

# Teacher and student reflections on interactions in an Internet based unit

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For the last three years Dorit has been teaching an Internet based distance education unit. This year, more attention was given to the evaluation of the learning in the unit. The features of the unit comprise a static component which includes a Reader, and dynamic components which include an Activity Room and a Resource Room with hot links to other relevant places on the Web.

An important pedagogical design feature is that the Web must be brought to life in an environment of cooperative learning that is consistent with social constructivist theory. This has been achieved in this unit by:

- The establishment of an Activity Room as a centre for learning interaction between students and tutor.
- Students acting as discussion leaders and participants contributing on a weekly basis to focussed activities.
- Interaction between students.

In the paper, Dorit describes her perception of the unit as a facilitator for introducing the research in progress.

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## Introduction

The purpose of the unit is to overcome the intellectual isolation of science and mathematics teachers from around Australia, who participated in postgraduate studies at SMEC, Curtin University (Maor, 1998). The unit is an Internet based distance education unit which focuses on the major content areas such as examining current theories of teaching and learning with computers, evaluating educational software, and implementing constructivist approaches with technology. The use of the Web provides the framework to focus on the learning process as well as on the content area. Therefore the teachers were involved in computer networked communication in order for them to become familiar with the technology and to utilise it for their own communicative learning. The unit was designed to promote interactions and social negotiations between the participants in the group, while I planned to act as the facilitator.

The teachers in the group were dealing with computers at their respective schools, had an interest in this medium, wanted to learn more about how to use the Internet and computer software in schools, or were seeking professional development for their advancement in schools. Salomon (1996), suggested that teachers need to experience a novel learning environment as learners so that they have some appreciation for challenges facing their students. It was my third year of teaching "on the Web" and the learning curve was steep. From my desk in my office or my study at home I communicated several times a week with the group of about ten people who were scattered around Australia. Through these constant interactions we overcame the intellectual isolation and created enormous opportunities for social learning.

The social constructivist theory that I adopted for teaching this unit (Tobin, 1993) was enhanced by fostering interactions in the Activity Room, by creating the role of a Discussion Leader, and by promoting learning that is based on sharing information, communicating and reflecting.

There were many significant aspects to this internet based unit. A major advantage was that many of the features of the unit could change and evolve over time. Web sites were added, new topics discussed and this led to new and relevant

issues being initiated by students. However, in this paper I will focus on the aspects of the Discussion Leader and the contribution of this role to the group learning and to the personal learning.

## **The focus on the discussion leader**

In creating the Discussion Leader feature my aim was to create a student centred approach to learning, to engage students in active learning in which they have the opportunities to discuss, collaborate and reflect. This is in contradiction to most distance education programs that use technology mainly to deliver instruction, by emphasising the transmission of the content rather than collaboration (Duffy & Cunningham, 1996). By having a discussion leader, I also wanted to delegate responsibilities and ensure full participation.

My expectations for the discussion leader's role were emphasised in the Activity room. The Discussion Leader should give a brief summary and critical reflection of the reading, present their own views and experiences related to the topic and pose relevant questions for group discussion.

Each group member should respond to the Leaders' questions by a follow up message about their personal experiences, ideas and beliefs and present their critical reflection to the group. At the end of each week the discussion leader was expected to critically reflect on some of the ideas presented during the week by the other participants. The mode of interaction that is employed in the activity room is asynchronous which enables the learners to delay the reaction to the discussion leader and use the time to do some reading or reflect on their views.

The most difficult issue for me was how to assess students' participation and contribution in the Activity Room. I tried to put clear criteria and told the participants that:

As a leader you will be assessed on your ability to critically present the topic, pose relevant and stimulating questions and then reflect on other participants' ideas (Activity Room posting).

Using interpretive research methodology (Erickson, 1986, 1998) I intend to answer the following research question:

*To what extent did we achieve my goal for the discussion leader?*

A rich data source based on students' perceptions and my perception were used to answer this question.

I asked Tom to be the first discussion leader. Both of us were unsure of the outcome of this. Tom posted a long message to the group with many, rich questions. I was concerned that this would intimidate some of the less technically skilled learners in the group. The responses came slowly to which Tom responded with another message whose title read: *You will be marked on the number and quality of your responses*. Tom hoped to attract their attention and more responses which were coming slowly. In addition to this tactic, Tom was quick to reply to the students who were posting, usually by sending a message which further stimulated responses. His style, as I perceived it, was to create a continuous conversation among the group. His perception of himself as discussion leader suggested that he have liked to see more feedback to his questions.

I feel that not all my questions were answered by other people and they were all too slow with putting in their answers.

In the mid term evaluation Tom expressed some frustration as he was keen to ask more questions and set a dialogue before his turn was finished. The rate of the group response improved over time, however the intensive discussion occurred towards the end of the semester between a smaller group of people. This created a sub group of people who interacted more closely.

Patrick, the next discussion leader, was less enthusiastic and very cautious with his use of the medium. This did not negate from his quality as a discussion leader. His comments were:

I think the discussion leader needs to be aware of the time constraints on each of the group members. It would be easy to get very excited and enthusiastic about the discussion leader role and ask too much of

the other members...

Patrick's leading discussion style was different from the rest. Using the suggested topic for his week he extended the topic by bringing additional URL's and linked them to the Activity Room. He also summarised these URL's in relation to the main topic. This was perceived positively by the group and enriched our resources. I greatly valued Patrick's contribution to the discussion, but to my surprise his perception suggested:

I don't think I led a good discussion. I just tended to throw up ideas.

I felt that Patrick, who was not constantly engaged in the interaction, needed positive reinforcement for his fewer but high quality messages.

