STAFF PERCEPTIONS OF BLACKBOARD AS AN ONLINE TEACHING TOOL IN TERTIARY EDUCATION

By

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The globalised economy and advanced web technologies are the key drivers for the growth of demand for flexible learning. To cope with the increased demand, educational institutions are continuing to explore the potential of e-learning technologies to enable changes in teaching and learning methodologies. Tertiary education providers are making huge financial investments on e-learning development. Such providers also continuously assess whether e-learning technologies are utilised to their full potential and if the providers’ efforts are achieving the expected return on the investment. Specifically these assessments aim to measure the level of effectiveness, ease of usage, flexibility, extent of utilisation and faculty perceptions of learning management systems.

This study aims at understanding the perceptions of staff at Unitec who have been using a software application called Blackboard that provides an online instructional environment. The study analysed the adoption of e-Learning in tertiary education and the extent of utilisation of Blackboard as a Learning Management System (LMS) by the instructors. This research study investigated the factors that influence staff perceptions while using Blackboard in the online teaching environment.

The study identified three relevant key variables namely Perceived Ease of Use, Perceived Usefulness and Staff’s Computer Background from the widely used Technology Acceptance Models drawn from the literature review. The research followed a Mixed Method Design where the results of qualitative data are further explored using quantitative survey to ascertain the identified results. Results from this study determined the level of usefulness is related and influences how often staff use Blackboard and how effectively instructors use the course tools on Blackboard. The perceived Ease of Use is not dependent on staff’s usage of Blackboard. Staff training has an impact for better utilization of the Blackboard features. However, the study revealed IT experience of staff has no considerable impact on usage and utility of Blackboard.

*Key words: Staff perceptions, Blackboard, E-learning, Perceived Ease of Use, Perceived Usefulness.*
Name of candidate: Saroja Missula

This Thesis/Dissertation/Research Project is submitted in partial fulfillment for the requirements for the Unitec degree of Master of Computing.

CANDIDATE’S DECLARATION

I confirm that:

- This Thesis/Dissertation/Research Project represents my own work;
- The contribution of supervisors and others to this work was consistent with the Unitec Regulations and Policies.
- Research for this work has been conducted in accordance with the Unitec Research Ethics Committee Policy and Procedures, and has fulfilled any requirements set for this project by the Unitec Research Ethics Committee.

Research Ethics Committee Approval Number: 2008.795

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Signature: Date: 28-10-08
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Advances in the development of World Wide Web and the internet are the key drivers for the efforts of education providers to explore new methodologies for teaching and learning. These efforts catalysed the process of integrating technology-mediated tools in education. Such mutually induced supply demand chain greatly influenced different modes of teaching and learning, thereby creating an interdependent learning environment. Different modes of teaching and learning in the form of online, distance, mobile and network learning environments motivated and to an extent compelled faculty to develop and deliver online teaching materials (Georgiev, Georgieva & Smrikarov, 2006). However, the socio-cultural aspects that underpin the technology integration in education have restricted the pedagogical use of these educational technologies in the early period of 21st century (Selwyn, 2007). To understand more about the technology integration in education it is analysed how the adoption of E-Learning Systems has been done.

1.0 Adoption of E-Learning Systems

During the 1970s and 1980s, web-based instruction theories followed behaviourist theories (Skinner, 1968) and the learning models of information processing (Eggen & Kauchak, 1999). According to theory of Social Constructivism by Vygotsky (1978), education should be cultivated, generated and improved with the help of interaction with groups of learners but cannot be imparted forcefully. The exercise of exchanging ideas led to the introduction of new teaching tools in turn to help in improving interaction among learners and with teachers. On the other hand, other researchers such as Gagne (1985) explained that using sequence of programmed events imparts and directs learner to gain knowledge and understanding (Roblyer & Edwards, 2000). The best of all these theories in online teaching methodologies facilitate to deliver effective teaching and learning along with enabling communication among various stakeholders.

In the late 1990s a key development in e-Learning, was the adoption of course delivery system using web technologies that usually referred to as Learning Management Systems (LMS). One such e-Learning system, also considered as
“technological innovation” by Hogarth and Dawson (2008), is ‘Blackboard’, an enterprise solution that facilitates web based e-Learning. With the introduction of LMS in flexible learning environments, teachers could develop and deliver course materials for students. According to Quarless (2007), the growing prevalence of Learning Management Systems is providing more opportunities in tertiary education by mainly exploring design of integrated systems for better suitability in online learning environments. Vrasidas (2004) described the main functions of any LMS system such as (1) Course administration and Management (2) Course Pedagogy Teaching and Learning.

