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# From caveman to casebase: the evolution of legal research through the technological age

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# FROM CAVEMAN TO CASEBASE[1]: THE EVOLUTION OF LEGAL RESEARCH[2] THROUGH THE TECHNOLOGICAL AGE.

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*'Legal research underpins almost everything that is done in law'.*[3]

## Introduction

With the evolution and advancement of online legal resources resulting in the demise of the use of print based materials, there has been a substantive shift in the practice and teaching of legal research. The use of emerging and eLearning technologies such as wikis, blogs, podcasts, synchronous virtual classroom systems and online interactive tutorials, has created a new world of learning. To keep pace with these new technologies, current pedagogical approaches to teaching legal research must be reviewed to allow for a move from traditional delivery formats to more contemporary and flexible delivery methods.

This paper will present a historical overview of the evolution of legal research through the technological age, with a focus on the history of computer assisted legal research (CALR) in Australia. It will provide an insight into the impact of the technological age on the practice and teaching of legal research and outline the role of the law librarian in the new technological environment. The primary focus of the paper will be on the impact of eLearning and emerging technologies on teaching legal research to 21st century law students, with emphasis on using technologies for distance education. The paper will also include a discussion on how these technologies are being used in the development of blended or converged delivery models for teaching legal research and writing at Southern Cross University.

## Evolution of legal research through the technological age

Traditionally, legal research was based on the process of locating the popular legal paradigm contained within the printed book.[4] Gallacher observes that:

> From the first days of recorded history until very recently, the historical record has been maintained in written form on physical pages, handwritten at first, then after the advent of printing, through the impress of moveable type. In the law, these pages, bound into books then organized in libraries, have been the repository of all legal knowledge – an analog database of legal information – with sophisticated finding aids developed to help lawyers find the law relevant to their issues quickly and effectively.[5]

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1 The 'FirstPoint' I would like to make is that in choosing the title of the paper I do not profess to have a personal preference for CaseBase; it simply suited the theme of the title.

2 This paper focuses primarily on doctrinal legal research as this is the category of research most often used by practitioners and law students, and is the research approach which has been notably affected by the developments in technology.

3 Barbara Bintliff, 'Context and Legal Research' (2007) 99 *Law Library Journal* 249, 257.

4 Ibid.

5 Ian Gallacher, 'Forty-Two: The Hitchhiker's Guide to Teaching Legal Research to the Google Generation' (2006) 39 *Akron Law Review* 151, 153. For a comprehensive history of the print record of English law, see generally George S Grossman, *Historical Foundations of the Electronic Age* (1994).

For many years legal researchers relied on the legal context printed on the pages of case reports, indexes and digests, however as the volumes of print legal materials increased, so did the burden of locating the relevant rule of law.[6]

The problem of dealing with an unwieldy collection of legal tomes was particularly noted in the early 1960s by the legal profession in the United States.[7] As a result, the concept of using computers to manage the information was raised in a number of forums. In the beginning, no substantial advancements were made, but after Professor John Horty's work at the University of Pittsburgh converting statutes to machine readable form became widely known, the feasibility of such a concept was finally realised.[8] His work with the KWIC (Key Words in Combination) search system and text retrieval methods led to the development in 1963 of the US Air Force computerised legal information program FLITE.[9] This database was almost certainly the largest collection of machine readable legal sources in existence at the time.[10] It was considered to be the earliest CALR program in the United States, thus proclaiming Professor Horty as the 'true pioneer of computer assisted legal research'.[11]

Following on from the development of the FLITE system, the Ohio State Bar Association in the late 1960s developed and tested a commercial CALR system,[12] which was further developed by Mead Data Central in the 1970s. At the beginning of 1973, the redesigned and rebranded full text computer retrieval system, now known as Lexis, was released to the world.[13] Soon after, in 1975, West Publishing launched their online legal research system Westlaw. Initially, it was not full text, but with further development and redesign it was to become a strong competitor of the Lexis system,[14] and for decades these legal publishing giants dominated the online legal research landscape.

## A brief history of computer assisted legal research (CALR) in Australia[15]

As with the rest of the world, the rapid growth in the amount of legal materials being published became an encumbrance on the legal profession in Australia. They responded to

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6 See Terry Hutchinson, 'Developing Legal Research Skills: Expanding the Paradigm' (2008) 32(3) *Melbourne University Law Review* 1065, 1073; P J Ward, 'Computerisation of Legal Material in Australia' (1981) 1 *Journal of Law and Information Science* 162, 162.

7 William G Harrington, 'A Brief History of Computer-Assisted Legal Research' (1984-85) 77 *Law Library Journal* 543, 544.

