

2004

Australian universities in the information economy: electronic commerce and the business of distance education

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University of Wollongong

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Australian Universities in the Information
Economy: Electronic Commerce and the
Business of Distance Education.

A thesis submitted in fulfilment of the requirements for the
award of the degree

Doctor of Philosophy

from

University of Wollongong

by

Anthony Francis Dean, MLit, B Ed

Faculty of Informatics

2004

Thesis Certification

CERTIFICATION

I, Anthony F. Dean, declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the School of Information Technology and Computer Science, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Anthony F. Dean

21 December 2004

Contents

PART I	1
1 Introduction to the research	1
1.1 Introduction	1
1.2 Definitions, Rationale and Context, Scope and Structure	3
1.3 Discussion	20
2 Methodology	21
2.1 Introduction	21
2.2 Argument as a Research Approach and Strategy	23
2.3 Discussion	57
3 Distance education in Australian universities	60
3.1 Introduction	60
3.2 Terminology	61
3.3 Distance education — a condensed history	67
3.4 Distance education population in Australia	74
3.5 International student population in distance education	75
3.6 Media in distance education	77
3.7 Institutions involved with aspects of open learning and distance education	87
3.8 Distance education theory	95
3.9 The business of borderless education	101
3.10 Discussion	104
4 Electronic Commerce	107
4.1 Introduction	107
4.2 Terminology	107
4.3 Electronic commerce and electronic business	108
4.4 Business role of the Internet and World Wide Web	114
4.5 Electronic commerce	117
4.6 The web, Australia and e-readiness	119

4.7	Types and models of electronic commerce	122
4.8	Interpreting the framework	128
4.9	Discussion	134
PART II Investigating the relationship between distance education and electronic commerce:		
Building the Case		138
i.	Prologue.....	138
ii.	Presenting the arguments with Toulmin diagrams	141
5	Distance education and trade in information and knowledge	146
5.1	Introduction	146
5.2	Digitization and convergence	147
5.3	Information, information society, and information economy	152
5.4	Definitions of information society and information economy	154
5.5	Information economy, distance education and electronic commerce.....	170
5.6	Trade in information and/or knowledge services	174
5.7	GATS and higher education in Australia	181
5.8	Information economics and properties of information.	187
5.9	Discussion	204
6	Distance education, electronic commerce and web technology	210
6.1	Introduction	210
6.2	Electronic commerce infrastructure.....	212
6.3	E-readiness and electronic commerce infrastructure	214
6.4	Innovation theory	220
6.5	Introducing value chain analysis	225
6.6	Distance education value chain analyses.....	227
6.7	Competitive advantage	233
6.8	The value chain and software availability to support processes.....	240
6.9	Generic support activities and software development/availability	241
6.10	Discussion	250
7	Business models for universities in borderless education.....	254

7.1	Introduction	254
7.2	Universities responding to pressures	257
7.3	Businesses responding to pressures	258
7.4	Business models and terminology	259
7.5	Business models and electronic commerce	269
7.6	Universities and business models	275
7.7	Learning from further afield	296
7.8	Discussion	301
8	Universities and borderless education: a conclusion	308
8.1	Introduction	308
8.2	Overview of the study	311
8.3	Discussion – research questions	316
8.4	Importance of the study	327
8.5	Limitations.....	331
8.6	Research agenda	333
	Appendix 1 Australian Universities – 2004	336
	Appendix 3 Economist Intelligence Unit 2004 E-Readiness rankings.....	339
	Appendix 4 Taxonomy of business models according to Michael Rappa.....	342
	Abbreviations	345
	Bibliography	346

Tables

Table 2-1	Types of dialogue.....	34
Table 3-1	Students in Australian Universities and in Advanced Education Courses, 1971 - 1980.....	69
Table 3-2	Models of Distance Education - A Conceptual Framework	79
Table 4-1	Electronic commerce business models.....	126
Table 5-1	Definitions and introduction to fourteen characteristics of information.	200

Table 6-1 Distance education activities of the UKOU (1991).	229
Table 6-2 Software and the value chain: support activities.	242
Table 6-3 Software and the value chain: primary activities	244
Table 7-1 Summarized form of Rappa's business model taxonomy	270
Table 7-2 Business models proposed for university use	277

