

Sooner or later! – Have e-books turned the page?

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Abstract:

Electronic journals have become well established in their various formats in university libraries while electronic books are still struggling to find their place. The notion that “e-books are a solution in search of a problem” still has some currency as libraries negotiate the various licensing and access issues associated with e-books. This paper will explore the theoretical and practical issues of implementing e-books in the tertiary education environment. Experiences at Bond University where the School of IT and the Library are collaborating to experiment with e-book solutions for IT students will be used to illustrate progress.

Introduction

After decades of premature “death-of-the-book” prophecies, the electronic book is just the latest in a long line of technological innovations that have been destined to depose the book. Amongst the overstated visions for e-books are claims about its potential to transform society by revolutionising reading, making libraries and teachers redundant, and finally, ushering in the paperless society. In recent years, speculation about the demise of the book has been commonplace. For example, in 1979, computer scientist Chris Evans (quoted in Mash 2003, p50) forecast that “the 1980s will see the book ... begin a steady slide into oblivion”.

In an upbeat column in the February 2001 issue of the *Library Journal*, Michael Rogers (Rogers 2001, p. 31) reported on a survey conducted by electronic publisher Versaware which glowingly claimed that “as many as 87% of students polled favour electronic books over print”. The small size of the survey group (a tiny sample of 100 college students) proved to be less than representative. While the survey questions seemed to illicit optimistic responses from students about their positive attitude to e-books, harsh experience has shown that the majority of college students are less accepting of the new technology (Mash 2003; Online 2002; Rogers & Roncevic 2002). In other words, the revolution hasn’t eventuated and e-books are still searching for widespread acceptance.

More than most new information technologies, e-books have endured several false starts and some painful reality checks. Despite these reverses, the e-book is still showing signs of life. In all probability, the e-book is here to stay and set to eventually take its place alongside its more traditional antecedents.

This paper will discuss the way in which e-books are developing in response to market forces. To set the context, an overview of the short chequered history of the e-book is presented. A case study of the e-book experiments at Bond University will be described to illustrate how the medium can be used to meet particular information needs. Issues and challenges for future developments will be drawn from the Bond University experience.

The E-book Puzzle

What exactly is an e-book? Is it the content, the format, the software for reading it, the device that displays it, or all of these elements? What emerges from the literature is that there is no widely shared understanding of what constitutes an e-book. While some writers, including Esposito (2003), distinguish between notions of content and packaging, the software and the device are integral elements of the e-book equation that can dramatically affect the utility of the medium, which in turn ultimately determines user acceptance.

For the purposes of this paper, a common sense definition by Mattison (2002) is a useful one. This definition describes e-books as monographs similar to printed books but created and distributed in an electronic format. E-books may also be scanned from print versions. These e-books are “either delivered and read online or are downloaded to a hand-held device.” Essential to this definition is that the reader must have direct access to the digital medium. This rules out print-on-demand books that do not provide access to the electronic text.

While e-books may simply be an electronic version of a print publication, they also often include features that are unique to their digital medium. Such features include the ability to

update content continuously, the incorporation of a range of multimedia and interactive components, hyperlinks to relevant web pages, sophisticated search capabilities and the ability to change text size or convert text into audio for special needs readers. Some types of e-books also attempt to cater for traditional study techniques associated with the print medium by providing functionality to underline, highlight text and make margin notes and bookmarks.

Along with the greater possibilities for readers comes better control for the publishers. Technology provides the publisher with tools to regulate access far more tightly than could be possible with a print book on the library shelf. Most electronic book providers restrict the number of pages that can be downloaded or printed, via the search software. The use of token and cookie identification technology allows far greater intrusion by the publisher into the 'reading habits' of their customers. This technology can be used to access individual identification, in order to monitor, restrict or disable access. In the future, publishers and libraries could use this type of technology to manage the digital rights of authors, giving greater flexibility to provide both free, and pay-per-view access to otherwise unavailable material.