8 Ibid.

9 FLITE was an acronym for 'Finding Legal Information Through Electronics'. It consisted of statutes and regulations and US Supreme Court decisions which were later included in the Department of Justice's system, JURIS: see Lynn Foster and Bruce Kennedy, 'The Evolution of Research: Technological Developments in Legal Research' (2000) 2 *Journal of Appellate Practice and Process* 275, 279.

10 Jon Bing (ed), *Handbook of Legal Information Retrieval* (1984), 483.

11 Petal Kinder, 'The Adoption and Use of Computerised Legal Research Information in Australia' (2005) 30 *Canadian Law Library Review* 68, 74.

12 The system informally known as OBAR (Ohio Bar Automated Research) was established in early 1969.

13 Harrington, above n 7, 553.

14 Ibid, 555.

15 As this paper can only provide a brief overview of the early years of computerised assisted legal research systems, for a more detailed examination: see generally Graham Greenleaf, Andrew Mowbray and D Lewis, *Australasian Computerised Legal Information Handbook* (1988).

this by turning to advancements in information technology[16] to provide 'the panacea to the problem of the flood of legal material'.[17]

The evolution in the provision of online sources for legal research in Australia started in the 1970s, with the development of limited free access to legal resources via SCALE (Statutes and Cases Automated Legal Enquiry), the Attorney General's system, which used STATUS retrieval software.[18] SCALE included Commonwealth cases and statutes and a collection of negligence cases. Its use was limited to government lawyers. The SCALE database later developed into SCALEplus, and this is now gradually being replaced by the ComLaw database which provides free access to the full content of Commonwealth legislative instruments.[19]

In the early 1980s, there was a move to the commercialisation of legal materials when Australian states (excluding Queensland) distributed their case law and legislation through the CLIRS (Computerised Legal Information Research System). This system gradually morphed into Info-One and within a decade the product had been sold to Butterworths and much of the content was later migrated to its online platform. [20] It should be noted that a significant development in this decade was the launch of the Lexis database onto the Australian market in 1985. Australian legal researchers were offered access to United States, United Kingdom, New Zealand and European law.[21] However, because of copyright issues, Australian content was not included until the mid 1990s.

At the beginning of the 1990s, the CD-ROM 'rapidly replaced dial-up services as the legal information service of choice'[22] and new players emerged onto the electronic legal publishing scene. In 1990, Computer Law Services was the first to release a significant commercial CD-ROM product containing Commonwealth legislation. Many of the key legal publishing companies in Australia, who had been well positioned in the print market, then started to migrate their products onto the new CD-ROM technology which utilised the revolutionary hypertext system.[23] CD-ROMs were commercially very successful until the late 1990s when advances in the World Wide Web allowed the publishers to provide online access to their publications.[24]

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16 In particular, the ability of computers to provide full text storage and searching capabilities was very important to legal practitioners.

17 Kinder, above n 11, 68.

18 STATUS software was developed for the UK online legal system Eurolex, which was used by legal researchers from 1979-80. The Eurolex system was sold to Butterworth Telepublishing in 1985: see Ward, above n 6, 173.

19 Kinder, above n 11, 69;

20 Ibid.

21 Greenleaf, Mowbray and Lewis, above n 15. It is noted that UK and European Union legal materials were also available from Justis Publishing, who had been publishing titles online and on CD-ROM since 1986.

22 Graham Greenleaf, *Jon Bing and the History of Computerised Legal Research – Some Missing Links* (2004) <http://www2.austlii.edu.au/~graham/publications/2004/Greenleaf_Bing_book.pdf> at 31 July 2009.

23 Ibid.

24 See Appendix A of this paper for a timeline of some of the developments of CD-ROM and online products in Australia. It is interesting to note that prior to the commercial availability of Law Book Company products online, Southern Cross University was involved in a pilot project in 1997, where selected electronic products were mounted on the library's server and FolioViews software was utilised to provide full text content to remote users.

Since the mid 1990s, there has also been a strong move to unlimited free web access to legal materials across the globe with the development of legal information institutes such as AustLII, which saw its debut onto the legal research scene in July 1995.[25] The Cornell Law School LII, which had already launched its website in 1992, could probably be considered to have been the first site of its kind on the Web. There have also been significant developments with access to legislation, case law and government publications from the native websites of courts and parliaments.

