The Quest for the Best Mix: an Ongoing Project in E-Learning

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Abstract

Based on the hybrid delivery model for flexible learning, the paper presents and analyses the results of a pre-delivery survey. It introduces a research model for studying the case through the phases of planning, implementation, monitoring, and evaluation, with a focus on the distribution of the content of face-to-face and e-learning sessions.

Introduction and background

Evidence from research work in the area of distance, online and flexible learning identify the hallmarks of the hybrid delivery model, in which traditional delivery is complemented by online technologies. Among them are the integration of face-to-face teaching and online learning, the high degree of teacher involvement and strong student-to-student interaction. There is no general framework to follow when designing a particular course [3]. The paper describes a hybrid course, presents and analyses the results of a pre-delivery survey, and introduces a research-in-progress model for studying the case through the phases of planning, implementation, monitoring, and evaluation.

Following the “multi-method” approach described in [4], the selected course was redeveloped for hybrid delivery in three cycles. In cycle one, a content framework was suggested and evaluated through in-class experiments. In cycle two, flexible elements were introduced in the basic face-to-face model; the course architecture was defined as comprising three distinct dimensions: i) Theory – study topics supported by a prescribed textbook and intranet and Internet Web based resources (lecture notes, readings, quizzes, and exercises); ii) Practicum units – Web and Internet based, require access to the Internet and/or to the intranet; iii) Assignment tasks for formative assessment – require access to the corporate intranet and/or the Internet and the WWW. Previous work [5] reports on the results obtained in cycle one and provides a summary of the data collected through a student survey. The expected outcome of cycle three is a module offered in hybrid mode.

One of the pivotal design decisions is the structure and the mix of the face-to-face and e-learning sessions. As pointed out in [1], the literature on comparative studies on face-to-face and computer-mediated classes is not very rich. Most sources report on postgraduate courses - for mature students who are also IT literate. Subsequently, the face-to-face sessions are structured as seminars and group discussion classes. However, there is some anecdotal evidence to suggest that at least some undergraduate students taking an e-learning course, although familiar with the use of the Internet and the Web, would be facing some problems while working within five different communications and information technology e-learning environments: i) The Web - for locating teaching resources, for evaluating business-to-consumer Web sites and for comparing eCommerce software; ii) A Citrix server to access the intranet; iii) Business Online (BOL) – a Web based database providing a discussion forum and a shared resources space under controlled access; iv) A dedicated Web server used for publishing student assignment work, and v) SmartForce – an online computer-based training package. How to determine the structure of the best “mix” of face-to-face and distance components? What decision-making variables to use and how to interpret their values?

Research model

The model in Figure 1 (adapted from a framework suggested in [2]) shows three consecutive steps in the planning-implementation cycle of the course. Two variables – “Suitability” and “Level of difficulty” influence the decision about the structure of the mix “face-to-face” – “distance”. A questionnaire comprising a series of questions of the type: i)”Suitable for flexible delivery? (Yes/No)”, and ii)”If suitable, how difficult would be to study in flexible mode? (1-very easy, 5 – very difficult)” was used as a survey instrument. The questionnaire addresses the three module dimensions and was administered to 38 students who had completed the module, and to 22 teachers - familiar with the subject area and with e-learning.

Discussion and further research

The numbers of complete responses received were as follows: 13 students and 7 teachers (31.6% and 31.8% response rate respectively). The comparison of the perceived difficulty of the various components (when studied “flexibly” in distance mode) showed some
interesting results. Student and teacher perceptions about the study topics (Figure 2a) clearly correlate, while difficulty perceptions differ for practical units (not shown here due to lack of space) and for assessment tasks (Figure 2b) – with students showing generally higher perceived levels of difficulty.

The comparison of the number of negative answers to the suitability question shows a similar trend. Teachers underestimate the pre-existing level of student IT literacy and overestimate their maturity and capability to work independently online. Based on the analysis presented here as well on information from the interviews with two IT lecturers, a decision was made to develop four face-to-face focal points: i) a thorough course introduction, ii) an assignment workshop, iii) a tutorial on networking and telecommunications, and iv) a tutorial on evaluation of Web sites and eCommerce software. The online component will include work in BusinessOnLine.

Using specially designed measurement instruments, the project will continue with studying its effectiveness (student achievement and student satisfaction), as shown in Figure 1. It might be possible to conduct a comparative study of a face-to-face and a hybrid class.

References