

Adult Learners' Perceptions of a New Online Managed Learning Environment: A Case Study of the Trade Union Congress Online Delivery Using Teknical in Scotland

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Abstract

This study reports the results of a pilot study that assessed a new online course provision being offered by the Trade Union Congress in Scotland via its Teknical managed learning environment. The aim of these courses is to reach trade union representatives who are unable to attend day release courses at their local college or who would prefer, for a variety of reasons, to learn online. The results of the study indicated that students were happy overall with the course and the online learning environment. However, they felt that certain aspects such as previous IT experience and social issues such as motivation for doing coursework and feelings of isolation would need to be addressed in order to improve the overall e-learning experience.

Introduction

The World Wide Web provides opportunities for educators to create virtual classrooms (Mazza & Dimitrova, 2004) and build integrated teaching environments. In addition it also helps in supporting traditional educational methods (Kalifa & Lam 2002). As a result of technological developments such as the WWW, teaching and learning are no longer limited by place or time (Kalifa & Lam 2002). The WWW and the Internet are considered to be important new methods for delivering online courses (Jiang & Ting, 2000; Lee & Shih, 2001). As a result of this, the interest in web-based learning and technology to support learning is increasing in higher education and that can be seen in the growing number of research publications in this area (Bower, 2001; Hoskins & Hooff, 2005). Large numbers of educational institutions are offering web-based courses (Owston, 2000) or starting to use course management systems such as WebCT or Blackboard (Mazza & Dimitrova, 2004). Interaction is central in teaching and learning; the learning process is based on student interaction with instructors, other students, and with the course content (Lei, Paul, & Donovan, 2003).

From the outset of research work in this area, various researchers have highlighted the benefits of developing an “electronic classroom.” One early advantage of presenting course materials on the Internet for students was seen as the emphasis on learning activities moving from the teacher to the students (Locatis & Weisberg, 1997). In lectures, seminars and tutorials, lecturers control the delivery of information in terms of format (e.g., PowerPoint presentation with students taking notes) and speed (e.g., a lecture can last for 50 minutes on one topic). However, research has also shown over the years that, in a web-based learning environment, the student is in control (e.g., Bower, 2001; Menges, 1994; Lei et al., 2003). In this type of environment, the students can interact with course materials at their own pace and they can facilitate their own learning by using the resources that are available to them (e.g., links to other useful websites). This obviously has an impact on the role of the teacher in a web-based learning environment. In this situation, the teacher moves from being someone who controls the delivery of information to a facilitator of information, an e-moderator (Salmon, 2000).

Therefore, in terms of facilitating student learning, the evidence emerging from the literature on web-based learning appears to suggest that it provides a good example of what Marton, Hounsell and Entwistle (1984) call “deep learning.” In web-based learning environments, students are encouraged to engage with the material by questioning the content available and feedback is available should any misunderstanding occur, regardless of the time and location of the students (Lee & Shih, 2001; Tian, 2001). The philosophy on all TUC courses adopts this approach by designing course activities in such a way that the students need to speak to each other and offer each other solutions to problems. TUC courses are largely “real-problem-driven” and therefore demand real answers.

Another factor that is often overlooked in relation to web-based learning is students’ attitudes towards using web-based learning tools. These attitudes are important in determining the effectiveness of web-based courses. The body of literature about web-based learning is large and growing. However, the research dealing with students’ attitudes towards technology and web-based learning is limited (Valenta, Therriault, Dieter, & Mrtek, 2001). Few qualitative research studies have been undertaken to evaluate students’ attitude towards using WebCT (Felix, 2001), and their achievement (Huifen, Xin, & Xinyu, 2002). However, most of the studies depended on comparing students’ performance and attitude with and without using WebCT. From the above it is clear that evaluating the use of WebCT components in relation to students’ attitude and achievement is an under researched yet important area for investigation in relation to online learning.

Another key fact to emerge from a review of the literature is that the sample population for the majority of this work has focussed on students in institutes of higher education. Bearing this in mind, this paper reports the results of a study carried out with 59 students who were taking part in a series of courses (e.g., Health and Safety) organised by the Department of Trade Union Education at Stow College, Glasgow. These courses were based around an online managed learning environment called Teknical.