Developments in the commercial sector over the first decade of the New Millennium have also resulted in substantial changes to the provision of legal research resources as more print content continues to be migrated to online format. Some of the resources are simply electronic versions of the print content, such as the Law Journal Library provided by HeinOnline from mid-2000, but others have been transmuted into new products. An example of this is the database FirstPoint, which was launched in 2005 and includes content from the print *Australian Digest* and *Australian Case Citator*. Both of these products were previously available in electronic form, but now neither product has a unique digital identity.[26]

Probably the most significant development in the world of computer assisted legal research has been the change resulting from the globalisation of the legal publishing industry. Many of the long established Australian legal publishers of print and online legal materials have been absorbed into global companies so that, fundamentally, competition in the legal publishing marketplace has been reduced to three major players: LexisNexis (Elsevier), Westlaw (Thomson) and CCH (Wolters Kluwer).[27] The changes that are brought about by such a marketplace will have an ongoing impact on the very nature of legal research.

## Impact of the technological age on the practice and teaching of legal research

In chronological terms, the technological age is measured by only a small number of years, but in terms of the advancements in technology and impact on legal research, it is immeasurable. There can be little dispute that the rapid developments in technology and extraordinary growth in legal publishing have brought about many changes which have impacted on legal communities and have irrevocably changed the legal research landscape.[28]

The most significant impact of the technological age arose around half a century ago with the creation of the communication medium *'the screen'*, and the subsequent transformation of society from a printed-text to a hypertext culture.[29] Over a relatively short period of time, the nature of legal information experienced a parallel transformation, and '[t]he abundance of information available online and the speeds with which it appears has changed the face of legal research'.[30] This transformation has resulted in a distinct paradigm shift in legal

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[25] Kinder above n 11, 70.

[26] Hutchinson, above n 6, 1074.

[27] Ruth Bird, 'A Moveable Feast - Law Librarianship in the Noughties' (2006) 14(4) *Australian Law Librarian* 7, 9.

[28] F Allan Hanson, 'From Key Numbers to Keywords: How Automation Has Transformed the Law' (2002) 94 *Law Library Journal* 563, 563.

[29] Rogelio Lasso, 'From the Paper Chase to the Digital Chase: Technology and the Challenge of Teaching 21st Century Law Students' (2002-03) 43 *Santa Clara Law Review* 1, 3.

[30] Kellie Harpley, 'Information Immediately' *Lawyers Weekly* 26 August 2005, 12.

research from the traditional hierarchy of the print digest system, to the new world of online legal resources and computer assisted legal research.[31]

Foster observes that the fast access to online information has been a significant benefit as '[w]here the attorney once walked from digest to reporter volume to reporter volume to Shepard's, and carried on research surrounded by a pile of books, she can now sit at the computer and gain access to databases larger than most law libraries'.[32] Access to these online legal resources has particularly benefited legal practitioners as they are now able to view courts decisions very soon after they have been handed down.

Also, one of the notable advantages of the availability of online legal publications is that researchers can now access information which may have previously been unknown or inaccessible.[33] The evolution of legal information from print to online format and the influences of globalisation[34] have generated a vast amount of information available to legal communities. 'No longer is the legal research universe finite. In this respect, electronic legal research enriches legal research.'[35]

Researchers now have access to the full text content of case law, legislation and secondary legal materials from jurisdictions all over the world, either through subscriptions to huge commercial databases such as LEXIS, or from sites freely available on the Web.[36] However, as with any transformation in a society, there will be benefits from the changes and conversely, issues of concern. One of these is the issue of the authority of legal information available to legal research practitioners and educators in the digital world.

Where once researchers were able to assume accuracy and authenticity through the exclusive use of the official published print sources, powerful web search engines like Google have blurred the boundaries and now they must establish or verify the authority of the information they find in cyberspace. Once a document is digitised and uploaded to the Web, the 'assurance of quality provided by the publishers' editorial control'[37] is not guaranteed. The document is also more vulnerable to alteration, thereby making the task of authentication more difficult.[38] Therefore, as the world of legal information becomes more digitised, it is critical that legal researchers in the 21st century have acquired the skills to not only effectively search for relevant legal information, but to also evaluate both the content and sources of information available.[39]

Law librarians are particularly well placed to teach the required legal research skills in the new technological environment. Due to the rapid evolution of online legal publishing, they have been the leaders in embracing technological change for some time. The integral role of

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31 See generally Carol M Bast and Ransford C Pyle (2001) 'Legal Research in the Computer Age: A Paradigm Shift?' (2001) 93 *Law Library Journal* 285; Bintliff, above n 3; Hanson, above n 28.

32 Foster and Kennedy, above n 9, 282.

33 Ibid.

34 See Claire M Germain , 'Legal Information Management in a Global and Digital Age: Revolution and Tradition' (2007) 35 *International Journal of Legal Information* 134, 136-139.

