Implementation of a flexible online delivery model to replace a traditional face-to-face delivery of a PGCE ICT module

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Abstract

This paper describes aspects of the planning and delivery of a 10 credit module to learners participating in a full-time, Secondary Informational Communication Technology (ICT) PGCE course and the decision to replace an existing face to face delivery with a flexible, online delivery. The paper focuses upon four associated aspects of the module, including the conceptual framework for delivering the module, the online model implemented, the online tasks and the module evaluation.

Introduction

This paper describes aspects of the planning and delivery of a 10 credit module to learners participating in a full-time, Secondary Informational Communication Technology (ICT) PGCE course and the decision to replace an existing face to face delivery with a flexible, online delivery. The paper focuses upon four associated aspects of the module, including the conceptual framework for delivering the module, the online model implemented, the online tasks and the module evaluation.

It is widely accepted that the mediation of online technologies has potential to, 'engage in rich effective construction of knowledge' (Doolittle, 1999). Leask and Younie (2001) argue that ICT rich pedagogical contexts are in fact the basis for a new paradigm of constructivism they call 'communal constructivism' and that teachers have already intuitively adopted a communal constructivist approach in classrooms by integrating ICT and the Internet into their teaching.

Lave and Wenger (1991) identified the existence of communities of practice, characterized by common purpose, varying levels of participation, open-ended activities and a recognition of, 'the importance of dialogue, interaction and shared narrative' (Lewis and Allan, 2005) and it is against this background that an online model of learning was chosen. The conceptual framework is provided by four fundamental propositions which led to our decision to redesign the module.

Four propositions

The first proposition relates to the widely accepted belief that effective teaching professionals should be critically reflective professionals. Schön (1983) proposed the practice of reflection-in-action as a result of a perceived crisis of confidence among some professions, in which individuals were not, 'bound by the dichotomies of Technical Rationality', nor, 'dependent on the categories of established theory and technique,' but, in becoming a reflective practitioner, the individual, 'constructs a new theory of the unique case' (Schön, 1983. p.68). Moon (1997) extended Dewey's original argument to state that it is 'truly educative in value'. Brookfield (1995) directed these ideas specifically towards teachers and stressed the need for a more *critically* reflective approach to become an effective teacher.

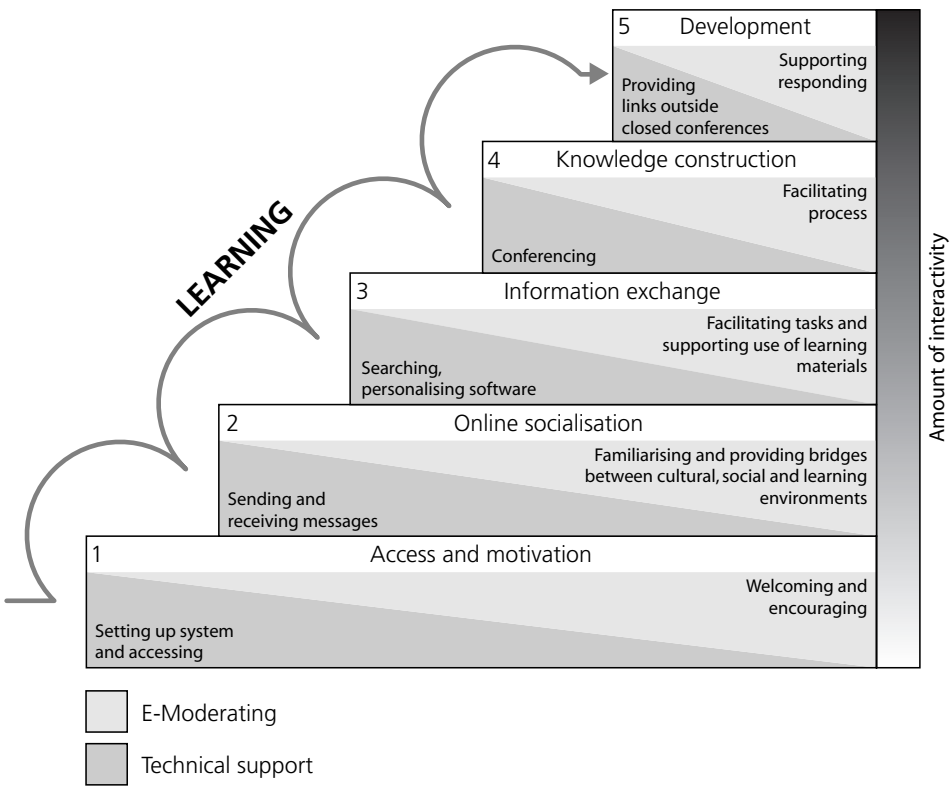
The second proposition which prompted the module redesign was based upon the notion of constructive alignment presented by Biggs (2003). Constructive alignment is a combination of constructivist theory and aligned instruction, which requires that instructional tasks or learning activities are aligned appropriately with learning objectives and assessment.