The course was an introductory health and safety awareness course aimed at small and medium enterprises. It gave the students a basic understanding of risk assessment,

hazard spotting and safety inspections and also focused on their own organisation's safety policies and procedures. The course was offered to students in academic year 2005.

The students on these courses were often adults with no formal post-leaving school qualifications and many were returning to education for the first time since leaving school. In addition, the aim of these courses is to reach trade union representatives who are unable to attend day release courses at their local college or who would prefer, for a variety of reasons, to learn online.

The students who enrolled in these courses were informed from the outset that all the information about the course would be found on the course website. This included information about course aims and expected learning outcomes, assessment criteria (including assignment hand-in dates) and reference links to other relevant websites. In addition, the students also held online seminars once a week (with their tutor) on a specific topic related to the course.

Therefore, taking this on board, the specific aim of the study was to assess student perceptions of an online managed learning environment.

Method

Data Collection

In order to assess students' perception of their online learning experience a Likert-type questionnaire was developed (Likert, 1932). This type of scalar questionnaire is one of the most popular types of questionnaire design used in HCI research (Love, 2005). The questionnaire used in this study required students to indicate the extent to which they agreed or disagreed with a specific statement. (See appendix for a copy of the questionnaire.) In addition, students were also asked to explain the responses they gave in relation to each statement.

The questionnaire included a balance between positively worded statements and negatively worded statements in order to control for the acquiescence effect. This is a phenomenon whereby participants may unwittingly respond positively to every Likert statement in order to help the investigator with their study. As a result of this, the negatively worded questions were scored in reverse to the positively worded statements as Figure 1 shows.

Figure 1: Example of the Scoring Used for the Likert Attitude Questionnaire

I learn a lot from online discussions				
5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I often feel isolated and not part of a class				
1	2	3	4	5
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

As well as the questionnaire, a series of open-ended questions were included in order to explore these issues in more depth and to provide students an opportunity to provide any further information on their experience of the online learning course. Students were also asked questions relating to social aspects of online learning such as motivation and feelings of isolation. The questions were as follows:

- Has this online course developed your skills the subject area?
- Is the online course organised in a way that you like to learn new information?
- Does the online course provide enough social interactions with your fellow students and tutor?
- Do you have a good understanding of the course material?
- Do you have any other comments you would like to make?

Procedure

The data collection for this study took place at the end of the delivery of the courses that the students were studying. Students were e-mailed the questionnaire and interview questions and asked to submit their completed responses to a specific area on their online module area.

Results

The results of the questionnaire analysis are given below in Table 1.

Table 1: Mean Attitude Scores Obtained for Section 1 of the Questionnaire

Attitude Statement	Mean Attitude Score
1. I enjoy using this online environment	4.22
2. I never use resources available on this online environment	4.16
3. I learn a lot from the online discussions	3.81
4. I would like more social support on this course	3.10
5. I e-mail my tutor or fellow students when I have questions about the course	3.86
6. I never use the coffee shop discussion area to provide information to my fellow students	3.04
7. I like the way the course materials are presented on this online environment	4.03
8. I often feel isolated and not part of a class	3.68
9. I do not need to motivate myself to use this online environment	3.59
10. I think this online environment needs a lot of improvement	3.74
11. I would like to have F2F contact with my tutor and classmates	2.97
12. I would enrol for another online course	4.50

Table 2 provides examples of the explanations that students gave for their answers.

Table 2: Student Explanations of Likert Responses in Section 1 of the Questionnaire

