

Theory, practice and reflection: The value of integrated learning systems from four different perspectives



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The dilemma addressed in this paper involves the selection of an appropriate course delivery system which best suits Indigenous adult pre-tertiary students. Course delivery systems are frequently evaluated from a single perspective where one system is judged to be more or less beneficial than another. For example, much literature is available on the benefits of the learning outcomes of online teaching or print-based distance education as compared to face-to-face classes. With the expansion of online and computer technologies in teaching and learning contexts, it is difficult to ignore the current debates surrounding the advantages and disadvantages of each delivery system. Instead of comparing one type of delivery system with another, this paper reports on the reflections of three academic staff from a number of perspectives about the value of integrated (or hybrid) delivery systems in the context of Indigenous adult pre-tertiary education. Questions about the advantages and disadvantages of single and integrated types of delivery systems are considered.

Firstly, the administrative and management perspective is examined to ascertain the financial and organisational implications of delivering such learning systems. From a resource development viewpoint, the role of the instructional designer is explored to identify significant issues related to the design, content input and resource management of course development processes in integrated delivery systems. From a practical point of view, a university teacher's experience of varied delivery systems (online, face-to-face and print-based distance education) is investigated. Responses from interviews with previous students were considered. Finally, as the three authors themselves are still studying, the student's position from within each of these delivery systems is determined by a self-reflection process.

This reflection-in-practice paper offers some suggested solutions to the dilemma of how to provide an appropriate integrated course delivery system and aims to inform the future courseware development at the School where the authors are employed. The paper provides some insight for course designers, administrators and university teachers, as well as students who are experiencing the integration of course delivery methods.

Background: Higher education course delivery systems

In recent years, the range of course delivery options in the higher education sector has increased in number and variety. With the increase of more computerised administrative and

organisational systems, universities are exploring various methods of communicating with students, structuring internal administrative and financial systems and presenting curriculum to students. Not only are changes evident in the organisational structures of tertiary educational institutions, but the foundational educational theories are also in a form of transition which, in turn, is being reflected in the choice and use of various course delivery systems. Ryan, Carlton and Ali (1999) suggest the current paradigm shift in higher education represents a change from traditional classroom settings to distance education program delivery via the World Wide Web (WWW).

In many cases, the mode of delivery that course designers and teachers adopt depends largely on the location and needs of the student body, the capacity of the university and the content of the course. For example, universities who provide a service for students in remote areas may choose to present their courses online or via printed distance material. On the other hand, where students are primarily enrolled in an on-campus mode, face-to-face classes may be most appropriate for the choice of course delivery. Some courses may suit a single mode delivery method. Mostly, however, it appears that university teaching staff are choosing to integrate various methods of delivery including online courses, face-to-face classes and printed material. The situation where a combination of delivery methods is utilised within the one course is becoming a more popular option compared to single delivery methods. For example, Bleed (2001) suggests a new hybrid model for university course delivery in which half of the course is delivered via “virtual instruction” and the other half is delivered within a “redesigned physical campus space.” This recommendation ensures the human element of the teaching and learning process is retained while utilising the affordances of the new online technology.

Possibly the ideal type of course would be one which makes use of the WWW as it “offers a tremendous opportunity for innovation and improved efficiency in higher education” (Goggin, Finkenberg & Morrow, 1997, p. 284) as well as including some face-to-face instruction and printed materials. Presby reminds us that “we must take responsibility in combining the best of distance learning with traditional learning in order to enhance our students’ college education” (Presby, 2001, p. 4).

Of course, the selection of which course delivery mode to adopt is dependent on a myriad of variables, ranging from course content, student needs, university funding and staff availability. In an ideal world, the students’ learning requirements and the nature of the course content may be the most significant variables in the decision making process behind how a course, or a component of a course is delivered. However, the contemporary university must operate within strict budgetary constraints, changing staff availability and speciality patterns, and student demand.

Case study of course delivery choice: Kurongkurl Katitjin

In the case of Kurongkurl Katitjin, the School of Indigenous Australian Studies at Edith Cowan University in Perth, Western Australia, the course delivery dilemma must be examined in terms of the selection of an appropriate course delivery system which best suits Indigenous adult pre-tertiary students.

Over the last few decades, courses at Kurongkurl Katitjin have been delivered primarily via distance education, where printed materials are mailed to students. However, in more recent years, the number of courses offered on campus and via online delivery has increased. Also, some courses that have traditionally been offered in one mode now include components of

other modes of delivery, depending on the course itself and the students' requirements. Materials provided to students enrolled in online courses include a combination of printed materials which integrate with resources accessed on the internet. Conversely, face-to-face classes often incorporate online or CD-ROM course materials as part of their learning activities or instructional strategies.