The third proposition for the redesign of the module was based upon the concepts of deep and surface approaches to learning in which Marton and Saljo (1997) make the case for learners to maintain high levels of engagement with their learning in order to utilise high order thinking skills and to support deeper levels of understanding of new knowledge. Biggs (2003) argues that traditional lectures have tended to promote a passive approach to learning resulting in a surface level of understanding. Good teaching, which is interactive, creates the conditions for deep level understanding and focuses upon activities such as arguing, hypothesizing and synthesizing as contributing to desirable levels of knowledge. Whilst activities which promote these characteristics can be straightforward in a face to face situation, it is a greater challenge to maintain these conditions within the flexible, distance, online learning environment. Indeed Entwistle (1996) was cautious about the likelihood that these approaches really could achieve levels of learning which were being predicted. However, more recently, a barrage of literature is available which supports the notion that flexible and distance learning, mediated by technology, can indeed contribute to deeper levels of learning and understanding (Lewis and Allan, 2005, Maor, 2003, Salmon 2003, Inglis et al, 2002, Palloff and Pratt, 1999, Harry, 1999).

The online model

The online module was redesigned around a 5 stage, online distance learning model suggested by Salmon (2002). Figure 1 is a diagrammatic representation of the model. It should be noted that Salmon's model was originally intended for distance learning environments and therefore its adoption for a module usually delivered face to face could legitimately be viewed with a degree of caution.

Figure 1 Model of teaching and learning online (Salmon, 2002:11)



Designing and implementing the e-tivities
College periods were scheduled for work on the module. Timetabling of fixed periods facilitated the potential need for face to face sessions in case of technical difficulties. The scheduling of fixed periods was also useful for moderating purpose as it was possible to indicate times when participants could reasonably expect to receive rapid feedback from moderators. The online nature of the module allowed sufficient flexibility for students to engage with the module at times other than those scheduled. The following e-tivites have been highlighted here because they occur at significant points in the online module and were designed to consolidate and progress the participants through various stages of the model.

Key e-tivity one
The first key e-tivity occurred during the third week of the module and was designed to support participant progress into Stage Three of Salmon's model. The learning objectives of the task were to identify modes for the delivery of ICT in secondary schools, to build an understanding of the advantages and disadvantages of each, and to understand how the existing framework for teaching ICT would fit into their preferred mode of delivery. The outcomes of the task were to present a supported argument in favour of a particular mode for the delivery of ICT in a secondary school, and to critically respond to the case presented by other participants. This e-tivity necessitated reading literature related to the delivery of ICT. The participants presented their own case, and read the contributions from other participants and critically responded to 3 of these identifying why they felt their peers had made a robust presentation. The tutor/moderator summarised the major issues as they emerged from the discussion boards. Moderating the discussion board involved 'weaving' and 'threading' (Salmon, 2002) themes made by the participants and presenting them at the end of the e-tivity period. Moderating in this way enabled the moderator to track participation in the e-tivity.