Attitude Statement	Positive Attitude	Negative Attitude
1. I enjoy using this online environment	<i>You can set your own pace.</i>	<i>Can be tedious when not used to troubleshooting with technical problems.</i>
2. I never use resources available on this online environment	<i>I used the resources all the time.</i>	<i>I could have made more use of it.</i>
3. I learn a lot from the online discussions	<i>I would say that the online discussions between the tutors and other colleagues were very useful, as it highlighted points that I had not realised myself and thus further increased my knowledge of certain areas.</i>	<i>Did not feel there was much online discussion, we merely commented on each others work.</i>
4. I would like more social support on this course	<i>I believe the social support was fine.</i>	<i>It would have been useful to have met with the others to form some kind of bond.</i>
5. I e-mail my tutor or fellow students when I have questions about the course	<i>It's always useful to be able to contact others to clarify points.</i>	<i>Discussions with other participants dried up at an early stage in the course.</i>
6. I never use the coffee shop discussion area to provide information to my fellow students	<i>It's good to talk!</i>	<i>Never got round to it.</i>
7. I like the way the course materials are presented on this online environment	<i>Concise, clear and easy to use.</i>	<i>Sometimes have to read the questions several times to realise what information is required.</i>
8. I often feel isolated and not part of a class	<i>I felt that I knew the other members of the group.</i>	<i>It is difficult to build any relationships online.</i>
9. I do not need to motivate myself to use this online environment	<i>The course allowed people to take part when it suited them which made it easier.</i>	<i>Sometimes I required motivation mainly due to my own time management.</i>
10. I think this online environment needs a lot of improvement	<i>No, very user friendly.</i>	<i>Too repetitive.</i>
11. I would like to have F2F contact with my tutor and classmates	<i>Defeats the purpose of online learning.</i>	<i>Good to have met the tutor and group at least once.</i>
12. I would enrol for another online course	<i>I enjoyed the course and would do another.</i>	No negative comments.

In addition, students were also asked several general questions and typical examples of the responses received are presented in Table 3 below.

Table 3: Examples of Student Responses to General Questions in Section 2 of the Questionnaire

General Questions	Positive Attitude	Negative Attitude
1. <i>Has this online course developed your skills the subject area?</i>	<i>The online course has definitely increased my knowledge of H&S issues, practices and legislation in the workplace. It has also made me more aware of H&S in my own working environment.</i>	No negative comments.
2. <i>Is the online course organised in a way that you like to learn new information?</i>	<i>Yes, information is available and accessible, can be downloaded and used anytime anywhere.</i>	<i>Yes, although I would prefer to see more activities apart from just writing reports all the time, maybe some interactive events.</i>
3. <i>Does the online course provide enough social interactions with your fellow students and tutor?</i>	<i>Although I never met any of the participants I feel there was enough social interaction through the discussions, etc.</i>	<i>The tutor was available most of the time but group members seemed to dwindle at sometimes. So, maybe some more social interactions would have been good.</i>
4. <i>Do you have a good understanding of the course material?</i>	<i>I felt that after reading the supporting documents in detail, I had a good grasp of the course material and was able to understand the information provided.</i>	No negative comments.

Skill Development

As can be seen from the results of item 3 of the questionnaire in Table 1, students believe that they are learning a lot from their respective online courses. When asked specifically about skill development in the first question in section two of the questionnaire (*has this online course developed your skills in the subject area?*), all students answered by saying that they believed their skills in the area of study had

improved (see Table 3). In addition, several students mentioned their IT skills had also improved as a result of being on the online course.

Understanding Course Material

The mean attitude scores obtained for the first two statements listed in Table 1 above suggest that students enjoy using the Teknical OnLine site and make good use of its resources. However, the mean attitude scores obtained for items 5, 6 and 7 suggest that the students prefer using some resources (e.g., those placed in the learning area by the tutors) more than others (e.g., using the online social area and e-mail facilities). If one looks at the answers given to question 4 in the open-ended section of the questionnaire (*do you have a good understanding of the course material?*) a similar pattern emerges. The majority of students felt that they had a good understanding of course material. This comment typifies student responses to this particular question: “The online course has definitely increased my knowledge of H&S issues, practices and legislation in the workplace. It has also made me more aware of H&S in my own working environment.”

When one looks at the mean attitude score for statement 10 of the questionnaire (*I think the online learning environment needs a lot of improvement*), it becomes apparent that students felt that the online learning environment site was effective, efficient, and satisfying to use. This feeling also comes across in the answers given to question two in the open-ended section of the questionnaire (*is the online learning course organised in a way you like to learn new information?*), as this quote illustrates: “The course was enjoyable and understandable and well layed [sic] out”

Student Motivation and Social Interaction

The mean attitude score obtained for item 9 of the questionnaire (*I do not need to motivate myself to use the online learning environment*) indicates students appear to be able to motivate themselves to study online, however as with all types of study, some students indicated that they had time management problems: “sometimes I required motivation mainly due to my own time management abilities.”