Figures

Figure 4-1 A framework for electronic commerce.	127
Figure 4-2 Electronic commerce areas - I	133
Figure 4-3 Electronic commerce areas II	134
Figure 5-1 Toulmin diagram for the argument that distance education is a digital trade in information products and services.	147
Figure 5-2 Four-sector aggregation of the US labour force, 1860-1980. (Using median estimates of information workers).	159
Figure 5-3 Australian labour force in paid employment, four-sector analysis, 1891-1994.	160
Figure 5-4 A new Information Technology Map	166
Figure 6-1 Toulmin diagram for the argument that distance education is now technologically feasible.	212
Figure 6-2 Electronic commerce infrastructure.	213
Figure 6-3 Phases in the innovation cycle	221
Figure 6-4 The S-curve of e-learning transition	222
Figure 6-5 The generic value chain of a firm	226
Figure 6-6 Online learning value chain	238
Figure 6-7 Online distance teaching value system and market map	239
Figure 7-1 Toulmin diagram for the argument that universities will seek new business models in order to be effective competitors.	256
Figure 7-2 The B-Web typology	273

Style Notes

Multi disciplinary research uses terms which some readers may find unusual or out of context. To aid reading, specific terms will initially be italicised as a form of accent or stress. The use of double quotes within the text is used for directly quoting a passage or phrase developed by another cited author. Single quotes within the text are used for generically assumed terminology and/or may be used where emphasis is needed.

Notes re CSU_AuthorDate referencing system used in bibliography

The bibliography was created using the bibliographic management software ProCite in conjunction with the Charles Sturt University (CSU) approach to bibliographic generation and management. ProCite enables organisation of bibliographic references to produce reference lists. References are entered into the database using one of the predefined 'workforms' and the bibliography is created directly from the database. This bibliography conforms to the CSU_AuthorDate style, which is based on the Harvard author date style and the specific formatting is in accordance with the parameters of this database.

Prologue

The dissertation presented here is one part of a journey that has been going on now for nearly fifteen years. This prologue is intended to provide an insight into how the study originated and how it has come to focus on the areas involved.

In 1988 I had my first foray into university teaching. This happened at the University of New England, a well-established university in New South Wales in Australia, known for its distance education activities as well as its rural campus. I was employed as a contracted lecturer at the Coffs Harbour Campus. There I was teaching an introductory information technology subject to students on the, then, fledgling campus. In 1989, the Dean of the faculty asked me if I would convert the on-campus materials that I had been teaching into a distance education subject for delivery across Australia. This was my first attempt at actually preparing such materials, though I had already experienced distance education as a student in the Bachelor of Business degree from Charles Sturt University. I prepared the subject material as a text-based package, supported by software (which was delivered on floppy disk), complete with instructions for how to install and use the software and the learning materials.

The subject started with some sixty students located all around the country. The experience of that subject was profound. Many students would ring me on my home telephone, often well away from a computer screen, and they would ask me to help them work out the software problems they were experiencing on a range of different personal computers. What I found was I had to develop an encyclopedic knowledge of all of the screens in the software so that I could work them through their problems during the telephone conversation. This experience led me to think that it must be possible for me to be on a computer and to have my screen being displayed in their homes so that they could see what it was that I was talking about. If so, the screen display that I presented to them would then be reinforcement that they had in fact done the right things in installing and operating the software.

Around the same time the Australian federal government joined with the Telstra telecommunication organization to research the technology known as video conferencing. The University of New England, a university with four campuses spread out over quite a large area of New South Wales with centres in Armidale, Orange, Coffs Harbour and Lismore, was part of the trial with Telstra of the video conferencing technology. With few members of staff at the Coffs Harbour Campus, I became involved in the trial use of the technology. As the trial progressed and my knowledge increased, it became obvious that the technology might hold an answer to my question about how I could get my computer screen display into the homes of students across the country. As part of the trial we had ready access to a Telstra engineer with whom I discussed my ideas and insights. Together we were confident that the new technology could be useful in distance education.

I pursued my interests and went on to invent an amalgam of technologies that was trialed with the support of the University of New England, Telstra and the local television station. We managed to get a special out-of-hours broadcast license to trial this amalgam of technology and the result was a technical success. In short, we demonstrated that it was possible to get a low-quality, 'no-frills', form of instruction from a simple office set-up at the university campus in Coffs Harbour to people right through the viewing area of the television station on the north coast of New South Wales.

