Assessing online discussions and forums

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Tutors from the School of Education have been using face-to-face discussions in tutorials to discuss the set course readings. Often when the tutorial discussion began, it became obvious that the students had either not done the required readings or had given them a cursory read at best. Obviously this had a devastating effect on the quality of the ensuing discussion. However, it became clear upon marking their final examination papers, that the students could read these articles without difficulty understand their messages and effectively engage with them – if a mark was attached. Therefore, it was decided to trial assessing the classroom discussions. The students would then have the benefit of this knowledge throughout the course which would enhance their understanding of course lectures and the quality of their other assignments. The logistical problems of conducting meaningful and objective assessment of students' tutorial discussions were substantial until it was discovered that LAMS online Chat and Forum retained all previous history. A trial was begun in which students undertook a number of their tutorial discussions online in class. The significant improvement in the students' engagement with the texts has ensured the discussions will continue to be included in the program. This presentation will outline the techniques employed by the tutors when they used online in class discussions to formally assess their students.

Background

For a number of years several tutors from the School of Education have been using face-to-face discussions in tutorials to discuss the set course readings. These readings are an eclectic mix of texts about the use of ICTs in education settings from a number of viewpoints and they were included in the class notes to generate active class discussion. Historically students have been given direction in the course outline as to which group of readings were to be discussed and when, but inevitably when the tutorial discussion began, it became obvious to the tutors that the students had either not done the required readings or had given them a cursory read at best. Obviously this had a devastating effect on the quality of the ensuing discussion. However, it became obvious upon marking their final examination papers, that the students could read these articles without difficulty, understand their messages and effectively engage with them when they had to – if a mark was attached. Therefore, it was decided to trial assessing the classroom discussions in the hope that this would encourage students to study the readings as the course progressed, rather than just before the examination at the end of the course. The students would then have the benefit of this knowledge throughout the course which would enhance their understanding of course lectures and the quality of their other assignments.

Assessing tutorial discussions

The logistical problems of conducting meaningful and objective assessment of students' tutorial discussions were substantial. Carefully evaluating individual comments to determine their quality, attributing them to the correct student and recording them – all in the heat of a classroom discussion was considered unmanageable, however, when it was discovered that LAMS online Chat and Forum (Learning Activity Management System, www.lamsfoundartion.org) retained all previous history, a trial was begun in which students undertook their tutorial discussion online in class. These written contributions could then be formally assessed at the Tutor's convenience after the discussion took place. For a more detailed description of the nature of online in-class discussions, see "Using LAMS Chat and Forum to promote quality conversations" (Cameron, 2009).

Discussion provided a different genre of assessment in this course which was weighted heavily in essay-style assessment. A high proportion of the group were "Net-Genners" who loved to "talk" online. Every member of the group would be shortly teaching NetGenners. Therefore, exposing this cohort to assessment techniques that utilised technology and capitalised on a medium with which their students would be coming increasingly familiar, seemed advisable.

The trial has now been running for five consecutive semesters, with an average cohort of 100 students. The students in the trial ranged in age from 17 to 68 years and each student brought with them a variety of academic learning, life experience and cultural differences. An unanticipated advantage of the LAMS online discussions was that it allowed small group discussions. .As students were typing responses into their computers, it was possible to have four groups of five students active concurrently. This provided students with a much greater opportunity to contribute than the 20:1 ratio of previous class discussions.

While the difficulty of "recording" class discussion was solved when we decided to use LAMS, how students' performance was to be measured caused vigorous debate amongst the tutors.

Literature Review

There is now a solid body of research about assessing online. Although little of it was designed for use with the type of in-class tutorial discussions we were using, the research provided a solid basis for the staff when considering the development of an appropriate assessment task. Assessing the participation rate of each student (frequency and distribution), the length of postings, the quality of their work and, additionally, how they interacted with their group has been researched by Mazzonlini (2000). However, like Palloff and Pratt (1999), the course tutors decided against assessing the tutorial discussions as a formal piece of writing as it was considered that online discussions are an informal medium and the students' text should be assessed as such.