35 Bintliff, above n 3, 259.

36 Foster and Kennedy, above n 9,302.

37 Hutchinson, above n 6, 1075

38 John Shear 'The Librarian as Educator: Teaching Essential Research Skills' in *The Changing Role of Academic Law Librarianship: Leading Librarians on Teaching Legal Research Skills, Responding to Emerging Technologies, and Adapting to Changing Trends* (2008), 99.

39 Ibid, 96-7; see also Germain, above n 34, 158.

law librarians in the process of legal research education has evolved with the rapid emergence of new technologies. They are required to not only keep abreast of these technologies, but must also learn new ways of engaging with their legal research students and accommodating the information needs and learning behaviours of these students.[40]

## The impact of eLearning and emerging technologies[41] on the teaching of legal research in an academic setting

The place of technology in an academic environment is becoming increasingly important and many universities are utilising web-based or emerging technologies to enhance student learning. Law students are one of the many groups engaging with these technologies and there has been some discussion in the legal education literature regarding the use of emerging technologies in the academic setting.[42] In particular, it is important that law librarians become familiar with these technologies so that they can integrate them into new pedagogical approaches to teaching legal research.[43]

These technologies primarily consist of what is known as 'second-generation Web'[44] or social software tools, but also include teaching or eLearning programs. There is an excellent directory of many of these tools on the *Centre for Learning & Performance Technologies* website <http://www.c4lpt.co.uk/Directory/index.html>. The following is a brief summary of the types of tools available:

### Social software tools

- *Blogs*: are web pages consisting of a collection of chronological writings or posts. They can be student or instructor controlled, and provide opportunities for law librarians to keep students and academics informed of new developments and relevant legal research resources.[45] Wordpress <http://wordpress.com/> and Blogger (http://www.blogger.com/) were two of the widely used blogging tools, but have now been overshadowed by the new microblogging tool Twitter <http://twitter.com/>.

- *Wikis*: are a collection of linked web pages where content can be added and edited by authors. A wiki is a collaborative web environment and can be an excellent learning tool for law students who are working on a group legal research project as they can share knowledge, information and resources.[46] Well known wiki creation sites include PBworks, previously PBwiki <http://pbworks.com/> and MediaWiki <www.mediawiki.org/>.

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40 Germain, above n 34, 157.

41 Often referred to as Web 2.0 technologies.

42 See Bird, above n 27, 17; Matthew M. Morrison, '*Where Web 2.0 and Legal Information Intersect: Adjusting Course without Getting Lost*' (Working Paper no 35, Cornell Law School, 2008) <http://lsr.nellco.org/cornell/clsops/papers/35> at 31 July 2009; Gayle Lynn-Nelson 'The Next Generation of Learners' (2006-07) 11 *AALL Spectrum* 8.

43 Philip C Berwick, 'A New Law School Library and a New Role for Librarians' in *The Changing Role of Academic Law Librarianship: Leading Librarians on Teaching Legal Research Skills, Responding to Emerging Technologies, and Adapting to Changing Trends* (2008), 58.

44 Yoany Beldarrain, 'Distance Education Trends : Integrating New Technologies to Foster Student Interaction and Collaboration' (2006) 27(2) *Distance Education* 139, 140.

45 Ibid, 140-141; see also Morrison, above n 42.

46 See generally Tom Cobb, 'Public Interest Research, Collaboration, and the Promise of Wikis' (2007) 16(1) *Perspectives: Teaching Legal Research and Writing* 1.

- *Social bookmarking*: allows users to store their bookmarks centrally on the web, so access is not confined to a specific web browser or computer. Bookmarks are tagged with keywords and can be shared with other students and researchers.[47] They are an excellent resource for sharing legal research websites. Popular sites include delicious <http://delicious.com/>, Connotea <http://www.connotea.org/> and citeulike <http://www.citeulike.org/home>.

- *Social networking*: focuses on the building (or creation) of a personal profile of an individual, who can then connect to a community or network of 'friends'. MySpace <http://www.myspace.com/>, Facebook <http://www.facebook.com/>, LinkedIn <http://www.linkedin.com/> and Ning <http://www.ning.com/> are the most popular social networking sites which can be used to promote the law librarian's profile and useful legal research resources to students and academics.[48]

- *Content sharing*: provides opportunities for students and educators to share documents, images and audio/video content. Popular sites include: YouTube <http://www.youtube.com/> for uploading and viewing video content, Scribd <http: //www.scribd.com/> for sharing documents, Flickr <http://www.flickr.com/> for sharing photos, and SlideShare <http://www.slideshare.net/> for sharing Powerpoint presentations, PDF files and Word documents.

- *Virtual Worlds*: are 3D computer based simulated environments where users interact with other residents via representatives called avatars. The most well-known virtual world is that of SecondLife <http://secondlife.com/>. Virtual worlds have been used in law schools to conduct law moots and are just beginning to be considered as a tool for teaching legal research.