The teaching staff and course designers associated with planning and developing courses at the School approach the dilemma of which course delivery mode to select from a number of perspectives: administrator, instructional designer, lecturer and student. The staff wanted to avoid the situation where online course components were just "bolted on" (Baker, Hale, & Gifford, 1997) to previously designed print-based course materials. Instead of basing the choice of an appropriate course delivery system on a single perspective where one system is judged to be more or less beneficial than another, the staff at this school aimed to base their decision on a wider framework. By examining the various needs, skills and available resources associated with each perspective, the decision about course delivery was made in a more deliberate manner. The reflections of three academic staff from a number of perspectives about the value of integrated (or hybrid) delivery systems in the context of Indigenous adult pre-tertiary education were considered before a course delivery choice was made. These perspectives are outlined in this paper.

Considering "hybrid" delivery systems from various perspectives

A "hybrid" course delivery system is one which incorporates a variety of delivery systems into the one unit of study or course. For example, although a course may be delivered predominantly in the on-campus mode where teaching and learning takes place in face-to-face situations, some groupwork may be completed via the internet using online bulletin boards. Similarly, courses delivered via print-based materials may incorporate some face-to-face teaching sessions. Various other terms for hybrid delivery systems are used interchangeably: integrated delivery system (Beattie & James, 1997); distributed delivery environments (Hawkins, 1999); distributed instruction (Welsh, 1999); converged learning environment (Oliver, R., Omari, A., & Herrington, 1998). However, for the purposes of consistency, the term "hybrid" will be adopted in this paper to refer to delivery systems which incorporate various modes of course material.

From the administrative and management perspective

When considering the type of course delivery format that would best suit the students' needs and staff capacities at Kurungkurl Katitjin, the administrative and management perspective was examined to ascertain the financial and organisational implications of delivering such learning systems. The choices associated with various learning contexts have direct impact on the type of resources and staffing that need to be budgeted for and organised from a day-to-day management perspective. This sometimes becomes quite complicated as hybrid delivery systems provide opportunities to distribute actual course components, as opposed to the course as a whole, which offers "designers many options for mixing and matching instructional contexts" (Welsh, 1999, p. 41). Such options need to be considered from the administrative and management framework if the hybrid course delivery method is to be considered as feasible.

As with all projects the main limitation is fundamentally financial. With limited resources much of the funding is primarily taken up with staffing costs. The skills and experience of instructional and programming development staff is the most resource-intensive component of

online unit development. Another consideration is the need to provide opportunities for academic and administrative staff to foster their personal skills in this new area of teaching. Therefore professional development plans are essential with online unit development activities.

An organisational issue to address is the importance of making the online development program part of the School's ethos. This can be achieved by the provision of relevant professional development for all staff as an integral part of the School's teaching and learning culture. The University's tradition of content revision and development is another issue that needs to be considered in the selection of an appropriate course delivery system. Traditionally the roles of initiating and revising content across modes are in some ways restrictive, especially if funding and availability of staff are limited. In order to address this, the School's system should be flexible enough to provide a more functional and achievable outcome, no matter which delivery system is selected.

The importance of acknowledging the Indigenous needs of the school reflects a bottom-up approach, ensuring that the course medium maintains an Indigenous voice rather than just an Indigenous interface design. The involvement of Indigenous cultural authenticity in all areas of content development is essential and should be introduced at the earliest stage of the materials development process not only when Online development is considered.

From the resource development perspective

From a resource development viewpoint, the instructional designer then identified a number of significant issues related to the design, content input, cost and resource management of various course development processes appropriate to integrated delivery systems. From the previous course development that had taken place within the School, it was clear that the most appropriate course delivery system would need to be student-centred and culturally appropriate. Such a system would also need to include authentic learning activities and be able to cater for students with various levels of content knowledge and technical expertise, especially in terms of computer literacy.

The development of new systems and technology often encourages educators to review the way they design their courses and new modes of teacher-learner communication require new modes of course delivery (Beattie & James, 1997). Although the new technologies offer opportunities for the provision of exciting, innovative and authentic learning activities, the significance of face-to-face contact and community was seen to be of vital significance for any future units that were designed at the School, as it "allows for changes to be made on the fly, is quicker to prepare and easier to revise, humour and entertainment elements can be incorporated, and it is a social and communal gathering" (Andrewartha & Wilmot, 2001, p. 13). This preference for some form of face-to-face contact was confirmed in interviews undertaken with students within the School (Marshall, McLoughlin & Hayward, 2000).

These various instructional design considerations indicated that the choice of course delivery system would need to be one which could incorporate various ways of learning, to cater for a wide range of student characteristics, as well as a variety of interaction formats – including print, online and face-to-face strategies.