Graves (2001) suggested that there are two main reasons for education providers to adopt e-learning tools: 1) To improve the traditional classroom environment with web based technologies with flexibility for access of web based course materials and communication 2) To implement the concept of distance education where there is no traditional class environment and minimise the classroom time. However, it is still a challenge for teachers to adopt the new course delivery formats in spite of the support or training provided by their management (Perreault, Waldman & Zhao, 2002).

1.1 Research Purpose

The purpose of this research is to understand the staff perceptions of using Blackboard and to determine levels of usage of Blackboard by staff. This study also addresses the problems staff experienced and the features of Blackboard useful in their courses. Staff from the School of Computing and Information Technology (SCIT), the School of Education and the School of Communication, were asked questions about how useful the different features of Blackboard were when delivering an online course. In addition, the staff were encouraged to explain issues such as student benefits and staff training in relation to using Blackboard.

This research provides information to Unitec’s management on issues such as the level of use of Blackboard by staff and their perceptions. This information helps the management to encourage better utilisation of Blackboard by staff. Also it assists management to support their staff to overcome any technical difficulties. By
identifying these issues staff are better supported and hence use Blackboard more effectively as a teaching tool.

1.2 Background Study

Unitec was founded initially as Carrington Technical Institute in 1976. It went through few name changes with Carrington Polytechnic in 1987, Unitec Institute of Technology in 1994 and finally to ‘Unitec New Zealand’ in 2004. These name changes reflected the dual sector nature of the organisation combining both university and polytechnic attributes. Unitec has extended its campuses to Waitakere City, West Auckland and to Takapuna, North Shore. Unitec offers a wide range of programs including certificate courses, diplomas, bachelor’s degrees and doctoral courses.

1.2.1 Development of E-Learning at Unitec

In the early days of distance education, the postal services facilitated course delivery and despatch of study materials (Keegan, 1986). With the rapid development of internet technologies, distance education has evolved using these technologies, in particular the internet and compressed video. This form of flexible mode of course delivery has given rise to a new concept called online learning, also referred to as e-Learning (Ostendorf, 1997). Harasim (1989) refers to online learning as a combination of distance education and traditional face-to-face education using computer mediated instruction. Most of the education providers including Unitec have implemented flexible learning through e-Learning technologies. Richard (2005) explained the categories of flexible learning environment as:

- **None or trivial online presence**: It is based on traditional classroom environment with usage of electronic tools.
- **Web supplemented**: Students use course documents provided by lecturers, communicate by emails and refer external links for additional course information
- **Web dependent**: Students are required to participate in key course activities through online discussion, discussion board while attending classroom.
- **Mixed mode**: Students need participate in online activities as course requirement as well as attending classroom sessions. Some part of classroom sessions can be replaced. This method has been implemented at Unitec to facilitate working students.
- **Fully online**: Students need not attend classes.

Unitec adopted a mixed mode of teaching where “students are required to participate in online activities, e.g. online discussions, assessments, online project/collaborative work, as part of the course work, which replace part of the face-to-face teaching/learning. Significant campus attendance remains” Richard (2005, p.37).

In 1998 Unitec adopted Blackboard with four new courses. Their aim was to enhance teaching and learning and improve access to information resources. There are online courses that require students to attend class and participate online. However, there are online courses where students are not required to attend classes and there are no face-to-face interactions between students and teachers. At Unitec, the online courses have increased to 750 during 2004 and at present, there are 1,408 online courses, eight of which are completely online using Blackboard as the teaching tool (Unitec, 2008). One of the key objectives of Unitec Annual report includes “Leadership in technical and further education” by developing multimedia tools, the rapid growth in online and distance education facilities with the flexibility of time and space (Unitec, 1999, p.13). Unitec with the help of Centre for Learning Technologies could achieve:

“More than 80 courses now have substantial on-line components, developed by key staff members with invaluable leadership and support” (Unitec, 1999, p.15)

At the time when Unitec first implemented Blackboard, the chief executive stated in the Annual Report 2000 that there would be increased use of e-Learning
technologies in student learning with the increase of more online courses and expansion of multi-media in courses. The report said:

“Increasingly, we expect students to select e-learning mechanisms to supplement, or in some instances to replace, face-to-face studies by time-shifting lectures and tutorials and planning study schedules to fit in with their other commitments” (Unitec, 2000, p.11)

The Annual Report 2007 states a total 3,856 full time students enrolled in e-learning courses, thereby exceeding the target of 3,800. This is due to development of courses with e-Learning components as “E-learning is widely utilized to support and enhance teaching undertaken in the classroom and other traditional learning environments” (Unitec, 2007, p.26).

