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ABSTRACT

Central Queensland University in Australia has developed an orientation program to introduce first-year university students to interactive teaching technologies. The program, called Passport to Flexible Learning, was organized in the form of workshops that run concurrently over a 5-day period during the university's orientation week. During the workshops, participants acquired hands-on experience with a range of interactive teaching technologies. During the workshops, students were required to complete the following activities: participate in large-screen and small-screen videoconferences, a teleconference, and an audiographic session; summarize the main points from a tutored video instruction lecture; communicate via e-mail; download data from the Internet; and search and locate information from on-line library catalogues. A total of 400 internal and external students and 20 academic and general staff from a number of faculties and divisions participated in the program. Upon successful completion of the program, students received a passport documenting their participation in a range of activities representative of the world of electronic classrooms. Students who completed the program credited the workshops with increasing their knowledge and basic understanding of communication technologies and greatly increasing their confidence in interfacing with various media and participating in learning involving interactive technology. (Contains 20 references.) (MN)

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Crossroads of the New Millennium

A Passport To Flexible Learning: An Orientation Program Designed To Introduce First Year University Students To Interactive Teaching Technologies

Prepared and Presented

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Workshop 2

Abstract

For students coming to university for the first time, experiences with new technologies used in teaching can be daunting, even threatening. Research has shown that learners not adequately trained in using the technology cannot participate effectively in interactive instruction and that new users of a technological medium are often fearful. Where learners are inexperienced in interacting with the medium, they focus on the interface rather than on learning from the content. To overcome these problems, an orientation programme familiarising students with interfacing techniques was designed and delivered before formal academic programmes commenced.

The programme, called a 'Passport to Flexible Learning', exposed first year university students to teaching approaches significantly different from traditional methods by giving them 'hands-on' experience with a range of interactive teaching technologies. Teaching was organised in the form of workshops that ran concurrently over a five-day period during Orientation Week. A total of 400 internal and external students and twenty academic and general staff from a number of faculties and divisions participated in this innovative programme. Students were given a passport and, on successful completion of each workshop, they had an appropriate page in their passport stamped. The completed passport was a record of participation in a range of activities and represented the successful transition into the world of electronic classrooms.

This paper describes the evolution of the programme and argues that universities need to orientate beginning university students into the world of electronic classrooms early in their course. After undertaking the programme, students reported that they felt much more confident in participating in teaching that involves interactive technology.

A Passport To Flexible Learning: An Orientation Program Designed To Introduce First Year University Students To Interactive Teaching Technologies

INTRODUCTION

During the 1990s, advances in communication technologies have changed the face of traditional university teaching. There has been a move from talk to touchpad. Teaching has shifted from the traditional face-to-face lecture to a virtual educational experience where information is transmitted and received in digital form. To date, the move to deliver units of study electronically has not been accompanied by an understanding of who the current students are, the extent of their previous experience with technology and their expectations of university study (Peel, 1999).

The higher education system in Australia, too, has changed considerably in the last decade. Under a federal Labor government, the expansion of universities after 1987 resulted in a significant growth in the number of institutions and a corresponding increase in the number of enrolled students. Today's university student population represents a much broader range of backgrounds than in the past (Hodge, 1995). They are no longer an elite academic group, but are more like school students in their range of ability.

Students come to university from a background of traditional education more suited to the ordered linear and predictable way of life that is characteristic of the modern period (Giddens, 1987; 1991). Giroux (1990) contends that such a background does not account for the universal social, political, economic and technological changes that are a feature of the current era. Nor does the modernist position deal with the uncertainties, diversities and differences that underpin those changes.

Giroux (1990:10) describes the current 'post modern' era as "a world without stability, a world where knowledge is constantly changing". Ball (1988) maintains that if people are to thrive in this world they will need 'passports' to three different educational arenas: traditional education, vocational education and education to promote the development of enterprising people. Ball uses the metaphor of educational passports to define a person's rite of passage to lifelong learning.

A challenge for higher education is how to respond to the complexity of constant change and technological advances. Some universities retain traditional methods of teaching, while others are realising the need to respond to the changing world by incorporating innovative technology into the delivery of units of study (Barnard, 1992). It is the smaller and newer institutions that are able to take advantage of recent technology (NBEET, 1996:22). For example, Central Queensland University (CQU) is a regional institution with five geographically isolated campuses that span the coastline from Mackay to Bundaberg (a distance of 630 km). As such, it has proved to be a fertile ground for the emergence of flexible teaching and learning approaches that have attempted to address the problem of distance. The need to connect students at different sites to a university lecturer has seen the adoption of large screen videoconferencing as the University's major delivery system. Currently, over 100 hours of videoconference teaching and learning activities are conducted across campuses each week at CQU.