As can be seen from the mean attitude score obtained for items 4 and 8 of the questionnaire (*I would like more social support on this course; I often feel isolated and not part of a class*) students appear to be satisfied with their social interactions on the online courses (“If students feel like that they shouldn’t be taking part in an online course — it does exactly what it says on the tin”[you know what to expect from the outset of an online learning course in terms of social interaction]). However, the responses obtained for item 11 (*I would like to have face-to-face contact with my tutor and classmates*) suggest that some students may actually like some, limited, form of face-to-face contact. This finding also came out when the responses to item 3 in the open-ended questions (*does the online course provide enough social interactions with your fellow students and tutor?*) were analysed. This quote typifies the responses of students who felt they would have liked more social support and actual face-to-face contact: “Could do with more face-to-face interaction...to put faces to names.”

Discussion

By examining the results obtained from the evaluation of the Teknical OnLine Health and Safety course several issues emerged for the tutors to consider in relation to the general provision of e-learning resources.

The first issue to consider is student demographics. There is a general trend in institutes of further and higher education towards the growth of the 'non-traditional' student. This has resulted in more mature students, more part-time students and students with a range of qualifications they have obtained before entering further or higher education. This also has an impact on the lecturers' role, in relation to online learning, whereby they have to move from being a deliverer of information to what Salmon (2000) refers to as an e-moderator. The question that has to be asked here is to what extent are lecturers who provide online learning resources aware of changing their roles as educators in this way?

In terms of the tutors involved in running the online course, they felt that they were aware of the differing educational background of their students and tried to accommodate their learning strategies accordingly. An example of this awareness of their students skill set is the fact that all students must take part in a pre-course to establish their level of experience of using information technology. Tutors felt that this was necessary as they had previously spent a lot of time helping some students with technical aspects of the course (such as how to send attachments) rather than on specific course aims and objectives. In addition to this, some tutors also thought it would be a good idea in the future to try and have some assessment of the learning styles of the students would be taking part in an online learning course in order for them to structure their course accordingly.

In terms of social interaction, students clearly placed a high value on 'human-human' interaction. However, it appears from the results obtained in this study that students can, in general, get the level of social interaction that they require by visiting the online coffee shop and actively taking part in the online discussion groups. In addition, most students felt that they could always e-mail their tutor or fellow classmates.

Overall, looking at online learning provision from a non-traditional student perspective, there are important aspects that the tutors involved with online learning should be aware of such as student motivation, social interaction and previous computer experience. If these can be incorporated into a formal set of guidelines, students have the potential to become more active learners and engage in "deep learning." This will, in turn, provide an example of what the real potential of e-learning can be for adult learners.

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Appendix A: Online Survey Form



For each of the statements below, please tick **ONE** box

- I enjoy using this online environment

Strongly Agree Agree Neutral Disagree Strongly Disagree

Please explain your answer

- I never use the resources available on this online environment

Strongly Agree Agree Neutral Disagree Strongly Disagree

Please explain your answer

- I learn a lot from the online discussions

Strongly Agree Agree Neutral Disagree Strongly Disagree

Please explain your answer

- I would like more social support on this course

Strongly Agree Agree Neutral Disagree Strongly Disagree

Please explain your answer

- I e-mail my tutor or fellow students when I have questions about the course

Strongly Agree Agree Neutral Disagree Strongly Disagree

Please explain your answer

- I never use the Coffee Shop Discussion to provide information to my fellow students

Strongly Agree Agree Neutral Disagree Strongly Disagree

Please explain your answer

- I like the way the course materials are presented on this online environment

Strongly Agree Agree Neutral Disagree Strongly Disagree

Please explain your answer

- I often feel isolated and not part of a class

Strongly Agree Agree Neutral Disagree Strongly Disagree

Please explain your answer

- I do not need to motivate myself to use this online environment

Strongly Agree Agree Neutral Disagree Strongly Disagree

Please explain your answer

- I think this online environment needs a lot of improvement

Strongly Agree Agree Neutral Disagree Strongly Disagree

Please explain your answer

- I would like to have face-to-face contact with my tutor and classmates

Strongly
Agree

Agree

Neutral

Disagree

Strongly
Disagree

Please explain your answer

- I would be happy to enrol for another online course

Strongly
Agree

Agree

Neutral

Disagree

Strongly
Disagree

Please explain your answer

- Is the online course organised in a way that you like to learn new information?

- Does the online course provide enough social interactions with your fellow students and tutor?

- Has this online course developed your skills in the subject area?

- Do you have a good understanding of the course material?

Do you have any other comments you would like to make?