1.3 Research Questions

To gain an understanding of usage of Blackboard by Unitec staff, the underlying principles of TAM’s model and Landry’s (2003) theory were used to develop the following questions:

“What are staff perceptions of blackboard as an online teaching tool in tertiary education?”

The following research sub-questions explore the main research question further:

1. What are the usages of Blackboard as a teaching tool?
2. What features do staff perceive as effective on Blackboard?
3. What are the difficulties in using Blackboard as a teaching tool?
4. What are staff opinions for making Blackboard more functional?

1.4 Assumptions and Limitations

This research study assumed that most of the participants are familiar with the use of Blackboard application. It is assumed in this research that all courses presently taught at Unitec are uploaded in Blackboard as online courses.
The limitations for the research study are:

- The research was solely conducted at Unitec and no other institutes were included.
- Data collected from the staff of School of Information Technology and Communication, the School of Education and the School of Communication only.
- All the required information was not collected due to confidentiality constraints.
- This research does not take into account what are the staff needs; the research focus is only on features of Blackboard.
- This study assumed that most of the participants are familiar with the use of Blackboard application. Instructors who use Blackboard at the very basic level may not have given complete feedback about how they use all course tools.

1.5 Significance of the research

This research study has three significant benefits. First, the research findings assist to gain an additional understanding of staff perceptions of Blackboard as an online teaching tool. Second, this research outcome will help the management to identify issues of decision on integration of Blackboard with traditional classroom teaching. Third, this research study may bring changes in staff preferences of using course tools in traditional classroom in flexible environment.

1.6 Organisation of this Report

The remainder of this research report has been organised as four chapters. Chapter 2 provides a review of relevant literature pertaining to the issues and problems described in this chapter. Chapter 3 explains the methodology of this research to address the proposed issues and problems with analysis of sample population, data collection instruments, data collection methods and data analysis. Chapter 4 offers and reviews the research results from the collected responses using the methodology explained in chapter 3. Chapter 5 interprets the study results with discussion, summary, conclusion, further recommendations and provides answers to the research questions.
CHAPTER 2 LITERATURE REVIEW

2.0 Introduction

The researcher extracted relevant literature for this research study from Unitec’s online databases, journals, books, annual reports of Unitec and conference proceedings. In this chapter, it is summarised about the information that is gathered from multiple resources.

Due to advances in digital technologies and usage of technology tools in daily life of society, education providers have found a need to incorporate educational technology in teaching and learning. This has given rise to “provision of education or training electronically, via the Internet” (ERICSSON, 2006). Further to this concept, Appana (2008, p.1) reviewed the potential benefits of investments in online learning such as “increased access, improved quality of learning, better preparation of students for a knowledge-based society, “lifelong” learning opportunity, profit making” and limitations as “online learning start-up funding, organizational preparedness and student readiness”. Thus, course delivery through electronic media has helped education providers fulfill the growing demand for flexible learning. This has given rise to, a new concept called e-Learning which is defined as

“E-learning is the collection of teaching and information packages – in further education which is available at any time and any place and is delivered to learners electronically. E-learning offers more lower level learning goals. Higher order goals like understanding, reasoning and (moral) judging are more difficult to achieve. They require an individualised interactive discourse and can hardly be planned”

(Dichantz, 2001).

In New Zealand, tertiary education providers have started to use technology based tools for course delivery in 1990 and one such tool called ‘Blackboard’ facilitated teaching processes online and eliminated the difficulties of course delivery
thorough the postal services. Even though many of the tertiary education providers started adopting online teaching activities during the 1990s, New Zealand Open Polytechnic Institute is the first one that started using online teaching tools. According to Nanayakkara (2007), it became necessary to incorporate online teaching tools for education providers and at present, many of the institutes are using ‘Blackboard’ as their LMS.