It is apparent that, if a university is to deliver units electronically and do so effectively, the interaction between the learner and the medium's interface has to become automatic, like turning the pages of a book. However, research indicates that, at entry to university, students are much less technology-literate than anticipated (Cuskelly, Purnell and Lawrence, 1995; Anwyl, 1996; Burmeister and O'Dwyer, 1996; Thompson, Winterfield and Flanders, 1996). They are not prepared for learning and teaching approaches that are different from the traditional (Gilcher and Johnstone 1988; Cutright, 1993; Peel, 1999) and new users of a technological medium are often fearful (Rheingold, 1990).

Difficulties for students sometimes encompass more than the physical manipulation of the interface. Research has shown that learners not adequately trained in using the technology could not participate in interactive instruction (Gilcher and Johnstone, 1988). Mizell and Carl (1994) report that the psychological barrier is considered 'formidable' where faculty members and students are at different locations. They stress the need for practice so that students feel comfortable with the medium.

More specific problems were identified in a small, local study of first year Education and Health Science students (n=131) from four CQU campuses who had participated in a videoconferenced unit (Jones, et al., 1998). Students generally expressed feelings of intimidation and personal inadequacy when first confronted with teaching via videoconference. The experience was "very nerve racking". Students were "afraid of the equipment", "really self conscious", "easily distracted" and "overawed". In response to these concerns, the *Passport to Flexible Learning* programme was designed to 'desensitise' students to the potential intimidation of their initial contact with new teaching technologies.

THE IMPORTANCE OF ORIENTATION

The *Passport to Flexible Learning* took advantage of the first point of contact with students – orientation. It has been argued that students look for relevant and meaningful learning activities during orientation week (McInnes and James, 1995; Dearn, 1996). However, incoming students at many universities are offered an orientation into university life that could only be described as 'narrow'. For example, past orientation programmes at CQU focussed primarily on reading and writing skills, how to reference assignments, general study skills, time management and basic computing skills. Much of the orientation was delivered in lecture format where students were passive recipients of information. The 'talking heads syndrome' and 'information overload' typified the design of the programme. There was little co-operation between faculties. Indeed, many faculties regarded orientation as someone else's problem and left this important time to the service divisions and the Student Association. Accordingly, the programme was fragmented and ineffective.

The *Passport to Flexible Learning* project was as much a response to these problems as a push to familiarise students with teaching technologies. The technology component of this project acted as glue that held together a much more holistic approach to orientation. It was central to the success of Orientation Week. It drew together academics and general staff from all faculties who worked in teams voluntarily for the period of orientation week. This involved a substantial time commitment and meant presenting as many as 12 one-hour workshops over a five day period. A positive outcome of this was that staff took a collective responsibility for the success of the programme. Participation in the planning and implementation of the programme led to a sense of ownership that had not existed previously.

Because most sessions were planned and presented as 'hands on' workshops, the emphasis was on actively 'doing' rather than passively 'listening'. At the same time, because students were assigned to groups randomly, they were able to work with students and academics from other faculties. This was also valuable to academics and helped establish a rapport with a range of students. Activities were designed to encourage students to socialise within groups and inter-group competitions were organised to bolster communication across groups. A central assumption of the programme was that orientation is as much about establishing a feeling of belonging to a community of learners as it is about learning how to study.

Although this paper focuses on the technology component of the orientation programme, it must be emphasised that the technology component was like a clothes-line on which all the other components were pegged. It was central to the success of the whole orientation programme. The Passport programme was not designed specifically to introduce students to communication technologies that they were likely to meet in their studies. On the contrary, the technology component was used because it offered a platform by which an outdated, uninspiring, fragmented orientation programme could be rejuvenated into an exciting, fun and worthwhile experience. This mirrors the idea that technology is used best when it underpins good practice, when it plays a subservient role to the task in hand, when, like turning the pages of a book, it does not remain in our consciousness. It is there, but invisible. Yet, at the same time, it is crucial to the success of the activity being undertaken.

THE PASSPORT TO FLEXIBLE LEARNING PROJECT

The aims of the *Passport* programme were founded on the premise that practical experience at the interfaces of a range of communication technologies, before the onset of classes, dispels the apprehension that students express about using communications technology. Achieving the specified competencies for each workshop helps engender a feeling of familiarity and confidence that carries over to students' first academic interaction with each medium of communication technology.

