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The Professional Doctorate on WebCD

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Introduction

Students enrolled in Southern Cross University's (SCU) [Doctor of Business Administration \(DBA\)](#) are a unique group of senior business people. Their demand for greater flexibility of delivery and portability of study materials was the impetus for a redesign of this professional degree at SCU.

With a rapidly growing student base around Australia and SEAsia, DBA study packages must be suitable for a very mobile and busy professional group. Most have convenient access to computers and network connection, unlike students in many other programs. On the other hand, DBA students do not have much time to devote to study. They are typically squeezing study in between many other priorities, snatching opportunities to read and write while in transit lounges, in-flight or otherwise en route between engagements.

Informal feedback from students has recently indicated their preference for the compact, portable features of CDROM (Meredith, 1997). In this case however, initial considerations of design quickly moved from stand alone CDROM to the CD/online hybrid or 'WebCD'.

Hybrids first made their appearance in 1994, with Microsoft's Complete Baseball CD being linked to an online supplement, followed in 1995 by a CompuServeCD which allowed subscribers to the periodical to link to various online, downloadable resources and consumer reference groups. At AusWeb96, [David Metcalf \[HREF1\]](#) presented a case for WebCDs as a way of utilising the advantages of both and complementing the weaknesses of each.

Combining CD and Web

The [Resource Guide on Distributed Media \(Teleshuttle\) \[HREF 2\]](#) now claims that a new generation of hybrids has arrived. With off-the-shelf tools for spinning webs around CDROMs, it seems that earlier problems with authoring tools being unable to support Web links across platforms (Metcalf, 1996) have disappeared.

Bandwidth and download speed are no longer an issue (Metcalf, 1996) when hybrid systems use

CDROM for storage of static information and Web for dynamic exchanges between people and searchable resources.

Through the use of hypermedia which can be both non linear and non sequential, hybrid systems potentially offer a great deal of user control. Combine this with a link to search engines for both local CD and remote Web content and the guidance or instructional strategies needed can come down to an understanding of the navigational tools. Navigation through 'punctual', 'structural' or 'historical' means (Eklund, 1995) can be installed or readily available through buttons, maps and footprints.

Components on CDROM

Due to a storage capacity of 650Mb, CDROMs can deliver a large volume of static documents or organised data. This allows plenty of space for electronic up-to-date study guides which provide the stable core of course and tutorial information. Following investment of initial development costs, the CDROM itself may be edited at low cost or revisions implemented through downloadable online updates as provided with hybrid reference materials such as [Microsoft's Encarta \[HREF 3\]](#) or [Grolier's Encyclopedia \[HREF 4\]](#)

However, since half the DBA units have been written around textbooks and integration of these into the hybrid delivery system would present both copyright and handling issues, the textbooks have been retained as print-based components of the course. As [Burnett \[HREF 5\]](#) states, while online teaching and learning is rapidly expanding as a global approach to higher education, there is still no doubt that books will continue to be essential elements in educational study packages.

Additionally, CDROMs can offer high resolution audio and visual materials delivered at high speed, free from the obstacles of limited bandwidth and unwieldy download times for complex data. All such audiovisual components are located on the DBA CD. Traditional in-text activities, also encapsulated within the CD based study guide, form the basis for student interaction as well as forming a transparent bridge between CD and Web.

Components on WWW

The WWW site developed for the DBA features a public access homepage offering course information, news and open discussion. The password protected sector enables all students to collaborate with peers and academic supervisors around the world, for each subject area or unit. Students are required to work online to review and provide feedback on research outputs of their student peers, and interact with their academic supervisors to produce research outputs for publication in refereed professional journals.

The previous structure of the DBA offered positive interactive features through use of email and a range of reliable media for student-supervisor contact e.g. phone, fax and face-to-face seminars. These positives are to be seen as the basis for electronic enhancement.

Links to libraries, databases and full-text professional journals serve as catalysts for stimulating online discussion. The DBA newsletter has been moved online and includes the latest news in business, business education and journal references for specific topic areas. Fresh information about anything can be readily conveyed through the threaded discussion list which is archived and sortable by subject, author or date.

Support through dialogue and interaction with supervisors and fellow students can be extended by linking Web to CD. Feedback to students' comments can be provided by academics, specialist authors and peers at the precise time when issues arise for learners. Other examples of such usage

include the [Coriolis Web CD \[HREF 6\]](#) which allows generic information to be stored alongside active links for support through just-in-time dialogue for job seekers.

Invitations to published authors in the field for their (casual but direct) involvement with the electronic discussion list within the password protected sector of the Web site, brings the DBA material even more to life as candidates experience 'off the cuff' input from the 'gurus' in their area of interest. Integrity of the course is maintained by keeping this discussion away from the public arena.