In course management systems, Blackboard has become a “glorified toolkit” to meet the demands at the teaching level as “there is the desire to promote active learning and perhaps employ cooperative/collaborative learning strategies and online learning assessments that offer timely feedback to student and instructor alike” (Quarless, 2007, p.2). By implementing online teaching tools in the mixed-mode learning environments, there is an increase of student learning capabilities due to combining traditional classroom teaching with online teaching (Wheeler & Jarboe, 2001). Also, the increased use of technology tools in classroom motivates staff to use these course tools more extensively as observed by Wheeler and Jarboe (2001). Understanding staff perceptions helps management to allocate staff release time because staff’s available time and student requirements sometimes limit instructor’s desire to develop and test the features of new instructional tools (Walker, 2004).

2.1 Web Based Instruction and Blackboard

Halloran (1999) found that Blackboard and WebCT are highly acceptable courseware amongst LMSs that have components of pedagogical use and a large range of course tools. It is necessary to ascertain how appropriate Blackboard is as an online teaching tool. “In a comparative study of Blackboard and Moodle LMS, course developers found that the navigation tool redundancies were a disadvantage in the Blackboard system since they occupied considerable course space” (Quarless, 2007, p.3).

While discussing how these applications are evaluated Halloran (2002, p.2) investigated that evaluation is mostly done on what these packages ‘Can do’ rather than what they ‘Need to do’. Packages evaluated the course tools appearance in the
application have not taken into account the ease of use and whether these tools are useful for faculty and students. Few issues such as development of the course materials and selection of additional resources for student’s reference addressed when evaluating applications for their ease of use. In these types of evaluations, the actual course materials developed were not studied.

Another researcher Halloran (2002) found that it is not possible to assess or predict how a LMS is suitable for an educational institute based on evaluation with its features and functional analysis. Because the requirement of a LMS is not only operational ease of use but also the application should be pedagogically sound for staff and students. However, development and successful implementation of such learning applications is dependent on how well “integration of the user interface design with instructional design” has been achieved (Nam & Smith-Jackson, 2007, p.1).

Despite the resistance to new web based technologies, increased use of technology tools results in greater pedagogical benefits for the instructor. However, due to the difficulty in predicting the reason for quality outcomes, researchers have observed that it is the way technology is used, rather than the impact of technology itself (Wingard, 2004).

As mentioned by Wingard (2004) the study done by Learning Technology Consortium held in 2001 on assessing the effects of web based teaching and learning in face-to-face education environments revealed the following:

- Requirement for ongoing staff training
- Collaboration in finding the capabilities of technologies
- Redesign of course materials

As mentioned by Wingard (2004) changes to instructional designs which requires more teacher’s time and effort, results in bringing slow changes to instructional strategies. The technological evolution in instructional strategies has influenced not only the classroom environment but also the instructor’s perceptions as identified in the following section.
2.1.1 Faculty Perceptions on Learning Management Systems

Teachers anticipate that the technology should be reliable and easy to use to accomplish complex teaching tasks. It is possible that the desired instructional deliverables can be achievable provided the technology tools are simple to use and are able to meet the pedagogic need of the instructors. However, there is a slow change in instructional practices using technologies due to various levels of instructor’s acceptance of online teaching tools. Moreover, certain factors such as new technologies, instructional medium, designing courseware and organization policy often challenge these instructional strategies (Newman & Scurry, 2001).

Daugherty and Funke (1998) in their survey of staff and students found that 77% of participants gave positive feedback that discussion boards and emails improved collaboration amongst users. However, they also found barriers in the use of Learning Management System by faculty such as:

- Lack of technical and administrative support
- Inadequate preparation time for the development of assignments and courseware
- Inadequate software and technology
- Inadequate technical knowledge

“At the instructor level, there is the desire to promote active learning and perhaps employ cooperative/collaborative learning strategies and online learning assessments that offer timely feedback to student and instructor alike” (Quarless, 2007, p.2). This statement suggests that teachers are able to impart collaboration and communication by making use of technology tools provided by LMS. On the other hand, there is an apprehension expressed by faculty that online teaching may become mandatory instead of supplementary, and they fear online interaction between teacher and students replaces face-to-face interaction (Walker, 2004).
2.2 Theories on Adoption of Learning Management Systems

2.2.1 Technology Acceptance Model

Technology Acceptance Model (TAM) originally designed by Davis (1989) has become popular as one of the theories to evaluate any information system’s user understanding and evaluated the decision factors and perceptions about how and when the technology tool is used. This model used two determinants (1) Perceived Ease of Use (PEOU) and (2) Perceived Usefulness (PU) to predict the user’s intentions and readiness to use web-based instruction tools such as Blackboard (Walker, 2004).