What follows is a description of the divergent models that are helping some e-book systems gain user acceptance and viable market share.

E-book Models

What is overwhelmingly apparent in current commentary is the diversity of developments under the e-book banner and the variety of markets into which e-books are moving. The business models offered by e-book providers have also proliferated, starting from open access to copyright-free material that is presented in plain ASCII text format through, any number of models providing controlled paid access, to high quality commercially published material that incorporates clever functional enhancements.

Some of the obvious niches for e-books are becoming better established while, others have stagnated as a result of poor technology applications. In the latter category are the e-books dependent on proprietary hand held readers, which came and went in the late 1990s and early 2000s. Examples were the Softbook reader, ebookman readers, and Rocketbooks. These were taken up enthusiastically for a brief period by some educational institutions and public libraries. On another development path, e-books delivered online over the Internet are starting to show more promise.

E-books on Hand Held Devices

Performance issues associated with e-book reading devices have seriously damaged the market for e-books on dedicated hand held readers. Complaints from users have been abundant and include the weight and size of the device (too large or cumbersome), the small size of the screen, poor screen resolution, short battery life and slow "page turning". More seriously, despite attempts at standardisation by the Open E-book Forum, the different proprietary standards mean that most e-books are only compatible with certain devices. Add to this the cost of the devices themselves as well as their lack of availability, and the early buoyancy of the market was unsustainable. Many publishers scaled back or ceased their e-book developments altogether. The companies producing devices for reading e-books were

adversely affected and some disappeared entirely or suffered mergers while the remainder face uncertain futures.

Just when specialised devices for reading e-books started their rapid decline, the “next big thing” in IT (mobile computing) began to breathe new life into the future of e-books on small hand held devices. The burgeoning interest in mobile computing is creating a mass market for Personal Digital Assistants (PDAs) and this is leading to greater standardisation and better connectivity for PDAs. The mobile computing trend is driving innovations that will greatly enhance the functionality of hand held devices.

The PDA is being further enhanced by the addition of e-books to its other customary functions of the digital calendar, address book and task manager. E-book content suited to PDAs includes quick reference sources that need to be regularly updated. An immediate benefit of the improving standardisation of PDAs will be that a greater number of e-books will be compatible with any one device while easier access to the Internet, usually by synchronising with a standard PC, enables continual updating of material to and from the PDA.

The medical and health professions are in the vanguard of PDA users to take advantage of e-reference books for point-of-care information (Fox, 2003 p.10). The benefits of carrying pocket versions of patient records, as well as the ability to check rapidly changing drug and disease references at the bedside has led to a growing popularity of PDAs amongst doctors and other health workers. The advent of evidence-based medicine, which requires access to a growing body of reported treatments, has further contributed to interest from the health and medical industry in PDAs. Initiatives such as that undertaken at the Institute of Medicine and Veterinary Science, Royal Hospital of Adelaide have shown that in practical terms, e-books have become a useful tool amongst the medical profession for reference material (Peterson 2003). The legal fraternity who rely heavily on a broad and changing body of legal information are another group who are recognising the benefits of PDAs in professional practice. Many other professionals, libraries and businesses are also looking for ways to harness the growing potential of PDAs to access information in a mobile computing environment. (Fox, 2003 p.10).

The eventual convergence of mobile phones, PDAs, laptops, notebooks and wireless communications will produce small mobile devices with unparalleled portability, computing power and connectivity. As mobile devices become ubiquitous in everyday life, the potential of e-books as a form of professional information, as well as popular entertainment increases.

E-books online

Unlike the boom and bust cycle associated with hand held devices, the model of delivering e-books directly to standard PCs over the Internet has grown steadily and avoided much of the hype surrounding other developments. This model relies on the pervasive and readily available technologies of the PC and the Internet and is closely allied to e-journal modes of delivery that have been in place for several years. Typically e-books that are designed to be read online are displayed in established formats such as portable document format or HTML.