The video conference experiment married up video conferencing technology, television technology, broadcast transmission, computers, and telephones all at the same time.

Whilst the cost of the overall experiment was around six to eight hundred dollars, the fact was that it was possible through this mechanism, to get into the homes of over fifty thousand people in the viewing area for that amount of money. By escalating the experiment, and sending the signal to the national infrastructure of the Australian Broadcasting Corporation, it would have been possible for the same six to eight hundred dollars to get to every house, with a television, in Australia.

Armed with that experience, I enrolled in a masters degree through the University of New England where my research component investigated the use of television for adult education. Among the things I found was that there had been little organized research about the use of television for education of adults, although there had been an enormous amount done with children. At that stage, however, no one had solved the problem I had confronted in my first distance education experience. Bear in mind that this was 1991-2, and well before the advent of the World Wide Web in Australia.

My invention, together with my studies about the use of television, led me to apply for a position at the University of Wollongong. I was successful in that application and commenced my career as a full academic in 1992.

My interests were then further supported given the nature of the work that I did at the University of Wollongong, in the Information and Communication Technology Department. The work involved broad ranging rather than technologically specific subjects; for example, information policy; information economics; the storage, retrieval, and use of information; and information as an economic entity. Within my teaching I looked at the effect of the application of technology on people and work among other things.

By late 1992 I had completed my masters degree (again via distance education) and had found through the research regarding the use of television with adults, that there were still many unanswered questions in distance education. To my knowledge nobody had been able to solve the problem of supporting students using software (as a part of their education materials) by being able to get the academic's computer screen display to be viewable in the student's home or workplace. Consequently, I continued with this line of inquiry in my academic research work and then decided to enroll in a doctoral program at the University of Wollongong, with the intention of furthering my understanding of the practice of distance education.

In 1998, I left the University of Wollongong, to satisfy a desire to build my own home. During that construction period I was also working as a contract lecturer—this time with Southern Cross University, in Coffs Harbour.

In 2000, I returned to academic work at the Wagga Wagga campus of Charles Sturt University (my current employer) where I've been involved in teaching on campus and in distance education mode. Both modes have included teaching in the areas of strategic planning for information systems, electronic commerce, and technology in organizations. My academic teaching work and my research interests all seem to coalesce when distance education and electronic commerce are brought together as a focus of study, which is the case in my dissertation. The intention is to look at any relationships that might be developing between new business formats (electronic commerce and electronic business) in the commercial world, and distance education activities in Australian universities.

Of course the web has arrived since my journey started and has the potential to have a marked impact on university operations. Its use will also be a catalyst for the universities to rethink their strategies as the higher education arena becomes more competitive. It may also provide the answer to the question that I had originally set out to conquer, or at least

to understand more deeply. As the time has passed, the developments in technology, especially those of the web and more directly those relating to digital television, have effectively rendered my invention obsolete. So whilst my attention has moved away from the development of that invention, it has stayed firmly rooted on the issues about which this dissertation concerns itself.

This prologue is provided as a personal backdrop to the current study and, apart from providing some context, is also meant to provide an insight into how I came to generate the following questions to guide me in my collection of relevant documents for my dissertation. The questions have subsequently been condensed in the main body of the dissertation where they are expressed as the specific research questions that steer the research:

- Is there a relationship between distance education and electronic commerce? If so, what is its nature?
- Is distance education in Australian universities becoming an exemplar of electronic commerce?
- Is the information infrastructure in Australian universities going to be a conduit for new forms of higher education business?
- Can electronic commerce be useful in theorising distance education in Australian universities?

The dissertation combines my teaching and research interests and seeks to answer, or shed light on, the questions above. Providing a better understanding of the complex mosaic of modern distance education is an important task and the dissertation is focussed on providing that outcome.

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Many hundreds of people through their publications have helped me to build the knowledge I now have. It is I alone, however, who must claim responsibility for and ownership of any factual errors or misinterpretations. I am indebted to these scholars, journalists, commentators, reviewers, and researchers for their contributions to the various fields. It is upon their shoulders that I am standing.