Although the initial stages of using and understanding an information system such as Blackboard is dependent on its ease of use, it is the usefulness of the system and the support by the organisation that have the major impact. For late adopters, this is due to the change of perceptions over time and increased experience. In addition, the belief about PEOU and PU mediates the instructor’s intentions to use such a system (Venkatesh, 1999). Hence, it is presumed that staff perceptions change with time as they gain more experience in teaching online courses using Blackboard. This also supports the premise that innovative usage of an application is determined by its perceived ease of use and perceived usefulness (Igbaria, Zinatelli, Cragg & Cavaye, 1997). A comparison can be done between research findings of this study with observations of Walker and Johnson (2008, p.1) as “the factor that was most likely to predict the acceptance of web-enhanced instruction was its usefulness and effectiveness”
2.2.2 Extended Technology Acceptance Model

The study of Landry (2003) validated the application of TAM theory in educational environment and identified the influence of external variables such as the instructor’s computer background, as shown in Figure 2.2. Walker (2004) believed the strongest predictor of a staff member’s intended usage is dependent on four independent variables (1) Ease of use, (2) Usefulness, (3) Computer skills and (4) Organization support as shown in Figure 2.3.
Walker (2004, p.99) in his study analyzed the components used to analyse PU, PEOU, Intended Usage and identified the most frequently used tools as “Announcements, Course Information, Faculty Information, Assignments, E-mail, Assessments, Discussion Board, Digital Drop Box, and External Links”.
2.2.3 Other frameworks and models

Nanayakkara (2007) developed a theoretical framework based on the following factors to assess the LMS user adoption. They are:

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<thead>
<tr>
<th>Factor</th>
<th>Relevant to this research</th>
</tr>
</thead>
<tbody>
<tr>
<td>individual characteristics</td>
<td><em>Not applicable</em> as Staff’s individual characteristics are not identified</td>
</tr>
<tr>
<td>individual perceptions</td>
<td>This factor is applicable as Individual perceptions of Unitec staff were evaluated to identify the effectiveness and usage of Blackboard.</td>
</tr>
<tr>
<td>LMS system characteristics</td>
<td>It is studied what features of Learning Management System at Unitec assisting the teaching needs, how course tools are used, their frequency of use and how certain tools are being used in the class room have been analyzed.</td>
</tr>
<tr>
<td>external system characteristics</td>
<td><em>Not applicable</em> as the external system characteristics are not identified in this research due to scope limitation.</td>
</tr>
<tr>
<td>organisational support</td>
<td><em>Not applicable</em> as Unitec’s support system is not studied in this research.</td>
</tr>
<tr>
<td>organisational characteristics</td>
<td><em>Not applicable</em> as Unitec’s characteristics as an educational body is not in the scope of this research study.</td>
</tr>
</tbody>
</table>

Table 2.1: Framework showing adoption of LMS factors  
(Source: Nanayakkara, 2007)

Venkatesh, Morris, Davis and Davis (2003) presented ‘The Unified Theory of Acceptance and Use of Technology’ (UTAUT) theory in which they stated four constructs that act as direct determinants of predicting the usage of information system.

These are:

1. performance expectancy
2. effort expectancy
3. social influence
4. facilitating conditions
The framework as mentioned by Nanayakkara (2007) have partial relevance to this research as only few determinants such as ‘individual perceptions’ and ‘LMS system characteristics’ are relevant to this research. UTAUT theory of Venkatesh et al (2003) is not used in this research study as the determinants specified above were not studied in this study.