E-book providers using this delivery method include services offered by e-book publishers (for example, ABC-CLIO and Oxford Reference Online) as well as services developed through partnerships between a range of players including the publishers, and software developers, library wholesalers and retailers. Some of these services are broad based,

providing e-books across a range of disciplines (for example, netLibrary and ebrary). Other services, such as Oxford Reference Online and xreferplus, specialise in reference books and several providers such as Stat!ref (medical e-books) and Books 24x7 (business and IT e-books) deliver e-book collections in particular subjects.

The electronic information formats used by some of the online e-book providers are beginning to challenge the notion of the traditional book. For example, publishers like Oxford University Press and Elsevier are starting to combine their electronic journal and e-reference book material into an integrated database that blurs the boundaries between book and journal formats. Other services, such as Ebsco's Booksource, provide e-book content in a format that is unlike anything recognisable as a book in the print world. Whether this "disaggregated" book content comprises e-books or e-something-else could be debated.

The markets targeted for the online mode of e-book delivery include individuals, companies, educational institutions and libraries. As early adopters of information technology innovations, libraries have taken a leadership role in testing and implementing a variety of these models. To illustrate some of the issues associated with implementing e-books in a tertiary education environment, a case study of recent experiences at Bond University Library will be examined in the following section. In particular, the case study will focus on the challenges and opportunities to capitalise on e-book models to support the dynamic information needs of information technology (IT) students.

E-books at Bond University

Bond University was established as the first private, non-profit university in Australia. Since it commenced in 1989, it has had more than 8,200 graduates with a current on-campus enrolment of approximately 2550. There is an equal mix of domestic and international students with domestic students being drawn from all Australian States and Territories, and international students coming from over 70 different countries. Bond University has six academic schools (Business, Health Sciences, Humanities and Social Sciences, Information Technology, Law and Learning Communities) that offer courses at both undergraduate and postgraduate level. Bond has a progressive culture of teaching and learning where innovative programs and teaching methods complement traditional academic values.

The Library at Bond University is well resourced with a per EFTSU allocation of funds well above the national average. While this ensures an excellent selection of resources, Bond University Library faces some intriguing challenges in meeting the information needs of staff and students. As a small but diverse institution, there are significant tensions in providing the depth and breadth of material for all of the disciplinary areas taught. As a private institution, Bond University responds quickly to market trends and the Library must be prepared to shift focus and acquire resources in line with changes in courses offered. To maximise value for money spent, the Library monitors usage and liaises closely with staff and students to make available the best choice of resources. Increasingly, licences for electronic information services are being used to provide the flexibility of access, and depth of information needed for this small and dynamic teaching, learning and research environment. To backup the purchases of books, subscriptions and licences, the Library has a strong commitment to an efficient document delivery service that is provided free of charge for all staff and students.

To round out the picture, the information technology environment at Bond favours electronic information delivery. Students have free Internet access on campus and there is a ratio of

seven students per common use computer. PCs are available in computing laboratories and in the Library and this access is further enhanced by a high level of laptop ownership by students living on campus (up to 95%). A wireless network is operated in the Library to permit students to connect their laptops to the network. Students wishing to access the Internet from off-campus use private Internet Service Providers and EZProxy authentication is used to enable access to IP restricted Library resources.

E-books for the School of Information Technology: A Case Study

In providing resources to support the School of Information Technology, Library staff work closely with faculty to provide a dynamic mix of print and electronic information. Despite their hard work, it has been a continuing challenge to keep the range of IT books current and relevant. IT is a fast moving discipline where study topics emerge and disappear in quick succession. There is a constant need to update the collection with new resources and weed out-of-date material. In addition, IT books are expensive and bulky. For Bond, this was resulting in shelf space problems as well as significant wastage of resources.

