

Web-based Learning - WebCT in practice

Rod Kevill

Lecturer, Centre for Educational Advancement

Curtin University of Technology

Perth, Western Australia

r.kevill@curtin.edu.au

Abstract

Curtin University of Technology first launched WebCT in mid 1997. Since then, its adoption by teaching staff in terms of units and students has been extraordinary. Current usage (December 1999) is around 35,500 students enrolled in about 500 units. Approximately 70% of these units are “live” and currently in use by students.

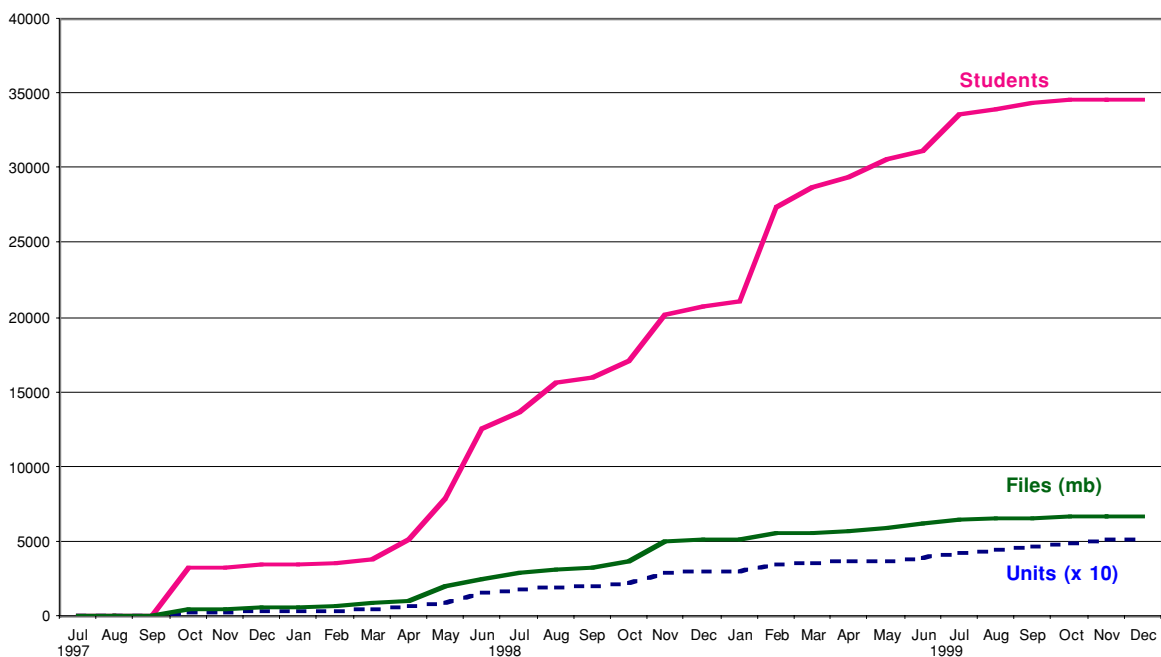
This paper will present the results and analysis of a recent survey of Curtin’s WebCT users, and will highlight some of the administrative and support issues that arise in the implementation of a large-scale web-based learning environment.

The survey focuses on such aspects as the predominant WebCT tools, content and media types used in WebCT units, the degree of satisfaction of unit designers with WebCT tools and the development interface in general, and the distribution of students and units across Curtin’s teaching divisions.

Introduction

WebCT has shown phenomenal growth at Curtin over a relatively short period of time since implementation. Academic staff have embraced the web-based learning environment with enthusiasm and have been encouraged to “do their own thing” with this flexible, robust and intuitive development medium.

WebCT Growth Jul 97 - Dec 99



Staff training has focused on basic skills in developing web-based materials, constructing a pedagogically sound on-line learning context, and implementing these materials and structures into the WebCT framework for delivery to students. On-line assessment and its problems and issues have also been addressed. Such training has been continuous and intensive over the last twenty-four months.