Key e-tivity two
The second e-tivity centered on the requirement to prepare a group response to a controversial view of ICT in education. The tutor moderator was required to make the responses available to other groups for comment. The activity was designed to allow the participants to experience the collaborative potential of the VLE and to be a 'warm-up' before a more complex and demanding e-tivity to follow. The participants were requested to record their experiences, focusing upon potential opportunities and challenges in their personal log or 'electric diary'. The e-tivity marked the point where a large proportion of the participants appeared to be working at stage three of Salmon's (2002) model and were beginning to explore the value of the networking potential of the online discussion environment as a precursor to moving into the communal constructive stage, indicative of e-tivities at stage four.

Key e-tivity three
This e-tivity continued to build upon the previous collaborative activity. By this point in the module and after 6 weeks of participation, the majority of the participants appeared to be working at a level in which they were able to construct knowledge as a result of being actively engaged in the discussion forums, indicative of reaching Stage Four in Salmon's Five Stage model. For participants engaged in these high level processes, it was considered appropriate that subsequent e-tivities would involve the synthesis of information upon which the basis of the final summative assessment might be constructed. Each group was required to prepare a 1500-1800 word collaborative response to a controversial statement associated with ICT teaching. In constructing their responses the groups were to reflect the views of a range of published contributors and ensure that appropriate references to these sources conform to accepted formats. A consensus view of the statement was not necessary but a balanced response was. It was stressed that it was reasonable to find no 'right' or 'wrong' answer.

Module evaluation and discussion
An evaluation of the module in which participants were asked to reflect upon the value of the model both for their own learning and also for use in teaching in schools revealed that a majority of the evaluations were positive and this comment was indicative of the positive feedback

> *With an online discussion it lets you take in more comments/opinions and articulate your own response in a time that suits you. It also gives us as trainee teachers a useful resource in terms of a 'reference bank'. On some areas i(sic) have found it particularly interesting reading others thoughts, and this has ultimately made my opinion more focused and clear.*

One student comment provided a useful summary

> *Some of the advantages of this exercise are*
>
> • *it is easy to update the content, as well as being able to see the overall development of the task*
>
> • *the flexibility of the time and place that the task is carried out*
>
> • *allows contact with people in a different location.*

Disadvantages

> • *can lead to isolation of group members.*
>
> • *can be a long wait for input, and feedback.*
>
> • *requires self-motivation!!*

One participant offered a useful suggestion for future refinements of the module

> *it might have been more valuable to have a task where there was maybe a debate between two groups with one having to say about positive aspects of a nature of ICT education and another having to disagree. If this makes any sense to anyone but me!*
>
> *All in all like the discussion area and hope it stays as a feature of the course.*

A small minority of students did not feel comfortable working in an online medium. For example, one participant commented

> *I personally do not like working in this way and find it extremely frustrating, whereas I am sure that there are many individuals that find working in this way a pleasure.*

There were no quantitative data available to support any claim that being involved with a computer mediated, flexible and distance learning model of teaching and learning, had better prepared the cohort for writing the summative module assessment. However, the consensus among tutors was that, as a result of participating in the adapted delivery of this module, some participants were better able to articulate their own philosophy of ICT education than had been evident in previous cohorts. The nature of this evidence was qualitative in nature and was reflected in a marked 'maturity' in their progress when compared with previous cohorts at the same stage of training. As a result, the tutor team has decided that the new approach to delivering the module represented an improvement in the programme for the participants. With further refinement of the e-tivities and e-moderating of the module, plus the addition of explicit support for students who are challenged by academic writing, the team is confident that the delivery of the module in this way is a valuable addition to the programme.

Conclusion

The decision to incorporate computer mediated discussion forums to facilitate the delivery of a module was based upon the belief that a blended online collaborative model would allow students the opportunity for critical reflection of appropriate literature and of the conceptions of their peers. The constructive alignment of the online forums and e-tivities with the learning objectives and the assessment requirement of the module was identified as a key benefit for adopting the changes from the traditional face to face mode of delivery. Specifically the online forums facilitated critical debate of a range of literature related to modes of ICT delivery in schools; it enabled groups to collaborate in the production of extended texts which were shared on the virtual learning environment and formed useful resources for the production of a written assessment. Other benefits were also identified, such as the opportunity for flexible study and the potential to create a 'community of practice' which, despite being widely spread due to school placements in Lancashire and Cumbria, might permeate throughout the duration of the course.

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