**eLearning programs**

- *Course management systems*: utilise network and web technologies to 'design and develop an online interactive teaching and learning environment on the platform of the WWW'.[49] Many legal educators have been using these systems for a number of years to supplement face to face teaching by loading subject content into their course learning sites and engaging with students via asynchronous discussion boards, or instant chat services. More recently, course management systems have been used to develop fully online learning environments. Well known systems include Blackboard <http://www.blackboard.com/>, WebCT (now part of Blackboard) and Moodle <http://moodle.org/>, which is an open source system.

- *Virtual classrooms*: are synchronous, interactive and collaborative learning environments where students have the opportunity to engage with their lecturers and

[47] Morrison, above n 42.

[48] Debbie Ginsberg and Meg Kribble, *Social Networks for Law Librarians and Law Libraries, or How We Stopped Worrying and Learned to Love Friending* (2008) <http://www.llrx.com/features/socialnetworks.htm> at 31 July 2009.

[49] Lili Li, *Emerging Technologies for Academic Libraries in the Digital Age* (2009), 77.

with each other in real-time.[50] Many of the course management systems have a synchronous virtual classroom option. Examples of these are Elluminate <www.elluminate.com/> and Wimba Classroom <http://www.wimba.com/>, which are both compatible with the Blackboard system.

- *Podcasting and vodcasting*: involves the process of recording video and/or audio and then broadcasting the content. Many law lecturers and librarians video and audio-record classes or sessions[51] as they provide opportunities for the students, particularly distance education students, to feel connected to their community of learners.[52] Audio/video content can be created using a large variety of free software such as Audacity <http://audacity.sourceforge.net/>, or licensed software like Garageband <http://www.apple.com/ilife/garageband/>, which is platform specific for Macs. Podcast and vodcast content can be subscribed to with the use of RSS feed technology.

- *Screen capture/screencasting*: software tools can be utilised by law librarians to capture computer screen output and record audio to create video presentations and online tutorials to assist in the teaching of legal research concepts.[53] Available software ranges from the popular free tool Jing <http://www.jingproject.com/>, to licensed products such as Camtasia <http://www.techsmith.com/camtasia.asp>, Adobe Captivate <http://www.adobe.com/products/captivate/> and SnagIt <http://www.techsmith.com/screen-capture.asp>.

- *Mind maps*: are nonlinear visual representations of ideas or concepts, where the main topic is the focus of the map and relational information will branch out from this topic. Legal research educators can use mind maps to help students transfer learning from one educational experience to another by diagramming complex legal topics.[54] Mind maps can be created with pen and paper, but for online learners there is a range of free software applications available like bubbl.us <http://bubbl.us/> and Freemind <http://freemind.sourceforge.net/wiki/index.php/Main_Page> or for purchase, MindManager <http://www.mindjet.com/>.

It is important to note that many of the technologies outlined will have significant impact on the pedagogical approaches of those universities with distance education programs.[55] The use of such technologies can potentially fill the gaps left by the more traditional models of education,[56] which had been 'dominated by texts and lectures [and] traditional didactic or

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50 Shauna Schullo et al, 'Selecting a Virtual Classroom System: Elluminate Live vs. Macromedia Breeze (Adobe Acrobat Connect Professional)' (2007) 3(4) *MERLOT Journal of Online Learning and Teaching* 331, 332 .

51 Diane Murley, 'Innovative Instructional Methods' (2007) 26(1) *Legal Reference Services Quarterly* 171, 177.

52 Beldarrain, above n 44, 141.

53 Murley, above n 51, 181.

54 Ibid.

55 Beldarrain, above n 44, 142.

56 Beth Tennent, Karen Becker and Jo Kehoe, 'Technology-Enabled Delivery and Assessment Methods: Are We Addressing Student Expectations and Learning Preferences?' (Paper presented at the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE) Conference, Brisbane, 4-7 December 2005) 649.

transmission approaches to teaching and learning'.[57] Current literature indicates that with the rapid development in online distance education, there has been a paradigm shift in pedagogical approaches with greater emphasis on student-centred learning.[58] Opportunities and challenges have arisen for educators to utilise these emerging technologies to create an interactive and collaborative learning environment for 21st century students entering universities and law schools.

## 21st century students and learning styles

Students attending academic institutions in the new century, and who belong primarily to Generation Y[59] and to a smaller extent Generation X,[60] are demanding more control of their learning experiences.[61] There is a plethora of literature[62] regarding the specific characteristics of these generations with a common thread indicating that 21st century students are culturally diverse, like to work collaboratively, are comfortable with new technologies and primarily use the Web for their research.