The nature of designer/lecturer access to units has meant however, that the unit structure and content has remained essentially private to other academics (and to WebCT project managers!) and that little was known about such aspects as the degree of use or the range of WebCT tools incorporated into the unit, or the difficulties faced by students in using particular components of WebCT.

Two on-line surveys were created to determine answers to these and other questions. The first was aimed at Designers of WebCT units, and the second was based on questions relating to individual units offered via WebCT. In each case, the lecturer responsible for the unit completed the questionnaires.

The Designer Questionnaire requested information on the following:

- Curtin teaching division in which the lecturer was based
- Self-rating of designer skills in WebCT
- Source of those skills
- Number of WebCT units which were active and under development
- Lecturer's motivation for developing an on-line unit
- Degree of satisfaction with useability/functionality of a range of aspects of the WebCT environment
- WebCT professional development interests
- Perceived student difficulties with WebCT units

The Unit Questionnaire sought responses relating to the following:

- Curtin teaching division in which the unit was offered
- The year group of students accessing the unit
- Proportion of students from various geographic locations (e.g. state, country, overseas)
- Implementation of "student" WebCT tools (e.g. email, bulletin board, password)
- Content types offered within the unit (e.g. text, pdf, audio, video)
- Estimate of student usage of the various components of the unit
- Open ended comments relating specifically to the unit

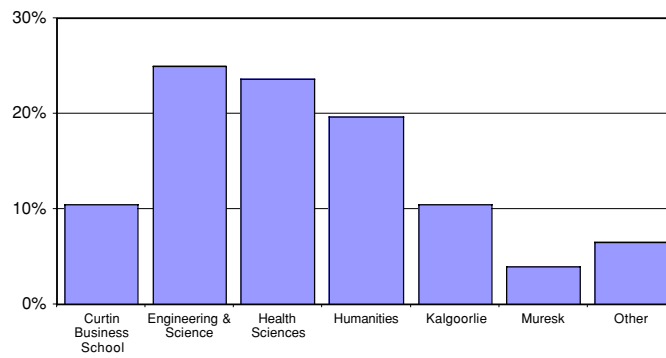
Survey Results

At the time of writing, data analysis is still proceeding, and further details will be available in the conference presentation. The following graphs illustrate the main interim findings of the surveys. There were 76 "Designer" questionnaires completed, and 224 responses to the "Units" questionnaire. These responses represent 59% of designers and 62% of WebCT units. The version of WebCT installed at the time of the surveys was v1.3.1.

Designer Survey

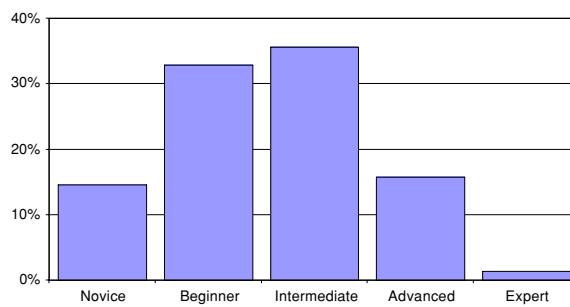
Distribution of Designers over the Curtin Teaching Divisions

Distribution by Division



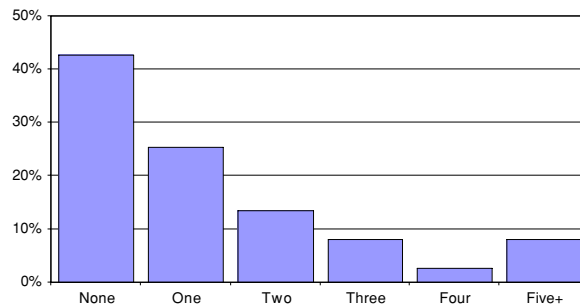
Self-rating of designer skills with WebCT.

