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On-line Education: A Radical Approach

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Abstract

The IT/IS education sector needs to come up with creative ways of thinking about on-line education. In this paper, the major themes in the literature on on-line education to date are highlighted with a view to identifying issues that are either missing or under-emphasised. Next, the “radical model of on-line teaching” is presented. The paper is concluded with a discussion of how the model addresses some of the issues that are missing or under-emphasised in the literature.

Introduction

The literature on on-line education to date seems to emphasise a number of themes:

A. The advantages and disadvantages of teaching on line

Cost effectiveness and flexibility, particularly for students, are often mentioned as the major advantages of on-line teaching ((West, 1998; Cunningham, 1998), while "second rate" education and extra work for the lecturer are mentioned as the major disadvantages (Cunningham, 1998). There is general agreement in the literature, however, that no matter what the disadvantages are, the cost-effectiveness of on-line education is so compelling that it is bound to be the way of the future for universities (Cunningham, 1998; Ryan, 1998; Flew, 1998; Thomas, Meredyth, and Blackwood, 1998 and others).

B. The range of technologies for on-line teaching

Another important theme in the literature on on-line education is a discussion of the ways in which it can be accomplished. In particular, the publications in this area contain descriptions of teaching situations that lend themselves to the on-line mode. For example, lecture notes can be placed on the class web site, students can submit assignments and be tested on-line, on-line multimedia packages can be developed to guide students through the major components of a subject area. There is also emerging literature on how video and audio conferencing can support teaching and learning and some literature on how chat groups can be used to support teaching or as the basis for class interaction (West, 1998; Ryan, 1998; Cunningham, Tapsall, Ryan, Stedman, Bagdon, and Flew, 1998; Kelly and Shing Ha, 1998; Tsang and Fong, 1998).

C. The profound changes to the role of the lecturer as a result of on-line teaching

It is implied in the literature that on-line teaching heralds a new role for academics, with a stronger emphasis on the lecturer as provider of mass education and a lesser emphasis on his/her role as creator of new knowledge or as a researcher. This theme often leads to the conclusion that in the future academics will be expected to engage in less research and more teaching.

What Is Missing In The Current Literature?

A careful reading of the literature in this area seems to suggest that several themes are either missing or under emphasised in this literature. These themes include:

A. A relative under-emphasis on the "many to many" mode of student/lecturer interaction

In contrast to the "one to one" and "one to many" modes, that seem to be predominant in the current literature on teaching on-line, the "many to many", is not as frequently practiced. Even when this mode is practiced, it is more than likely to be seen as a parallel process to the real teaching, intended to "keep the students motivated".

B. An under-emphasis on the soft knowledge / skills

Many IT/IS researchers and educators (e.g., Lee, Trauth and Farwell, 1995) have emphasized in recent years the need to supplement IT/IS education with "soft skills", namely, managerial, business, and interpersonal skills. Obviously, the overemphasis on the one-to-one and one-to-many mode of interaction in the on-line teaching practice results in an over-emphasis on hard skills and under-emphasis on the soft skills needed by IS/IT professionals.

C. An under-emphasis on flexibility for the lecturer

Much of the current discussion about on-line learning and teaching emphasises the flexibility that results from this mode of learning to students. Students are supposed to be able to learn any time, and anywhere (as long as
they have access to the Internet. They are supposed to be able to not purchase books (if the course materials are available for them on the class Web site) or other teaching materials. Given the cheaper price of on-line education, it is supposed to be available to all students, irrespective of income, socio-economic level, gender, family status, or professional activities. In fact, the general assumption is that on-line education would make it possible for full time employees to do their studies “flexibly” in between all their other daily activities without major investment in either time or energy.

In contrast to the above, there is almost a universal agreement in the literature, that on-line teaching results in less flexibility and more work for lecturers. In fact it would be true to say that the increased flexibility for the learner is seen as associated with a decrease in flexibility for the lecturer. It is precisely for this reason that on-line teaching, as a major new activity for lecturers, is associated with the belief that academics in future will be disseminators of knowledge (teachers) rather than creators of knowledge (researchers).

The Radical Approach

The first thing that students are expected to do once they read the Course Outline and watch the video is subscribe to the class e-mail list. They are then expected to introduce themselves to the class on-line so they can be divided into weekly presentation groups. The allocation to groups is completed by the second week of the semester. By this time, students are expected to establish contact with their virtual group members and start working on their assessment tasks. On week 3 of the semester, the first group makes its presentation to the class on-line. The presentation consists of an article (which the students have to enclose, attach, or simply establish a hiper-link to) and a critique that links the article with the reading in the book for the week.