From the university teaching perspective

From a practical point of view, a university teacher's experience of varied delivery systems (online, face-to-face and print-based distance education) was investigated for the purposes of considering which type of course delivery was most appropriate for the School. From a university teacher's perspective, the impact of new types of course delivery systems on pedagogy is indisputable:

... emerging forms of distributed learning are leading to a reconceptualisation of education's mission, clients, processes and content. This new instructional paradigm is based on shifts in what learners need to be prepared for the future as well as on new capabilities in the pedagogical repertoire of teachers.
(Dede, 1996, p. 26)

Our experience with students at Kurungkurl Katitjin indicates that some face-to-face teaching and extensive student support provide students with the optimum chance of success. The success rates and retention rates at Kurungkurl Katitjin's Regional Centres, where students have some face-to-face tutorial support, regular educational and personal counselling and a sense of community, bear this out. However this mode of teaching and learning is not always possible, with many of our students opting to study externally for a variety of reasons, including distance, family circumstances and work commitments. For these students, a combination of learning modes is offered. Staff availability, expertise levels and workloads also impact on such course delivery choices.

From Semester 1, 2002, Kurungkurl Katitjin offers its units in block-release mode, where students attend at least two on-campus weeks per semester. In this situation, students receive a component of face-to-face teaching while still having the flexibility to study from their home environments using print or online materials. There are also two initiatives in Student Support that Kurungkurl Katitjin has developed to assist students across all delivery systems: SOLID and YARN. SOLID (Student Ongoing Learning and Individual Development) offers personal and academic support and counselling to students via Student Support Officers who can be contacted in person or by phone or email. YARN (Your Answer Right Now) offers students the opportunity to contact academic staff at set times each week by telephone. With this additional support, we believe that students will have enhanced opportunities for success, no matter which mode of delivery they have chosen. Such support systems are considered within the context of course delivery system choices for the School.

From the student's perspective

When selecting the most appropriate delivery system, students' needs are of vital significance. A recognition of students' needs was gained by a process of self-reflection from each of the three authors who are also students themselves. Furthermore, research has been undertaken within the school (Northcote, 2001; Marshall et al., 2000) which investigated students' perceptions and attitudes to mathematics and online learning. It became clear from this research that the sense of community among the groups within the School was an important contributing factor to many students' successes. Dede (1996) and Gallini and Zhang (1997) recommend that the choice of course delivery system would need to maintain balance between virtual and direct interactions between staff and students, so as to maintain a sense of community. The authors' experience and research reinforce this recommendation. As well as the benefits of community learning for students enrolled in courses at the School, the diversity of their backgrounds was also considered. From this recognition of our students' variety of

abilities, experience and needs, we realised that the choice of course delivery system would need to cater for various ways of learning with the provision of multiple learning pathways (Seagren & Stick, 1999) and assessment options.

Solution to the problem: Provision of an appropriate course delivery system

This reflection-in-practice paper offers some suggested solutions to the dilemma of how to select and provide an appropriate integrated delivery system for a specific group of Indigenous students, and aims to inform the future courseware development at Kurungkurl Katitjin.

When discussing the advantages, disadvantages and other related issues regarding the choice of course delivery formats for postgraduate students, Beattie and James (1997) suggest that:

The message here is not to disregard particular delivery methods, but that it is necessary to incorporate alternatives which complement and compensate. From what we have seen, the most effective delivery strategies at postgraduate level use a judicious mix of approaches, determined by the discipline context and program goals. The result is a flexible learning environment with premiums of individual time management and the practical application of learning.
(Beattie & James, 1997, p. 192)

This recommendation equally applies to the pre-tertiary Indigenous students studying at Kurungkurl Katitjin who also study across various modes.

After considering a review of the literature, as outlined earlier in this paper, our own research (Northcote, 2001; Marshall et al., 2000), and a reflection of the various perspectives outlined throughout this paper, a solution to the dilemma of the most appropriate delivery system to use within the School became apparent. The solution is made up of the following recommendations. Firstly, the materials must be easy to update by using the online delivery mode rather than being CD-ROM based, which is more time consuming, complex and costly. Secondly, it is clear that our students require a mixture of online and printed materials. For this reason, most online units still include a print-based component. Similarly, face-to-face classes frequently include the use of print or online learning materials. Our findings also indicate that the choice of course delivery system should be influenced by the staff and time available for courseware development. Another issue to be considered is the “feel” of the units that are developed. This “feel” is communicated in the online mode through the presentation of the homepage and graphics used in each unit’s website. Finally, our units are built around the knowledge that our students bring to their studies a diverse range of skills and experiences.

In view of the above considerations, the solution clearly points to the use of a hybrid delivery system that incorporates a combination of printed, online and face-to-face components.

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