Students, regardless of their generational profiles, will also bring to their academic lives a diverse range of learning experiences and educational backgrounds. It is vital that law schools consider how technologies are changing the ways 21st century law students learn, as there has been commentary about the challenges that these student are presenting.[63] Each of these students will have an individual learning style, which will influence their engagement with the online educational experience. As educators will not necessarily be aware of the profile of their students, it can be difficult to provide the appropriate online learning program.

It is therefore critical that educators are aware of different learning styles so that they can design the most effective learning experience for the students.[64] An examination of learning styles is also particularly important to academic law librarians, as they are one of the key stakeholders in helping students to prepare for their future legal careers. Law librarians need this understanding in order to meet the challenging task of teaching students legal research processes in a time of rapid development in technology and growth in legal research sources and formats of materials.[65]

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57 Tracey Carver and Tina Cockburn, 'Making Law More Accessible: Designing Collaborative Learning Environments for Physically Remote Generation Y Students' (Paper presented at OLT 2006 Conference: Learning on the Move, Brisbane, 2006) <http://eprints.qut.edu.au/5356/>.

58 Beldarrain, above n 44, 139-40.

59 Generation Y, also known as "The Millennials", usually refers to those born between 1980-2000: Tracey L Carver and Tina Cockburn, 'Online Skill Development for Generation Y Students: A Case Study of an Online Negotiation Model for External Law Students' (2007) 13(12) *International Journal of Learning* 81, 81; A new generation called the iGeneration has been cited as being born between 1986-2006: see Australian Bureau of Statistics *Picture of the Nation: the Statistician's Report on the 2006 Census* (2006).

60 Generation X are usually those born between1960-80. The Australian Bureau of Statistics has placed them with the Y Generation with birth dates between 1966-86: Australian Bureau of Statistics, above n 59.

61 Beldarrain, above n 44, 142.

62 See generally Marjorie Crawford, 'Teaching Legal Research: Bridging the Gap Between Legal Education and Practice' (2008) 12 *AALL Spectrum* 10, 10; Tennent, Becker and Kehoe, above n 56, 651; Lynn-Nelson, above n 42, 8-10; Carver and Cockburn, above n 57; Lasso, above n 29, 19-22.

63 Lasso, above n 29, 23.

64 Davison M Mupinga, Robert T Nora and Dorothy Carole Yaw, 'The Learning Styles, Expectations, and Needs of Online Students' (2006) 54(1) *College Teaching* 185, 185.

65 Murley, above n 51, 171.

There is a vast range of educational research on students' learning styles. Much of this research focuses on analysing the styles according to the learners' methods of absorbing information through their visual, auditory and tactile or kinaesthetic senses, and how the learners process this information.[66] Murley[67] and Newman[68] note that students and their learning styles fall into the following three main categories: *Visual learners* who need to learn about a concept holistically rather than in parts and prefer to learn with diagrams, pictures, graphics and models, *Auditory learners* who are analytical and abstract thinkers and would rather receive their information orally in individual parts which they then join to get the whole concept, and *Tactile or kinaesthetic learners* who need to have physical interaction and movement and they learn by doing and being actively engaged in a task.

Although visual and kinaesthetic learning styles are most often attributed to the generation Y student,[69] 'it must be recognised that any student cohort is heterogeneous',[70] and not all students will belong to this generation, or present with a millennial student's learning profile. To address the diversity of students, a number of authors believe that the task of providing appropriate and flexible learning experiences for all student cohorts can be made easier if educators develop blended teaching and delivery models.[71] Blended models of teaching and learning are noted as being effective in engaging these students and providing them with opportunities to 'deepen their learning'.[72]

There is much debate as to the authoritative definition of blended learning. Graham, in his working definition of blended learning systems, states that blended learning occurs when educators 'combine face-to-face instruction with computer-mediated instruction'.[73] Goh[74] suggests that in an educational environment, where an institution is a distance education provider, the concept of the converged or blended delivery of programs is ideally based on the premise that there is no distinction made between internal or external student cohorts.

Universities in Australia, particularly those with distance education programs, are moving towards blended or converged models of teaching and learning,[75] and are utilising new and emerging technologies to accommodate diverse learning styles and engage students in a range

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66 Ibid, 173.

67 Ibid, 173-74.

68 Marie Stefanini Newman, 'Not the Evil TWEN: How Online Course Management Software Supports Non-Linear Learning in Law Schools' (2005) 5 *Journal of High Technology Law* 183, 192.