The *Passport to Flexible Learning* programme was a response to three specific educational problems:

1. First year university students lack the experience and proficiency to utilise successfully the communication technologies likely to be used in teaching and flexible learning.
2. Learners who are inexperienced in interacting with electronic media, focus on interacting with the interface rather than on learning from the content. This requires experience, training and instruction (Norman, 1988:17). The interface itself should be a tool to be used and its manipulation should not demand the student's attention and energy (Hillman, Willis and Gunawardena, 1995).
3. If instruction on using the interface takes place as part of the unit being studied it competes with the course content and does not ensure uniform minimal proficiency.

To overcome these educational problems, a programme familiarising students with interfacing techniques was developed and delivered before formal academic programmes commenced and followed up by sessions undertaken in the early weeks of the semester. The project was developed around key learning principles particularly relevant to adult learners. These principles included helping students build on existing knowledge. The planned activities were relevant to the students' academic progress, included group learning approaches and gave students responsibility for their learning. Finally, there was immediate feedback on students' learning, recognition of learner differences and provision to practise new skills.

DESCRIPTION OF THE PROJECT

A five-day programme in Orientation Week was designed to increase students' confidence and proficiency at the user/medium interface. Almost all of the incoming students participated voluntarily in the programme. The success of the *Passport to Flexible Learning* project depended on three crucial elements. First, it was necessary to produce clearly written instructional materials that were essential for helping students understand the range of technologies being used. A set of these materials was presented to students in a resource folder, which also contained a passport. Secondly, the *Passport to Flexible Learning* project involved a team of lecturers from a number of faculties and divisions. Thirdly, wherever possible, instruction in the technology included interactive link-ups between campuses so that students could experience the dynamic, exciting nature of teaching and learning using a multimedia approach.

Workshops ran concurrently during Orientation Week, and students:

- participated in a large screen and small screen videoconference, a teleconference and an audiographics session;
- summarised the main points from a tutored video instruction (TVI)* lecture;
- communicated via e-mail;
- downloaded data from the Internet; and
- searched and located information from on-line library catalogues.

[*TVI was used extensively in the past at CQU, but is gradually being replaced by videoconference. TVI uses a videotaped lecture from the main campus, which is shown at another campus where a tutor is on hand to answer students' questions.]

Using Colin Ball's (1988) concept of a passport as defining a person's rite of passage, the project used a passport to record the student's progress during Orientation Week. When the specified competencies associated with a particular medium of communication technology were achieved, the page was signed and stamped, signifying a milestone passed on the journey to successful university study. Having accomplished successfully the set of learning outcomes developed for each session, students had the appropriate page in their passport certified. The completed passport entitled a student to receive a certificate of competence in using communication technologies and represented successful entry into the world of electronic classrooms.

Students were divided randomly into groups of 20-25 on the first day and, as a group, engaged in workshop and team building activities for the duration of the five-day programme. The emphasis in workshops was practical experience for students. After a brief description of the evolution of the technology, its scope and use and a demonstration of using the interface and the medium, facilitators guided students into mastering the interface.

POST-WORKSHOPS EVALUATION

Student evaluation of what they had gained from the programme highlighted three main areas: development of knowledge and basic understanding of communication technologies; increased

confidence at interfacing with various media and responses that can be summarised in one student's comment, "realising how I've missed the boat on technology - until now".

The level of interest and enthusiasm shown by students, unanimously, impressed facilitators. One-hour workshops were thought to be appropriate for initiation into some media interfaces (for example, videoconferencing), but too short for others (for example, e-mail and Internet). Suggestions for improving future programmes included presenting a one-hour workshop on day one followed by an advanced workshop on day two for the more complex media interfaces.

CONCLUSION

Research has shown that interfacing with various communication technologies is a daunting experience for first-year students and so much energy is wasted on mastering the interface that it interferes with the learning process. An orientation programme called a *Passport to Flexible Learning* initiated incoming first-year students into becoming confident users of a range of communication technology interfaces.

Lecturers, experienced in using specific technologies, facilitated the learning of groups of students. Each workshop was structured around a set of competencies and encouraged maximum student participation within a non-threatening environment so that students gained experience and confidence in using information technology interfaces. During the *Passport to Flexible Learning* project students focused on specific interfacing techniques they will subsequently use for academic purposes, thus ensuring that the protocol associated with each interface was clearly understood. Research noted in this paper indicates that for optimum academic performance, students must feel comfortable interacting with the technology.

This paper argued that orientation is an important time for beginning university students and if used creatively, can pay dividends in preparing students for university life. The Passport programme did more than help build the confidence of students in using new technologies. It was central to a quality orientation into university. It gave both purpose and, structure to orientation. It improved on existing programmes by making activities 'hands-on' and 'user

friendly' with more action and less talk. By far the most important outcome of the Passport project was that a collective responsibility was taken to make students' entry into university as smooth as possible. Involving academics and general staff from all faculties in the planning and implementation of orientation achieved this.

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