Traditionally, IT students have been erratic library users and Bond IT students are no exception. While usage surveys indicated reasonable uptake of electronic resources such as *ACM Digital Library* and Ebsco's *Computer Source*, use of print books was limited. A usage survey conducted early in 2003 identified that of the 330 new IT books purchased in 2001, approximately 30% had never been borrowed and a further 50% had been borrowed between one and three times. Given the limited shelf life for IT books, this survey indicated a poor return on investment for the majority of the material that was being purchased. In contrast, to widespread low usage of IT books in general, usage of a few prescribed textbooks was high, most probably due to the students' reluctance to purchase expensive books that would quickly date. To make any impact on this situation a radical change was needed and at this point, the potential of e-books was revisited.

E-books were already playing a minor role amongst the resources selected for the Bond Library. Bond had trialled a number of e-book models and subscribed to some; for example, *Stat!Ref* and *Harrison's Online* as well as free selections from the University of California Press eScholarship Editions, have become core resources. A short trial of ebrary was conducted in mid-2002 however, the range of resources was not thought to suitable at the time.

The medium of e-books seems ideally suited to IT as a specialised discipline. E-books can be updated frequently to keep pace with short innovation cycles inherent in the discipline. Users of IT books usually scan sources for the relevant sections rather than reading them from cover to cover. Two of the market leaders providing e-books for IT professionals are *Books 24x7* and *Safari Tech Books Online*, and these products are the subject of the case study at Bond University.

Late in 2002, an opportunity arose for the Library to become involved in a targeted move into e-books by working with the School of IT to provide resources for IT students. At the time, a number of staff around the University interested in e-books for IT were trialling the *Books 24x7* service and this stimulated interest amongst Library staff and in the academic community.

The Library's venture into e-books for IT students at Bond was given further impetus when a lecturer decided to prescribe a subscription to *Safari Books* instead of recommending three expensive textbooks for one subject in Internet technology, a unit in the Bachelor of Information Technology. This academic arranged for his students to purchase individual subscriptions to *Safari Books* in 2002 while in 2003, *Books 24x7* was chosen. Use of these e-book services was incorporated into the teaching program and students' reactions to the new medium were closely monitored.

In support of this initiative, the Library decided in 2003 to purchase a University-wide licence for two simultaneous user "seats" for *Books 24x7*. Initially the local distributor assured the Library that Bond's normal access arrangements for electronic resources would be satisfactory. That is, that IP authentication on site and EZProxy web authentication for remote access would provide adequate security. However, very shortly after the contract was signed, security concerns at the US office of *Books 24x7* emerged. In effect, *Books 24x7* had more stringent conditions that specified identification tokens for users that would identify individuals to the vendor. This would have required Bond to set up systems that would track individuals' activities and to pass that information on to *Books 24x7*. At that time, Bond did not have the scrambling/encoding technology in place to ensure privacy of individuals in such a system and the University's privacy and academic freedom policies would have been compromised by these requirements. Regrettably, it was not possible for the Library to comply with *Books 24x7* requirements and the subscription had to be cancelled immediately.

While the *Books 24x7* model was working well with individual students who were using their personal subscriptions, the company was not really geared to the authentication procedures that Bond, and many other libraries use for controlling access to electronic resources. Despite the setback, Bond Library has continued discussions with *Books 24x7* especially regarding their development work with EZProxy.

Still in the market for e-books for IT, the Library turned its attention to *Safari Books* and a trial of the product was organised. Under the trial arrangements, the Library provided access to the full range of *Safari Books*' titles using IP authentication on site and EZProxy web authentication for remote access. In this case, the agent for *Safari Books* was an established Library supplier and Bond Library was confident that the agent understood the product requirements for security in the context of normal Library operations in Australia. In effect, *Safari* was positioned for both individual and Library subscriptions and could handle variations in access arrangements including those at an institution-wide level. Usage information gathered in the trial period was used to select 90 titles from the *Safari* list of approximately 1,500 titles to include on the Bond Library's "bookshelf". The 90 titles were then made available under a two simultaneous user licence.