Jane, another student whose interactions as a participant and as a discussion leader were stimulating and challenging suggested:

I feel challenged in my role as a discussion leader and question: How do I make this discussion intellectually challenging, interesting and appropriate to the rest of the group as well as to myself.

She perceived her contribution as a discussion leader as stated in her evaluation of the unit. Her metaphor of a tour guide suggested that she adopted the role of the discussion leader as that of a facilitator:

I perceive my contribution as a discussion leader similar to the role of a tour guide. While it is important to provide guidance in which the discussion ("tour") moves, it is equally important to incorporate other people's ideas and experience (the tour group) into the general discussion.

Daisy, a student who made frequent and valuable contributions in the Activity Room felt uncomfortable at the beginning but later gained her confidence as a discussion leader:

I was apprehensive in my role as a discussion leader. I was unsure of the degree of participation needed and if any follow up was needed. I have studied externally before, but this was the first time that I'd had contact with others doing the same subject. On the whole I found it an interesting experience...

Daisy wanted to succeed on the practical level and overcome some technical constraints. She perceived her contribution as a discussion leader in the following way and emphasised her need to be more technologically able:

After receiving the email as to what I was to do, I posted the request to the Activity room ... The compiling and categorising of the web sites was interesting, but I feel that the list would have been of more benefit had I been able to provide links to the web sites.

The quotes above from students' reflection on their role as discussion leaders suggested the different styles of Discussion leaders, and also suggests that students had high expectations for themselves as discussion leaders.

Reading the posting of the discussion leader and the reactions to them I found my role as a unit coordinator interesting and rewarding. The different approaches that learners took emphasised the richness and the diversity in the learning style and how much we can gain from each other in this type of learning. I had to restrict some of the participants so their contribution, although valuable, would not overwhelm the others, and some other participants had to be encouraged not to fall behind. I myself also struggled from time to time to keep up the pace of reading and responding. A solution for me was to read a set of messages and then to respond in one major message. Sometimes I sent individual messages to the participants via email.

However, the pedagogical processes involved in being a discussion leader included the ability to analyse the weekly topic, to pose critical questions, then to collate, summarise, analyse and present back to the group. It was difficult to observe that a typical style of discussion leader emerged. More time and deeper reflection is required to achieve a typical model of discussion leader. Looking at the Activity Room collage, there are not always clear threads in the discussion. These strongly support Tom's lack of satisfaction for not being able to engage in long responsive

interaction while he was a discussion leader. However, to a large extent the goals of involving teachers in using the World Wide Web for discussion, clarification and extension of ideas was achieved. At times I facilitated the flow or lack of flow to create opportunities for everyone to participate. Further analysis is needed to determine the successful and unsuccessful characteristics of a discussion leader.

One of the Unit's objectives was to "use the Internet to access information and resources via the Web, to participate online in the activity room and communicate via electronic mail". The feedback from the students and my monitoring of the activity room suggest that this goal was met by the participants. Not only was it useful in terms of the context, but also in terms of facilitating effective communication, dealing with people, facilitating moderating skills, and using new technologies. As a course leader I also shared the load with the discussion leaders.

## **Self assessment**

In an attempt to make the learning meaningful to the learners I decided to give them a shared control over 20% of their assessment. The self assessment, I thought, could increase self reflection amongst the participants. The responses from the participants were intriguing. I selected three responses which represent the majority of the group. Jane explained:

After much thought, I've based my suggested grade on the four objectives (of the unit), Also, I have included a fifth one: Effort and extent of progress in the unit... I believe I have put in an enormous effort this semester far exceeding that of previous SMEC subjects....I believe I have come a long way in terms of my understanding and knowledge of the computerised classroom when I reflect on these aspects from the beginning of the semester...(Email)

Another student replied:

This is the first time I've been asked to give myself a grade.

I have completed all the requirements of the course; participation in the activity room, contributing and responding to others; the assignment; reflections on my role as a discussion leader; reflections on how the readings have influenced my classroom practice and the mid semester evaluation... 505 has proved a challenge which I believe I have met to the best of my ability...Based on this and from what I have gained, as stated above, and from my contributions and participation, I believe that I am worthy of a grade equivalent to a "distinction". (Email, Daisy)

Patrick replied:

Dorit, you also wanted to know what grade to give me. I think I have gained a lot from this course. In that way I suppose that I have already been rewarded for my efforts. A grade is just a letter. Of greater value is the process that I have been through over the semester. Taking time to think critically about computer use in the classroom has been timely and will be very useful.(Email)

The qualitative data about students' confidence and what they gained from the unit re-assured me that with this style of teaching students had increased opportunities for peer interaction and expression of their views. However, some of the students expressed concern because of unrealistic attempts to keep up with everything, and therefore I realised that I should adjust my expectations from the learners as well as from myself.

## **Concluding remarks**

As a result of this intense learning experience some new issues were raised. The workload both for the facilitator and the students became a major issue: To what extent should we keep an open channel for discussion, or should we constrain ourselves to the topic at hand. To what extent should the facilitator reply to the frequent messages that come, how should we cope with trying to keep up to date with the discussion; In this online unit the risk of falling behind caused fear and frustration for a few people. Therefore, the disadvantages of the pressure of logging on frequently to keep up with discussion, feelings of information overload are issues for further investigation.

The result of this study suggested that although communication was very productive and rewarding for the group, some of the participants even requested more reflective thinking which I believe will further increase the rate and depth of responses. As in Burge (1994), qualitative data from learners suggested that in this type of learning active and constructive thinking occur more than absorption of transmitted knowledge. This type of online learning helps to connect with others and helps students to connect with themselves.

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