Spelling mistakes, grammatical errors and colloquial language would be expected in student posts because of the speed, spontaneity and nature of the writing. This was quite an important issue as a number of students in the course for whom English is their second language. It was not considered reasonable that these students should be penalised for the errors in their posts because they were not given the time or opportunity to correct their work. Additionally, encouraging students to post without editing promotes spontaneity and liveliness in the discussion (Palloff & Pratt, 1999). When students are concerned about being corrected for the spelling and grammar in their posts, they may not post as often or may become uncomfortable and discouraged with the medium. However, the rules of engagement were made clear from the outset: the purpose of the discussions was effective communication and inclusiveness. Therefore, abbreviations, emoticons and instant messaging jargon were not acceptable if the whole group did not understand the meaning.

The assessment procedure

As all students in the course were pre-service teachers, it was decided to take a very transparent approach to the discussions and their assessment: Students were informed that the discussion approach was new and the marking criteria was put up on the course discussion board for student review. No changes were suggested by any of the students at that time. The first discussion (synchronous) was to be a practice so everyone might gain some experience with the LAMS software, specifically the Chat tool, and how the marking criteria would be applied. The second (asynchronous) and third (synchronous) discussions were to be assessable. Students were put into five randomly selected groups for the first discussion. They were given 25 minutes in which to discuss the topic in light the two course readings and lecture content (they had been given the topic, the discussion question and the readings some weeks before).

At the end of the discussion, the tutors and the students looked through each group's discussion logs (using a data projector) and, each archived group discussion was "marked" live in the tutorial, according to the marking criteria. The students very quickly became attuned to what was required of them and this influenced how they approached Discussion 2 and 3.

The students' evaluation of the whole process was very positive. The only change suggested was a reduction in the size of the discussion group from five students to four, enabling each member ample opportunity to state their case. Hence, in the next two discussions, each of the five tutorial classes consisted of five groups of four students. Consequently, when the exercise was repeated for the next assessable discussion, the tutors had to mark the discussions of 25 groups – a mammoth task and clearly not sustainable. How this workload issue was resolve is outlined later in the paper.

The Marking Criteria

Determining a marking criteria for the online discussions required some research. A major literature search ensued and a number of options were considered for selecting the marking criteria. The first considered was Henri's 1992 Model of Content Analysis as revised by Gundwardena, Lowe and Anderson (1997). Their five phase analytical model proposes that knowledge construction moves through five hierarchical levels from knowledge sharing to knowledge building: They are:

Phase 1: Sharing and comparing
Phase 2: Discovery and exploration of difference
Phase 3: Negotiation of meaning and co-construction of knowledge
Phase 4: Testing and revision of ideas
Phase 5: Awareness of newly constructed knowledge

It was decided marks could be awarded according to how far up the hierarchy students' message posts were judged to be.

McLoughlin and Luca (2000) include their own possible assessment categories for online discussions:

- Offer and receive assistance
- Exchange resources and information
- Explain and elaborate on concepts
- Share existing knowledge
- Give and receive feedback
- Challenge others' contributions
- Monitor each others contributions
- Engage in collaborative tasks
- Negotiate solutions to problems

After careful consideration, some aspects of each of the above were incorporated into the initial marking criteria presented to the students. The initial marking criteria selected is shown in Figure 1 and is taken directly from the information provided in the Student Outline for the course:

Tutorial discussions **(20%)**
You are asked to prepare for the online discussions in weeks 5, 9 and 12 in advance. You will be assessed on the quality of your online contribution in weeks 9 and 12. (Week 5 will be a practice session.) This will be assessed in a range of ways including through evidence of your reading and understanding of the topic, and your ability to think and argue a point of view.

Assessment of your contribution to the asynchronous LAMS discussion
Your contribution to the asynchronous discussion should reflect an understanding of the specified course readings, lectures, gather research related to the lectures and the course material. You can include related thoughts, observations from your classroom observation, and material, readings or questions that occur to you as you progressed through the unit. A grade for your contribution to the Asynchronous Discussion using LAMS will be awarded on the basis of:

1. The frequency of your contributions throughout the discussion – you must respond at least twice to the prescribed topic.
2. The quality of your contributions in which the following criteria was used:
   a. Contributions providing a single point of view
   b. Contributions presenting contra points of view
   c. Contributions that offered reflections on theoretical perspectives or practical experiences

Figure 1: Information for students about online class discussions provided in their Course Outline

Each student posting was counted and evaluated for quality (see Figure 2). The students were then given a total grade for each discussion. Although the marking was extremely time consuming for the tutors, it was a rewarding task because the quality of the students' work was very high – much higher than the face-to-face discussions the tutors had previously experienced in this course. It was immediately clear that the students were familiar with the course readings they were discussing, unlike in previous face-to-face discussions. Obviously a major factor in this improved performance was that the tutorial discussions were now being assessed. Using LAMS online discussion tools is the only manageable way the tutors can see this can be achieved.