The cost of the Library's *Safari* licence for 90 books with two simultaneous users was similar to the amount that had been set aside for the *Books 24x7* subscription, which would have provided access for two simultaneous users to the full *Books 24x7 IT Pro* list of approximately 3,000 titles. This highlights the difference in the access models provided by these two products. While *Safari* provides access to its full title list of 3,000 titles and some libraries can afford to subscribe, the cost is very high and as a way of providing access for smaller institutions and individuals, a subscription for a limited "bookshelf" that can be changed once a month is available. For example, students at Bond who had individual subscriptions to *Safari* in 2002 had a bookshelf of ten titles. Nine titles were selected for them by their lecturer with the tenth title a free choice. Students who had individual *Books 24x7* subscriptions in 2003 had access to the full range of titles.

E-Book Experiences

To evaluate the move into e-books, usage surveys, focus groups and interviews were used to gather information on the experiences of staff and students.

The Library's usage statistics reveal that during the first two months that the 90 *Safari Books* titles have been available, approximately 40% of the books have been accessed. Although it is still early days, the level of usage looks promising when compared with the usage of print titles.

Staff and Student Feedback

In addition to the print and electronic usage surveys reported above, feedback was gathered from staff and students using questionnaires and surveys. The lecturer who organised individual subscriptions for students conducted a web-based survey. *Safari Books* users were surveyed in third semester 2002 and *Books 24x7* users were surveyed in first semester 2003. The results of these surveys have been made available to the Library and are gratefully acknowledged. The Library has also used a web survey form to gather feedback from *Safari Books* users. To follow up on these surveys, focus groups will be conducted and the results made available at the VALA 2004 Conference. Responses from 40 students' surveys are included in the survey pool to date, although not all students answered all questions as the survey undertaken by the lecturer was longer and included some additional questions about price satisfaction.

When asked about the advantages and disadvantages of e-books, students had a number of comments. The feature of both products that students universally valued was the search function that allowed them to search across the available books for keywords and strings of code. Two students commented on the tables of contents as another convenient way of navigating. Students appreciated having an extensive collection of books that were readily accessible, although one student commented that the books did not cover the complete range of topics they required. One negative reported for both *Safari Books* and *Books 24x7*, was the slow response times for loading pages.

Using personal subscriptions, a popular function that was available in both *Safari Books* and *Books 24x7* was the ability to set up bookmarks and the personal "bookshelf". In the Library's *Safari Books* survey, users said they would like to use the bookmark and bookshelf functions if they could be made available.

In comparing electronic books with printed texts, students had many perceptive observations.

Negative comments:

- Several students commented about difficulties reading online ("eyes get tired", "hard for my eyes", "hurts my eyes", "reading online is more tiring"). One student commented that these problems meant that s/he spent less time reading and then had to re-read some chapters to fully comprehend the material.
- Two students commented about the need to be online in front of a computer screen to read their textbooks. This reduced their mobility and increased their already significant periods of time spent working at a computer.
- Inability to make "normal" notes.
- Prefer printed (text)books (5 students)

Positive comments:

- Good search functions
- Easier navigation
- Ability to cut and paste
- Extensive range of books with well organised material that had good, up to date examples (although one student felt overwhelmed by the amount of material available to read).
- Paper saving
- Convenient, not having to carry around books
- Better than print books (5 students)

Some students commented that with more practise, studying from e-books would become easier. Presumably, reading online and using the online facilities for making notes and highlighting text would become easier with practice. In contrast, another student said that having to pay for a subscription to e-books was useless as there are “many great free online resources available on the web”. In comparison with the mixed feedback from students using personal subscriptions, the feedback obtained from students using the Library’s *Safari Books* subscription was universally positive. It appears that students with negative perceptions about e-books do not use the Library’s *Safari Books* subscription and are not completing the survey.