Skill Level in WebCT

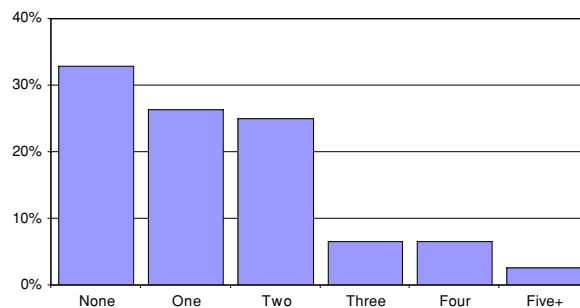


How many WebCT units do you currently have a) On-Line, and b) Under development

Number of Units Completed

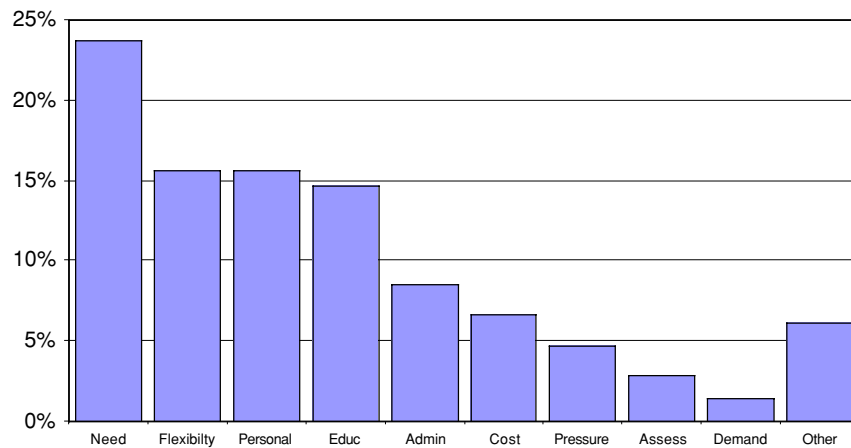


Number of Units Under Development



What factors provided the motivation for you to develop an on-line unit?

Motivation



The categories here are:

A need to provide access for remote/distance/off-campus students

Requirement for increased course flexibility

Personal interest

Educationally, a better way of teaching & learning

Student management facilities provided by WebCT

Cost effectiveness of placing units on-line

Pressure from your school /department

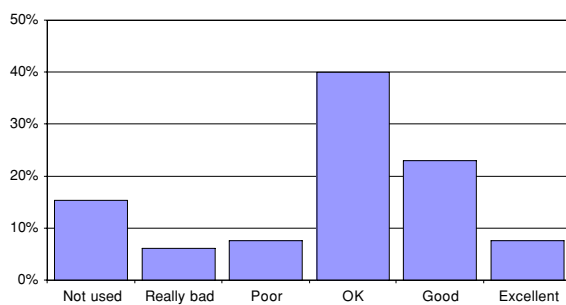
Requirement for on-line assessment

Demand from students for on-line access

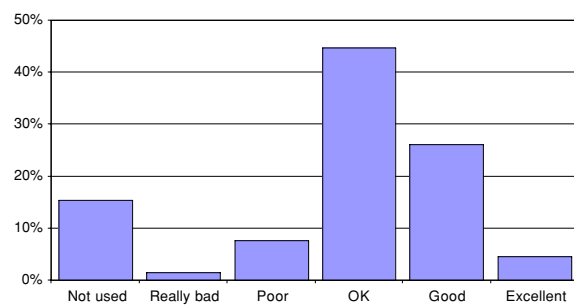
Other (included need for supplementary materials to be provided on-line, facility to provide student support whilst travelling overseas, easy development tools, learning about on-line delivery, catering for large unit enrolments, to increase interaction amongst students).

