this is recognised by many participants and the danger is reduced by a concentration of visits towards the end of the discussion with relatively few new postings. However, the benefits of asynchronous attendance are slightly negated by the need to be there at the end if all points are to be fully considered.

2.3.8 Discussion hogging

Like traditional meetings, online discussions may be dominated by a few enthusiasts. Although others may choose to ignore their contributions if they are of no interest, it is none the less the case that some points will gain prominence because they have champions and there will always be someone willing to further the discussion (usually at least the moderator).

2.3.9 Misclassification

Most postings have followed the structure of categories, but some have been misclassified when posted leading to confusion, especially when they spawned further threads of conversation.

Although some of this may be ascribed to poor interface design, the fact that all users were very familiar with the design of teamroom we were using suggests that it would in principle be hard to avoid the occasional human error. This is not an issue that would usually affect a face-to-face meeting, where temporal and verbal cues mean that any departure from the current agenda item is likely to be intentional.

2.3.10 Loss of tacit dimensions

In a traditional face to face meeting there are many non-verbal cues and recognition of shared meanings which do not necessarily have equivalents in an online dialogue. Although all participants at these meetings have been expert users of the medium by virtue of being participants in the course, it is recognised that it is a different kind of interaction and a different kind of socialisation that occurs in this environment. It is not the purpose of this paper to explore this in detail (see [5, pp.150-154] for an excellent discussion), but the flip side of the benefits of focus discussed earlier is that some of the community bonding generated by a face to face meeting may be lost.

3. CONCLUSIONS

Although this method of constructing an online course board has clear benefits, the problems raised above show that there are also drawbacks. Some of these will be dealt with through organisational changes, but work has begun on a longer term solution which uses collaborative filtering technologies, utilising:

- Weightings provided by frequency of reading;
- Date of posting, so that novelty is rewarded with greater prominence;
- Importance of the sender: for instance, course leader postings receive higher weighting while student representatives may be more interested in other student representative postings;
- Ratings of contributors to constrain verbose but under-valued contributors. We have toyed with the idea of amalgamating such ratings so as to

- provide the virtual equivalent of yawns in traditional meetings, but this may be too demotivating to those rated poorly;
- Content filtering: for instance, module leaders will probably be most interested in messages relating to their own modules;
- A simple voting mechanism to make decision-making easier, such as that found in the D3E environment [6]

Visual cues such as font weight, size and colour combine with screen position, explicit metadata and user-selected filtering to provide greater or lesser emphasis. Using stylesheets we hope to make these similarly accessible to disabled users.

The design of this system is still in its infancy and for the time being we continue to refine and extend the capabilities of the simple approach which we have described in this paper which, for all its failings, has removed the need for costly and dull face to face meetings.

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