For another perspective on e-books, the lecturer who had arranged personal subscriptions for his students was interviewed. A range of factors influenced the decision to recommend an e-book subscription. One rationale was to ensure students had online access to an academically rigorous, up to date, body of information that had been peer reviewed and minutely edited. In the past, a number of web-linked sites had been used in teaching but these varied greatly in quality. In the opinion of this lecturer, IT students are not big users of print books as they go out of date so quickly. In addition, he felt that as a practical subject, books are not as necessary in IT as in some other subjects. The advantage of prescribing e-textbooks also lay in being able to use a wider range of books. The extensive range of material meant that there were a variety of approaches amongst the available books that could appeal to students’ different learning styles. Fragments of text and diagrams could also be used in lecture slides to reinforce students’ learning.

The lecturer did not believe that students’ levels of achievement were affected by the changeover to e-books. However, in terms of students’ behaviour during the course, there were some noticeable improvements. For instance, there were fewer “cries for help” as students had easy access to a large number of reliable examples they could use in their assignment work. Furthermore, students had good access to up to date information, which was essential in the context of the subject being studied. Another benefit was the way in which the e-book services encouraged students to copy with appropriate acknowledgement, and students generally complied with this requirement.

The process of arranging e-book subscriptions for students was an additional burden for the lecturer concerned. The pricing had to be negotiated and for both *Books 24x7* and *Safari Books*, the agents were prepared to offer “deals” to keep the price competitive with the cost of printed books. This was done by limiting the time period to a semester and for *Safari Books*, limiting the number of books available through the subscription. One of the difficulties with *Safari Books* was the method of payment, as students were required to use a credit card and not all students had a card. In the case of *Books 24x7*, students were able to purchase their subscriptions via the University Bookshop.

In the last semester of 2003, the trial of prescribing personal subscriptions instead of print textbooks will not be continued for a number of reasons. The Internet subject that was the focus of the experiment has been concentrated into one major topic (down from three major topics) and it is now possible to find a satisfactory textbook. In the interim, the costs of individual subscriptions to both *Safari Books* and *Books 24x7* have increased and are no longer within easy reach for students. The Library's *Safari Books* subscription has also been a factor and students will be encouraged to use this as their source for e-books.

The move to e-books using the *Safari Books* model has had implications for Library staff. Selecting the 90 titles from the full *Safari Books* list is a task similar to selecting print books although usage statistics gathered during the trial period could be used as a guide. A major difference however, is that the list can be changed once a month and with accurate usage data, it is difficult to leave titles on the "e-bookshelf" that are not being used. At Bond, a new selection has been generated for each month of the subscription to date and this is creating considerable work for some staff.

The Bond Case Study in the Wider Context

The electronic book experiences at Bond University Library reflect many of the outcomes reported in other research. A number of studies have investigated the use of e-books in university educational programs and although they have primarily focussed on e-books displayed on hand held devices, the issues raised are similar to those emerging at Bond University ('Online' 2002; Bell, McCoy & Peters 2002; Blumenstyk 2001; Dearnley & McKnight 2001).

E-book technology is clearly a significant issue. For example, difficulty with sustained reading from a screen was one of the most frequently reported problems in the Bond case study, and this is also one of the most commonly cited problems for all types of e-books. While new technological developments are always on the horizon, it will be several years before software and hardware platforms for e-books can provide the high quality display necessary for effective readability (McKenzie 2002). The Bond case study appears to indicate that for e-books delivered over the Internet, there are fewer technology related problems. The issues reported in studies based on hand held devices such as battery life, small screens, software incompatibility, data loss, and so on, do not arise for e-books on the web. However, it could be argued that greater technology reliability is achieved at the expense of portability.