The presentation is expected to be made on Tuesday of each week. By Friday, each of the groups in the class is supposed to comment on the presentation. On Sunday, the presentations for the week are read by the instructor along with the comments that were made by all the groups. All groups are marked every week for either their presentation or their comments about other students’ presentations. This procedure is repeated for ten weeks until the end of the semester, with each week dedicated to an in-depth discussion on a different topic that is related to the reading for that week. This assessment is supplemented by a written exam at the end of the semester.

What are the advantages of this approach and why it should be considered radical?

1) This approach encompasses the best of all three modes of student/teacher interaction

Students have some interaction with the material (when they read the book and the articles that are presented by the other groups). They have some interaction with the lecturer, through direct correspondence on e-mail and the replies to them about their presentations on the class list. However, the major bulk of their interaction is in the ”many to many” mode, with the other students in their presentation groups and with the rest of the students in the class through the class e-mail list.

Throughout the semester, students are assessed on 11 assessment tasks (including their group presentation, comments on other students’ presentations and an end of term exam). For each presentation that they make, they get (if the class consists of 100 students) 19 comments which represent the views of their own group members (in this case, there will be 10 members per group) as well as all other 90 students in the class. Since this procedure is repeated every week, the students receive over 100 inputs from their group members, the other groups, and from the lecturer by the end of the semester.

2) This approach encompasses both hard and soft knowledge/skills

In addition to learning about the content area for the semester, students learn important on-line skills such as how to set up their e-mail lists, how to be citizens of an on-line community, and how to contribute to a virtual team, including dividing the work between the team members, resolving conflicts, developing ideas and projects, and providing positive feedback to others about their work. Through the involvement of students from diverse backgrounds (many of whom are fully employed) students learn about how organizations use the abstract concepts that are mentioned in the readings. They also learn about relevant legislation and ethical issues.

3) This approach is flexible for both lecturer and student

The flexibility to the students is increased in this approach because the students do not have to submit hard copy assignments (hence, nothing can get lost through the system). They get to know if their submission was successful immediately when they see it posted on the class list. If something happens to preclude an individual student’s contribution during the semester, he or she can negotiate with their group members on how they can take time off and compensate later by doing more work for the group. Students have further flexibility in not having to download large amounts of data from the class Web site.
Lecturer flexibility is also an enormous benefit from the radical model. Since the package for this course does not include a Study Guide, there is no need to update one every semester. Since the course is in no way dependent on a textbook, there is no need to modify or change it in any way if and when there is a need to change a textbook. In fact, preparing study materials for a new semester should not take more than a few minutes, given that nothing substantial has to change. As for ongoing teaching – reading the weekly presentation and the comments by the other groups (students are restricted to two pages or two screens maximum per critique or comment on other people's critique), takes about an hour and a half to two hours per week. This can be done from anywhere, including from home or from a conference.

The most important aspect about this model is that no matter how many students are in the class, the amount of work for the lecturer is the same. No matter how many students are in the class, 10 or 100, the lecturer ends up checking 10 presentations of one page each per week for ten weeks. Thus, the amount of marking for the lecturer remains the same, irrespective of the number of students in the class.

The radical approach can be enhanced in a range of ways, including:

1) class interaction can be supported by audio or video-conferencing (in this case differences in time-zones between different locations where students were located around the world prevented this application);
2) submissions can be made via the telephone (for example, students can tape role plays in a class on interpersonal communication and submit these to a voice mail box where they can be listened to and commented on by the other groups in the class);
3) class assessment can be complemented by on-line testing (this has not introduced so far in this situation);
4) teaching can be enhanced by on-line tutoring; and at least part of the interaction with the students can be undertaken through the class Web site, rather than on the class list.

Other improvements to this approach could involve a class management system which would allocate students to groups and establish group lists for them. Currently in the absence of such a system, the allocation of students to groups is conducted manually and students establish their
groups on their own. It would seem that a class management system and/or the use of team teaching would be necessary once the number of students in a virtual class where this model is applied goes beyond 100. If this were to happen, the model could be easily duplicated, with more than one lecturer facilitating the learning process.

However, even without these enhancements, important lessons from use of the Radical Model are that this approach does not result in more work for the lecturer or inferior education for the students. Student comments are very enthusiastic and they consider this format an improvement over the usual hard copy distant education packages. They also consider it superior to many of their face-to face-courses, where the "one to many" or "one to one" modes are practised.

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