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**Evaluation of the Effectiveness of a Tertiary Course  
Delivered via the World Wide Web  
The Case of the 86.761 Course – “Learning with Computers”**

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A thesis presented in partial fulfilment of the requirements for the degree of  
Master in Education at Massey University.

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# ABSTRACT

Delivering courses via the World Wide Web is a relatively new phenomenon. Evidence on how it can promote learning is still under investigation. The main objective of this thesis is to evaluate the effectiveness of a tertiary course, 86.761 “Learning with Computers”, delivered via the web, and contribute to the formation of a body of knowledge on this subject.

The research is organised into three phases. Phase one involves the design of the web-based course and an interview with the Paper Co-ordinator which documents his perceptions of teaching via the web, the objectives, pedagogical strategies and web tools used to deliver the course content, and the design of the user interface. Phase two of the research describes the implementation of the web-based course. In the third phase, a questionnaire is used to gather data on the students’ perceptions of the various aspects of the web-based course. It also involves another interview with the Paper Co-ordinator, which describes his perceptions of teaching via the web, after the implementation of the web-based course.

Analysis of data shows that there had been a positive evolution in the Paper Co-ordinator’s perceptions of teaching via the web. Regarding the students’ perceptions of learning via the web, results suggest that it was a positive and valuable experience, meaning a step in the right direction, yet with plenty of room for improvement. As for the objectives of the web-based course, some were clearly better achieved than others. The pedagogical strategies used to deliver the course content were accomplished with different levels of effectiveness. The results also reveal that the web tools used in the web-based course achieved various degrees of success. Finally, with respect to the user interface, findings show that the web-based course was simple,

easy to use and friendly. The aspects of consistency, access and navigation were considered acceptable, yet with plenty of room for improvement. However, the aspects of online help, advice and customisation were considered inadequate. In summary, this thesis was moderately successful in achieving its main objective. More research is needed on how to effectively use the web for teaching and learning.

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# Glossary

<b>ARPRANet</b>	A packet switched network developed in the 1960s.
<b>Asynchronous Communication</b>	A term that indicates that communication can take place without both parties being logged on at the same time.
<b>Browser</b>	A software used to read hypertext information and navigate through various web sites (e.g., Netscape Communicator, MS Internet Explorer).
<b>Chat mode</b>	Form of communication in which messages are exchanged in real time rather than stored for later reading.
<b>Discussion Forum</b>	Online discussion group in which users contribute comments to be read by all other users.
<b>Electronic mail (Email)</b>	Electronic transmission of messages sent across a network to an individual or a group.
<b>File Transfer Protocol (FTP)</b>	Standards allowing the transfer of files to and from a host computer.
<b>Gopher</b>	An early form of computerised information distribution system. Gopher is a menu based system protocol, which allows a computer to maintain a database of information, which can be searched by other computers through the Gopher protocol.



<b>“Lurker”</b>	A person who mainly reads or listens to a mailing list document or Usenet newsgroup, without actively participating.
<b>Modem</b>	Computer peripheral device allowing information to be exchanged over a telephone line between computers.
<b>Multimedia</b>	Communication format integrating several media (text, audio, visual and animations), most commonly implemented with a computer.
<b>Network</b>	A communication system linking two or more computers.
<b>Platform</b>	Refer to a specific computer or operating system (e.g. a Macintosh is a platform). Platform independent means that a piece of software should work on a computer no matter what its operating system or make.
<b>Synchronous Communications</b>	Data communication in which transmissions are sent at a fixed time rate (e.g. two or more individuals communicating online at the same time to one another).
<b>Telnet</b>	A basic function provided by the TCP/IP protocol on the Internet is Telnet. This allows an individual to interact with another computer as if she or he were directly connected to the remote computer.
<b>Transmission Control Protocol/Internet Protocol (TCP/IP)</b>	Standards that allow different computers to transfer data over the Internet.
<b>Upload</b>	Transfer electronic data from a local to a remote computer.
<b>User Interface</b>	Methods by which the user interacts with the contents of a computer application.

<b>WebCT (World Wide Web Course Tools)</b>	An authoring software package used to design and deliver content via the web.
<b>Wide Area Information Service (WAIS)</b>	A form of database available on the Internet.
<b>World Wide Web (WWW or web)</b>	Information available in hypermedia through the Internet.

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