There were also many attractive features associated with the technology. The functionality for searching and navigating that is valued by Bond students is a positive aspect reported in most studies. For other features such as the ability to highlight text and make electronic notes, the results are equivocal. While some studies found that these functions were popular, a study by Blumenstyk (2001) found students were disappointed that these add-on services were not as intuitive as they could be. This may be why some Bond students commented that they missed being able to take "normal notes".

E-book marketing is another widespread concern. For individuals and libraries alike, the path to choosing and acquiring e-books can be a convoluted one. The Bond University lecturer found the process of arranging e-book subscriptions for his students was an additional burden. For electronic books to succeed, selecting and purchasing them needs to be as easy as ordering and buying from the campus bookstore (McKenzie 2002). As the *Books 24x7* and

Safari Books experiences at Bond have shown, even libraries that are geared towards purchasing and delivering electronic content can find the journey to acquiring e-books a challenging one.

Nevertheless, the usage of e-books in the Bond case study illustrates how the medium is potentially more popular than the print equivalents for the discipline. Although not directly comparable, usage statistics for the two media show that 66.4% of the print collection was borrowed in its first two years while more than 40% of *Safari* titles selected have been accessed in the first 2 months of their availability. Bond University is yet to fully explore the opportunities that electronic books offer. Licensed e-content in other formats (for example journal articles from proprietary databases) can be seamlessly integrated into electronic reserves or course packs. E-books fit well into this category, where 'chunks' or chapters of e-books could be incorporated into required readings for weekly lectures and tutorials. Exciting developments in the area of portal technology and federated searching capability will allow for greater integration of information (books, journals, web, data, code, images) regardless of format.

Content Versus Technology

A great deal of the debate about e-books focuses on the features of the technology, the business models and the market successes and failures. However, as Esposito (Esposito 2003) observes, much of this commentary may be missing the point because at the heart of the matter, books are valued more for their content than their packaging. The Bond case study illustrates how different stakeholders can have widely divergent views on e-book content. For example, the lecturer in the case study valued e-book material as high quality, academically rigorous information that could be easily accessed on the web. In other words, the content should have the quality of information contained in books but should also incorporate some of the interactivity and multimedia features of the Internet that appeal to IT students. In contrast, some of the Bond students did not seem to appreciate the difference between the quality of the information contained in e-books and free web based information.

Some writers are critical of e-books because of the way the technology is used to transform the traditional book into a multimedia experience that encourages web-surfing and non-linear thinking. (Mash 2003) These arguments are valid for some types of books, especially where sustained linear modes of thinking suit the intellectual task at hand. However, e-books can bring added dimensions to the learning environment when used in an appropriate context. There are a great many examples of the ways in which e-book technology can enhance the learning experience for most students and make books accessible to those with reading disabilities. (Kerscher & Fruchterman 2002; Looney & Sheehan 2001; Williams 2003) In the Bond case study, the lecturer found that with ready access to appropriate information and examples amongst their e-books, students needed less help with the basics of their assignment work. That is, by using the technology to take care of the processes of information transmission, the teacher is freed up to spend more time on the human aspects of teaching. (Ramsden 1998)

Conclusion

The Bond University case study does not resolve the question posed, “What exactly is an e-book”, but it does go some way to answering a more important question “What exactly makes a *successful* e-book” in the Bond setting. Is it the content, the format, the software for reading it, or the device that displays it, or all of these elements? From reviewing what has gone before, studying current usage patterns and surveying the perceptions of different stakeholders, this case study shows that the importance of each element depends on the experience, information need and expectations of the user. Students welcome the additional features and web accessibility, the lecturer values the quality content, while the Library appreciates the greater flexibility that e-books provide. E-books can enhance the learning experience by providing additional dimensions to quality information. The Bond study suggests that e-books are starting to find their place in the teaching and learning environment of tertiary institutions. They can no longer be regarded as a technological solution in search of a problem. By working in partnership with the academic community and continuing research the usage, applications and perceptions of e-books amongst user groups, the Library can add value to learning environments at Bond University.

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