69 Carver and Cockburn, above n 59, 83; Angela Weiler, 'Information-Seeking Behavior in Generation Y Students: Motivation, Critical Thinking, and Learning Theory' (2005) 31 *Journal of Academic Librarianship* 46, 51.

70 Carver and Cockburn, above n 59, 89.

71 See Carver and Cockburn, above n 59, 89; Jacquie McDonald et al, 'A Conceptual Model and Evaluation Process for Educational Technology Learning Resources: A Legal Case Study' (2004) 41 *Educational Media International* 287, 288-89; Liz Polding, 'Delivering Blended Legal Learning by Open Source Methods' (2007) 1 *Journal of Information, Law and Technology* 3 <http://www2.warwick.ac.uk/fac/soc/law/elj/jilt/2007_1/polding/> at 31 July 2009.

72 Polding, above n 71, 3.

73 Charles Graham, 'Blended Learning Systems: Definition, Current Trends, and Future Directions' in Curtis J Bonk and Charles R Graham, (eds), *The Handbook of Blended Learning: Global Perspectives, Local Designs* (2006) 3, 5.

74 Bee Chen Goh, 'Leading a Regional and Rural Australian Law School' (Paper presented at the IALS General Assembly Meeting and Educational Program: The Role of Law Schools and Law School Leadership in a Changing World, Canberra, 25-27 May 2009) <http://www.ialsnet.org/meetings/role/papers/GohBeeChen(Australia).pdf>.

75 McDonald, above n 71, 288.

of learning experiences.[76] The importance of these technologies has been recognised by a number of these universities,[77] including Southern Cross University and its School of Law & Justice.

**Blended or converged delivery of law programs at Southern Cross University**

Southern Cross University is a regional, multi-campus institution[78] with a range of undergraduate law programs offered in internal and distance education modes.[79] To effectively provide flexible and quality learning experiences to students enrolled in these programs, the School of Law & Justice is working towards the development of a blended or converged model for the delivery of some of its units. This initiative is part of the Converged Delivery Project currently being implemented at Southern Cross University.

One of the pilot units chosen for the project is Legal Research & Writing. This unit is a core foundational first year unit offered across all of the Law School's undergraduate programs and covers two important skills in legal studies and legal work: research and writing. The unit is offered in both on-campus and distance modes, and has a diverse student cohort from various backgrounds and demographics including young adult school leavers, graduates of other disciplines, a variety of adult learners and employed professionals.[80]

Interaction with the cohort of distance students has been mostly two dimensional via access to unit materials and a study guide on Blackboard (and on CD), podcasts of lectures posted to the learning site and an asynchronous discussion board. Face to face interaction has been via attendance at two non-compulsory workshops and recently the synchronous virtual classroom system Elluminate[81] has been utilised to engage with these distance learners. Internal students interact in the traditional lecture and tutorial format and also have access to the resources on the unit's learning site.

The Converged Delivery Project will provide an opportunity for the Legal Research & Writing unit assessor to develop strategies to improve the pedagogical framework of the unit. A particular focus of this project will be on the use of digital technology to support the development of blended learning experiences for both internal and distance education students. The use of technologies can assist in improving student engagement, provide greater flexibility to cater for the diversity of students' learning experiences and backgrounds, and to promote self-directed learning.[82] These digital technologies should well suit the 21st century law student, as Goh states:

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76 See Murley, above n 51, 178; Crawford, above n 62, 11.

77 Tennent, above n 56, 649.

78 Campuses are currently located in New South Wales at Lismore, Coffs Harbour and Tweed Gold Coast, and a new Gold Coast campus in Queensland should be operational in 2010.

79 Associate Degree in Law (Paralegal Studies) and Bachelor of Legal & Justice Studies and LLB programs are currently offered internally at Lismore and via distance education. These programs (excluding the LLB) are also offered internally at the Tweed Gold Coast Campus. From 2010, the LLB will be also offered in internal mode at the new Gold Coast campus.

80 The geographic locations of the external cohort are also diverse. Recently in an on-campus legal research workshop for external LLB students, there were students attending the workshop who are residing in Thailand, Abu Dhabi and the United States. The geographic locations among the group of domestic students were also wide ranging.

81 In collaboration with the unit assessor, I conducted a virtual workshop for the distance students (and any internal students that wanted to join in), which was well received by the students.

82 See Anna Williams Shavers, 'The Impact of Technology on Legal Education' (2001) 51 *Journal of Legal Education* 407, 409-10; Polding, above n 71, 3; Beldarrain, above n 44, 143.