Criteria	**Comments**				
1. Frequency of contributions					
2. Quality of your contributions					
3. Overall achievement	HD	D	CR	P	PC

Figure 2: Online discussion marking matrix

Despite the workload, the tutors remained with the same procedure for marking the final synchronous discussion because the students were very comfortable with the format by this time, but the tutors decided there had be a more time effective way to assess the discussions, particularly if this was to be an on-going feature of the course. The time required to mark three online discussions for a cohort of 120 students was unsustainable, so possible modifications were researched. The current assignment incorporates self and peer assessment of the online discussions, culminating in a formal summary submitted by each individual student.

Introducing Peer Review and Self Review: The Literature

Self assessment and peer assessment is an approach recommended by a number of researchers. Wozniak & Silveira (2004) suggest students should always be self-evaluating their discussion contributions. They ask the students to nominate three key postings that demonstrated any of the following characteristics:

- Timely posting that allows adequate group conferencing before deadlines
- Posting helps to promote further interactions with other group members
- Posting demonstrates their role in providing feedback to group members

Palloff and Pratt (1999) agree students should be asked to evaluate their own performance and they should receive feedback from each other throughout the course. Developing skills in giving effective feedback and in self-assessment can be useful in the promotion of collaborative and transformative learning. When students regularly document their perceptions of the contributions they are making to the

ongoing exchange of ideas, they learn an enormous amount about the conditions and behaviours that make discussion successful (Brookfield and Preskill, 1999). The evaluative assessment approach emphasises learning as much as assessment.

Knowlton (2000) has developed a model of phases of self-analysis of online discussion contribution:

Phase 1: Contribute original answers to a discussion question
Phase 2: Offer replies to each other as a means of broadening the discussion's scope
Phase 3: Write a summary of the discussion content
Phase 4: Write a self-analysis of their role in the discussion

Knowlton (2000) has also developed criteria for evaluating initial contributions:

- Is the contribution mechanically clear enough for readers to understand the points being made?
- Is the contribution on time?
- Does the contribution meet the minimum length requirements?
- Does the contribution reference assigned readings or other resources?
- Does the post contain "crucial thinking": that is indicative of the paradigms in the field?
- Are the ideas communicated with respect for those who may dissent?

Peer evaluation is also highly regarded by the researchers. Tutors can create feedback groups or peer-review partners (Palloff and Pratt, 1999). Within these groups, students complete questionnaires or checklists that are designed to provide peers with feedback. Alternatively, students might be asked to nominate two or three of their group who have made meaningful contributions to a particular discussion. Another approach is to assign students small collaborative groups where they are given responsibility for one of the discussion topics (Geer & Barnes, 2001). The students' task is to identify and summarise the key issues raised throughout the discussion and then present these. Not only does this provide a useful discussion summary (an area we have noticed lacking in our own tutorial discussions), but it encourages further interactions as the small group is challenged to critique the responses of their peers.

Murphy (2005) drew on an adaptation of Toulmin's (1958) Models of Argumentation which involves identifying claims made in each message and classifying them in one of three categories: Fact; Judgement/Value; and Policy. A similar approach has now been adopted in this course and, Murphy's three categories were modified to reflect the dimensions and elements outlined in the "NSW Model of Pedagogy", as described in the "Quality teaching in NSW public schools: An annotated bibliography" (2003, p. 5). A brief summary of which is shown here in Table 1.

	Intellectual quality	**Quality learning environment**	**Significance**
Elements	Deep knowledge	Explicit quality criteria	Background knowledge
	Deep understanding	Engagement	Cultural knowledge
	Problematic knowledge	High expectations	Knowledge integration
	Higher-order thinking	Social support	Inclusivity
	Metalanguage	Students' self-regulation	Connectedness
	Substantive communication	Student direction	Narrative

Table 1: The dimensions and elements of the NSW model of pedagogy

The marking criteria was then expanded to include a rubric of the elements that combined to form an effective assessment. As outlined by Jonessen (1999), the rubric contains the following characteristics:

- All important elements of the assignment are included
- Each element is unidimensional (don't break things down too much)
- Ratings are distinct, comprehensive, and descriptive

- Communicates clearly to students
- Provides rich information about the multiple elements but does not create a contrived summary score.