Interactive activities and feedback also provide focus for dialogue as well as real and relevant opportunities for networking with peers. Considering the level at which candidates are positioned in their sphere of employment, connection to each other through studies may prove to be desirable beyond the limits of the study course.

Experience of the [Futures Study Unit \[HREF 7\]](#), first taught entirely online at SCU in 1996, resulted in application of the principles of 'cogenerative learning' and 'online peer assessment'. These strategies for dynamic interaction between students, peers, academics and subject experts are being built into the DBA Web component of the hybrid model to provide significant opportunities for meaningful online exchanges and development of electronic documents for publication in established professional journals.

Instructional Design Focus

Instructional design for the hybrid model has focused on the teaching and learning aspects of the whole study resource i.e. content is largely contained in textbooks, readings and Web sites. As mentioned, these elements have been incorporated into one package leaving learners with a sense of self-direction and requiring of students a high level of autonomy in their application of learned principles to their respective workplace contexts. This was seen as most appropriate at this level of postgraduate study.

Facilitation of dialogue for these DBA candidates studying by distance has been built in through a variety of media and students are free to exercise their choice of media and level of communication. Assessment tasks are negotiated through exchanges with supervisors and in the context of students' professional or workplace needs.

Principles of 'cogenerative' learning, where candidate and supervisor share the learning online, exchanging drafts of candidates' work to produce a research output for submission to a refereed publication make full and profitable use of the electronic medium for teaching and learning. To include online peer assessment and interaction with subject experts who choose to participate in discussion with students, ensures the DBA package extends the usual limitations of the text-based and external studies situation.

Technical design has pivoted on the adoption of HTML protocols for convenient application to both CDROM and Web environments. Cross platform support of Web links is now possible to allow for a seamless connection between the two enabling students to continue with their discipline related activities and feedback without having to bring their attention to the process. Wherever possible, databases have been constructed to be easily maintained by staff unskilled in Web programming. Through the use of forms and templates via the combination of CGI scripts with databases, the Web pages for items such as the DBA newsletter can be regularly updated by any staff charged with this task. By placing data into the dedicated fields, updates can be easily applied to relevant Web pages on a regular basis.

Stages of Development

Issues and challenges facing the development team have been considered relative to the stages of development. In the first instance, we have sought to investigate further the anecdotal reports of students' needs and to seek insight into their anticipated needs. A survey has been supplied to students, the results of which can be reported at the conference. Knowing that access to networked computers for this target group was no major obstacle, the Web site has been created and the development of the CDROM has been left till the final stage of the development process.

Challenges

Our principal challenge is to help academic staff move into this new environment and take their own initiatives as online teachers. The style of CDROM content has therefore been a modest move from the original print format and the emphasis in development has been to make available the various components of media for dialogue and discussion which will assist students to carry out their chosen tasks by means of greatest convenience and speed.

The pre-positioning of information onto CDROM has been retained largely in a linear format. Design of a CDROM with multiple pathways for navigation has not been seen as a priority at this stage, since the level of autonomy and self-direction is carried through from the nature of assessment tasks throughout the course. In this way initial costs for redesign of the course have been kept to a minimum whilst at the same time, the need for appropriate levels of learner control in doctoral study have been addressed.

Another issue for consideration over the life of this hybrid version is that of the ongoing life of links. Many's the time we've all sought information from a past hypertext reference only to find the link has been broken with its concomitant ramifications of lost server side image maps and dysfunctional cross-platform support. This eventual need for input of Web-wizards is something to be avoided by proper planning and considered initial design.

Finally, to capitalise on the 'cogenerative' and dynamic development of electronic documents for publication, SCU may consider it worthwhile to establish an E-journal of its own for the purpose of publishing DBA candidates' work and to disseminate this knowledge to an international audience who seek to keep abreast of up-to-the-minute scholarship in the business arena.

Conclusion

Following the redesign of the DBA, our ongoing interests will focus on instructional design issues in electronic teaching. Problematising and theorising on the teaching and learning outcomes of WebCDs and other such models of delivery for distance education students will assist to determine the direction of instructional design at SCU. Research into the effects of online teaching through hybrid models will commence with an evaluation of the DBA upon its implementation in 1998.

For now, all in all we consider that we have addressed our brief of providing a compact, flexible study package which makes the most of CDROM storage and multimedia capabilities while linking to the interactive, dynamic features of the Web. We have built a design for flexible course delivery which satisfies student needs and has not cost the sort of fee usually associated with multimedia productions.

At the time of writing, development has only just begun and some of the ideas mentioned have not yet been operationalised. An update will be provided at the conference as to the status of the project, its achievements and ongoing challenges.

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HREF2

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HREF3

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HREF4

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HREF5

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HREF 6

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HREF 7

<http://www.scu.edu.au/schools/sawd/Futures>

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[\[All papers and posters\]](#)

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