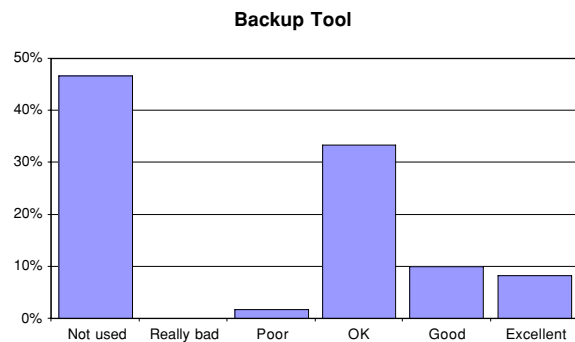
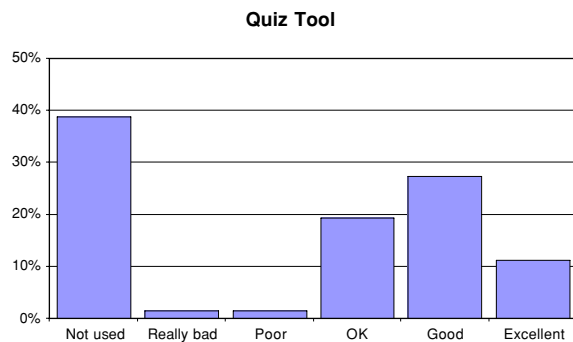
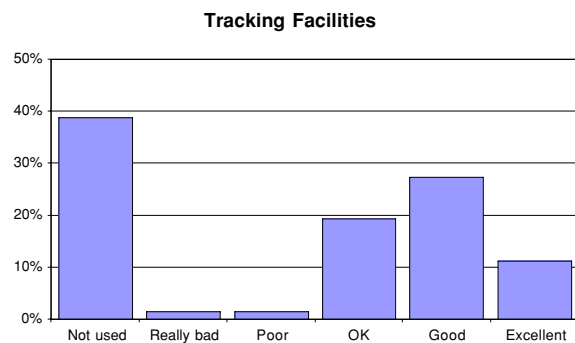
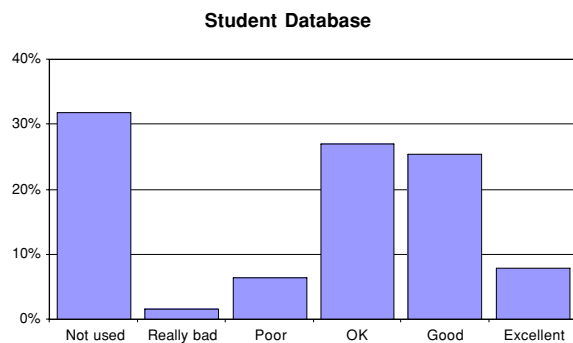
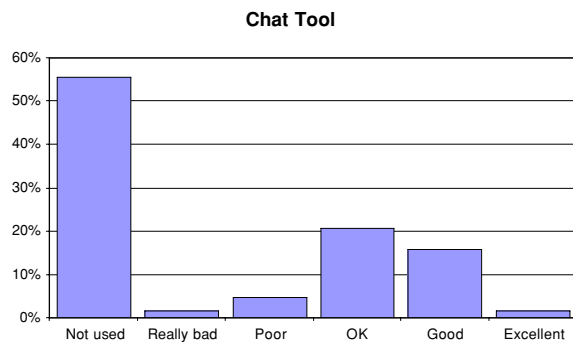
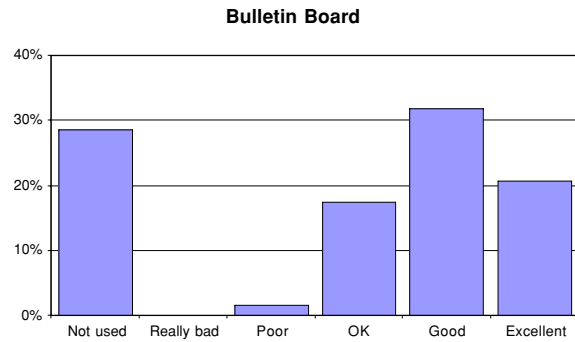
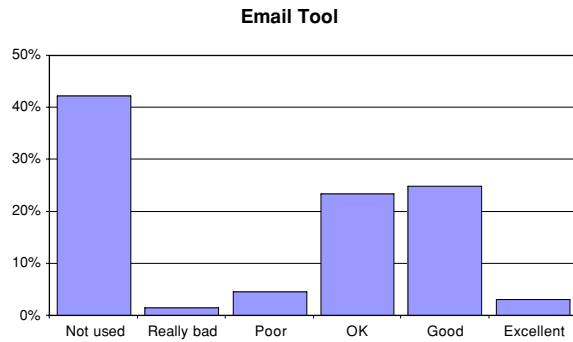
Degree of satisfaction with useability and/or functionality of WebCT facilities and tools.