Refining the marking criteria

Each student in the course was provided with a digital copy of their group's online discussion and they had to assess their own contributions within the context of the discussion. They were to self-assess their contributions for:

- logical argument;
- evidence to support their argument;
- how they interacted and engaged with their group;
- participation rate of each student (frequency and distribution); and,
- the overall quality of their work.

The self assessment was divided into three parts. The first part was to assess distribution, number and length of the student's discussion postings. The second section was to have the students assess the quality of their postings using defined quality teaching dimensions. In the final part of the assessment task was a formal essay in which each of the students analysed their group's use of cyberlanguage. The latter part of the assignment was included to incorporate a higher order thinking task and provided more depth to the assignment.

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2. Analysis of Workshop Discussion (20%)
You are asked to prepare an analysis of your contribution to the online discussions in weeks 3, 5 and 7. Your contributions MUST show evidence of your understanding of the reading material in your posts. This analysis is in three parts:

Part 1: You are to complete a statistical analysis of your contribution to the three workshop discussions focusing on the distribution, number and length of your discussion postings using graphs and charts as a visual representation (refer to Elizabeth Murphy's article for guidance http://www.ascilite.org.au/ajet/ajet21/murphy.html).

Part 2: You are to examine the content of your discussion postings in relation to the first dimension of 'Quality teaching in NSW public schools' Intellectual Quality, with emphasis on the elements: deep knowledge* and substantive communication** and off-task claims*** (refer to "Quality Teaching Classroom Practice Guide" in the New Readings section of the EDUC261 Blackboard CE6 page for guidance). Present your findings in a table. Demonstrate (by including quotes from your discussion) how your claims, in the three discussions, contributed to deep knowledge and metalanguage. Comment on the role off-task claims in online discussions. Length: 750 words.

Part 3: Analyse how your various discussion groups used (or did not use) cyberlanguage#. Length: 250 words.

Definitions:
*Higher-order thinking: to what extent are students engaged in thinking that requires them to organise, re-organise, apply, analyse, synthesise and evaluate knowledge. For example: justifying or interpreting posing questions that have multiple answers, asking respondents to justify their responses evaluating material from a variety of sources, extending respondents beyond recall by using follow up questions such as: Why would you say that? How does this compare with previous comments?

**Substantive communication: to what extent are students regularly engaged in sustained conversations about the ideas and concepts they are encountering? For example: there is sustained interaction throughout the discussion, communication is focused on the substance of the discussion and interaction is reciprocal. For example: framing questions that require more depth in response from respondents than the initiate-respond-evaluate (IRE) format encouraging respondents to extend their responses to make thinking and understanding explicit such as: Why do you think that? How did you get to that viewpoint?

***The claim is the main point, the thesis or the controlling idea. The claim may be directly stated or implied. The claim can be clarified by asking the question, 'What is the respondent trying to assert?'
Off-task claims refer to comments that veer off the task such as 'my fingers are getting tired'

Cyberlanguage: Words, expressions and linguistic phenomena associated with informational technology (Gibbs, 2006).

Figure 3: Information for students on self-assessment provided in their Course Outline

Conclusion

The online discussions held in this course led to a deeper understanding of the set readings and improved engagement with their content. Their use overcame many students' reluctance to join in the classroom discussions and avoided them being dominated by a small number of their peers. The use of the technology meant the discussion could accommodate simultaneous small groups and moved the discussion to a more student-centred activity.

By including the self and peer assessment tasks, the students became very aware of the significance of the marking criteria and this provided these trainee teachers with valuable experience in criterion-based marking. Additionally, the transparent nature of the assessment process helped these students understand the nature of a marking matrix. The quality of this cohort's work throughout the course confirmed the use of the online discussions facilitated student understanding and engagement of the course material. Using LAMS Chat and Forum improved the quality of in-class discussions within our tutorials and the quality of the subsequent written assignments. When faced with the question: Would you rather we replaced this assignment with an essay, the response from 98% of students surveyed was "No".

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