> To the children of the digital generation, digital education and distance education has become a natural convergence in tertiary education delivery. In a very short time, the landscape has shifted. The cohorts are blurred and blended. Teaching effectively in a virtual environment fulfils the needs of both internal and external students.[83]

The proposal for the development of the converged delivery unit incorporates a number of eLearning and emerging technologies to facilitate learning and will include: the development of a self-directed interactive study guide, further development of the use of the Blackboard course management system (including the use of podcasts, wiki technology and chat services), integration of the use of the virtual classroom software Elluminate into the core program, development of a series of digital modules to engage students in learning core legal research and writing skills, and the creation of self-testing exercises and pathways to cater for diverse student capabilities.

Support and resources for the development of the unit will be provided by a range of teaching and learning services, and will include involvement of the Law Librarian in the creation of digital learning objects for the unit.

## Conclusion

It is undisputed that the foundational heart of legal research can be found in the established structure of the printed text. However, as more and more legal materials were published, the traditional method of using print volumes of primary and secondary materials to locate relevant legal principles became a burden on the legal researcher. The answer to the problem was found in the advances being made with computer technology and the development of computer assisted legal research systems.

The evolution of print legal information to online formats, and the subsequent impact on legal communities, has been noted extensively in the literature and with much discussion on this shift in the legal paradigm. With the transformation of legal materials and developments in new technologies, there is a need to examine the current pedagogical approaches to teaching legal research in an academic setting.

The utilisation of a range of emerging and eLearning technologies has been especially noted in the paper as '[e]lectronic technology should be integrated into the teaching of 21st century law students to better connect with students who are the product of a learning revolution and to enhance their learning experience'.[84] Law librarians are an integral part of this connection with students and are great advocates for the use of these technologies in an academic setting. It is important that they continue to be involved with the development of new pedagogical approaches to the teaching of legal research to ensure that students are adequately prepared for their future roles in the professional legal community.

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[83] Goh, above n 74.
[84] Lasso, above n 29, 59.

**Appendix A:** Historical timeline of significant developments in electronic legal research publishing in Australia from the early 1990s to present.

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|---|---|
| **Early 1990s** | • Computer Law Services released its Commonwealth legislation CD-ROM.<br>• RMIT Publishing offered electronic access to AUSTROM databases (including AGIS).<br>• Butterworths released its first CD-ROM product, Halsbury's Laws of Australia. |
| **1994** | • Aunty Abha's Electronic Publishing was founded. Its first CD-ROM was produced covering Commonwealth, NSW and Victorian legislation.<br>• CCH Australia released its first CD-ROM in 1994-95, Australian Master Tax Guide (part of the Electronic Tax Library). |
| **1995** | • Info-One (formerly CLIRS) was bought by Butterworths / Reed Elsevier. The content of this product was later migrated to Butterworths Online.<br>• First Law Book CD-ROM produced.<br>• AustLII launched. |
| **1997** | • Butterworths Online launched.<br>• SCALEPlus available free to public. |
| **1998** | • Butterworths acquired CaseBase from Pink Ribbon Publishing, which extended its citator offerings beyond ANZ Citator to UK Reports.<br>• Aunty Abha's changed name to TimeBase. CD-ROM content was migrated to new online platform.<br>• TimeBase launched the world's first point-in-time legislation product,Timebase Corporations Service. |
| **1999** | • Content of CCH Australia's CD-ROM products were converted to Dynaweb, and uploaded to online website.<br>• LBC Online launched. |
| **2000** | • RMIT Publishing commenced offering online access to the full text content of selected materials from the AGIS Index. New product named AGIS PlusText. |
| **2001** | • LBC Online rebranded to Lawbook Online in line with the renaming of LBC Information Services to Law Book Company.<br>• LexisNexis AU launched. |
| **2005** | • Thomson database FirstPoint launched, consisting of online content of print Australian Case Citator, the Australian Digest and the Australian Legal Monthly Digest. |
| **2008** | • Lawbook Online rebranded to Legal Online.<br>• AustLII's citator LawCite launched. LawCite is the first internet-based system offering free access to citations of Australian law. |
| **2009** | • Migration of content from Lawbook Online platform to Legal Online continuing.<br>• CCH's new platform IntelliConnect to be launched . |

With acknowledgment to a number of legal publishers[85] for their assistance in providing this information and to authors of articles[86] referenced in this paper. It is noted that some information was unable to be sourced, so not all developments have been included in the timeline. Any omissions are accidental, not intentional.

[85] LexisNexis, CCH (Wolters Kluwer), Thomson Reuters.

[86] See generally Kinder, above n 11; Greenleaf, above n 22; see also Graham Greenleaf, Andrew Mowbray and Philip Chung, *Legal Research on the Internet: The AustLII Guide to Worldwide Law on the Web* (2003) AustLII <http://www.austlii.edu.au/austlii/guide/current/> at 31 July 2009.