File Manager



Unit Maintenance





Comments about the degree of satisfaction with WebCT included
 a facility to FTP directly to WebCT would be useful, with multiple files at once rather than having to Zip files
 difficulty in overriding WebCT's navigation
 frustration with equation-writing and the resulting multitude of files generated
 some facility needed to "share" resources between units
 frustration with the "tedious" nature of the web – refreshing of pages, confirmation of dialogue boxes.
 Editing and customisation of pages could be improved
 WebCT environment is restrictive compared to the usual web site development
 Designers were asked to comment on the main difficulties experienced by their students in using WebCT.

Comments included

access to computers is a problem for students – campus labs are often overcrowded and students lack the hardware at home

lack of computer literacy skills

technical problems occurring in the middle of quizzes, or access “drops out”

learning to use the tools in WebCT e.g. the bulletin board and e-mail

confusion between the SES (Student Electronic Services) login and the WebCT unit login

lack of on-line study skills – self discipline to handle self-directed study

remembering passwords and usernames – case-sensitivity of these

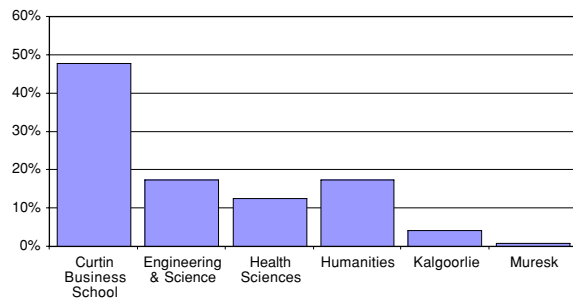
students tend to print everything rather than read from the screen

excessive amount of scrolling required for quizzes

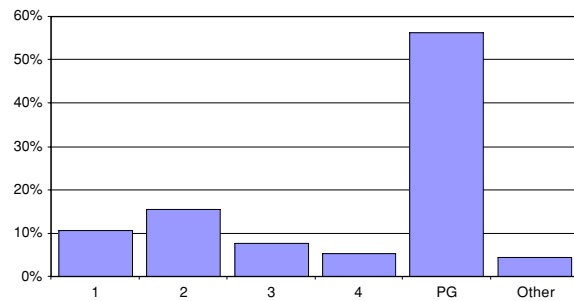
Units Survey

This survey was completed once for each unit by the designer responsible for the unit.

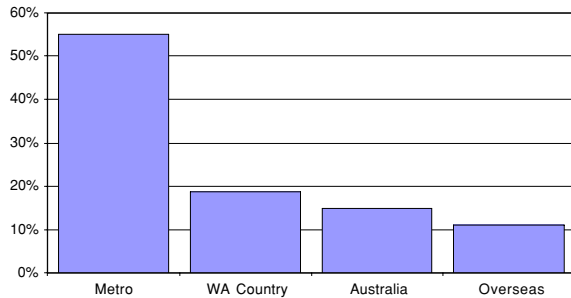
Distribution of Units by Division



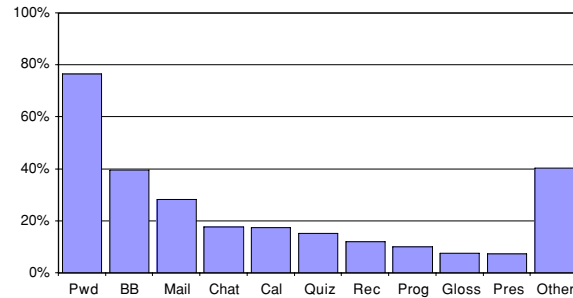
Year Group of Target Audience



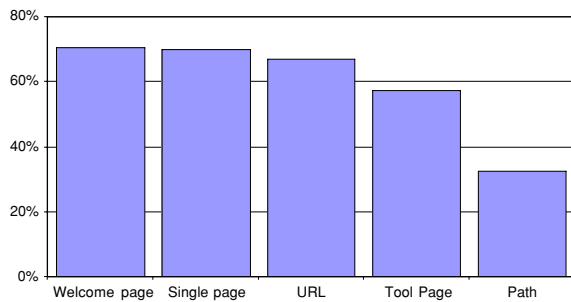
Geographic Location (Some or Most)



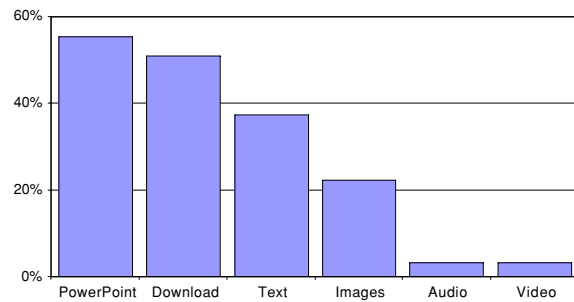
WebCT Tools included in the Unit

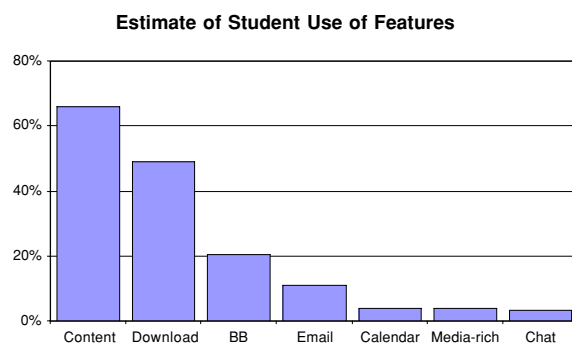


Other added features of WebCT



Type of Content in the Unit





Summary

Although the analysis of the results is incomplete, the raw information obtained from the two surveys provides some interesting insights into the use of WebCT at Curtin University of Technology. The conference presentation will provide further analysis of the data.

Distribution of Designers and Units is dissimilar over Curtin teaching divisions. For example, only 10% of designers are from the Curtin Business School, yet they are responsible for nearly half of all WebCT units (and 60% of students enrolled in WebCT units).

The highest motivating factor for designers to put their units on-line was the need to provide access to remote or off-campus students, followed by a requirement for greater flexibility in units, personal interest and educational benefits. Less than 5% were motivated by pressure from their school or department, and even less were prompted by a need for on-line assessment.

In general, designers were happy with WebCT's tools and facilities, although the figures for "Not Used" were somewhat alarming. (especially the backup facility). The highest rating tool was the Bulletin Board. Over 50% of units are targeted at postgraduate students, with 10% for first years and 15% for second year students.

Most units (55%) are provided for Perth metropolitan students, decreasing down to 10% for overseas students. The tool most commonly used in WebCT units is the Password tool (included in 77% of units) followed by the Bulletin Board (40%), Mail (28%), Chat (18%), Calendar (17%) and Quiz (16%).

The type of content incorporated in units was surprising. PowerPoint slides (displayed within WebCT) were included to a large or moderate extent in 55% of units, while 51% of units included compressed files for student download (zip, pdf, docs, etc). Text and images followed at 37% and 22% respectively, with video and audio content in about 3% of units.

The estimate of student use of WebCT features indicated moderate to heavy use of content pages (66% of units) and file downloads (49%), followed by the Bulletin Board (20%) and e-mail (11%).