2.3 Previous Research at Unitec on Blackboard

Malcolm (2003) in her research on staff opinions on Unitec’s LMSs identified the following factors:

1. Motivation for staff to use Blackboard for course delivery
   - Flexibility to use Blackboard as an extension to classroom where students can access all course materials any time any place.
   - Blackboard is easy to use and easy to learn
   - Requirement to work off campus will facilitate students for learning at their own time.
   - Staff felt it is an opportunity for development of new ideas

2. Barriers for using Blackboard
   - Lack of release time and more workload
   - More workload due to design and preparation of course materials and course related activities.
   - Organisation factors such as peoplesoft usage
   - Lack of technical support
   - Could not cope with technology

3. Reasons from staff opinions on why they use Blackboard.
   - Management’s policy to upload course information of every course on Blackboard. All the courses are available only through online.
   - To communicate with students using emails, chat
   - Enabling students to access course materials and handouts while in off campus.
Reusability of course materials through semesters

To follow the concept of Green IT such as paper saving as courses are available online. Malcolm (2003).

Northover (2005) in his research on “The development of online learning at Unitec” observed that one of the difficulties faced by Unitec as increase of work load. This finding was supported by Malcolm (2003). Other issues identified were IT literacy of staff as one of the factors while developing an online course delivery system.

Another researcher Sheriffdeen (2007) who had conducted similar research on “Challenges faced by Staff and Students at Tertiary level in flexible learning environment” at Unitec revealed the following:

- Courses should be made attractive by using LMS tools like Blackboard so that students get motivation to learn.
- As students are learning using computers from their previous class it is a must to incorporate online media for course delivery
- There are more benefits to students if Blackboard is used for teaching.
- Support staff have negative opinions of Blackboard that it is used as a replacement to traditional face to face teaching.

The literature for this research was taken from different resources i.e., theories, previous research at Unitec on Blackboard, quantitative surveys and interview transcripts. The literature identifies that the participants have raised three issues and they form as the basis to identify categories for this research. Table 2.2 shows the connection between each theme to a research question and the literature articles.
<table>
<thead>
<tr>
<th>Name of Theme</th>
<th>Relation with Research Question</th>
<th>Source from Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Computer Background</td>
<td>Staff perceptions of Blackboard as an online teaching tool in tertiary education.</td>
<td>Landry (2003)</td>
</tr>
</tbody>
</table>

Table 2.2: Table showing relation of research questions with literature

The themes developed from the literature review and their connection to the research questions were analysed. The following sub chapters discuss the relevant determinants used for this research.

2.4 Theories adopted in this research

The following sub chapters PEOU, PU and Computer Background describe the frameworks adopted for this research.

2.4.1 Perceived Ease of Use (PEOU)

As mentioned by Newman and Scurry (2001), teachers anticipate that to accomplish complex learning tasks technology should be reliable and easy to use. In addition, the desired instructional deliverables can be reached only when the technology tools are simple enough to use and meet the pedagogic need of the instructors.

PEOU as defined by Davis (1989) is “the degree to which a person believes that using a particular system would be free from effort”. TAM theory validated a concept that increased use of PEOU and PU improves the usage of technology (Tourtilotee, 2001).
The key determinants as provided by Segars and Grover (1993) for measuring PEOU are:

1. easy to use
2. easy to learn
3. easy to become skillful
4. clarity
5. and understandability

The above determinants help to identify how the Unitec staff feel about using Blackboard and how intuitive are the navigational tools.

2.4.2 Perceived Usefulness (PU)

Changes in staff perceptions as they gain online experience strengthen the usefulness of information technology application (Venkatesh, 1999). Hence, while analysing its usefulness it is helpful to know whether the perceptions of Unitec staff have changed. Venkatesh (1999) identified that Perceived Usefulness relates to two factors: effectiveness and importance. Davis (1989) defined PU as “the degree to which a person believes that using a system would enhance his or her job performance” and referred to the capability of software application to be used advantageously.

The key determinants of PU as provided by Segars and Grover (1993) are as follows:

1. work more quickly
2. make jobs easier
3. make jobs useful
4. increased productivity
5. effectiveness,
6. job performance
2.4.3 Computer Background

Landry (2003) described the following three elements that identify staff member’s computer experience. They are listed as:

- **Computer Experience**: Experience with IT technologies of staff will have influence on their attitudes and beliefs which positively affects their usage of software application (Igbaria et al., 1997).

- **Computer Self-efficacy** is the self judgement on the capability of doing the task given using information technology as observed by Igbaria et al. (1997). However, it is not related to past experience, rather described as precursor of training performance (Compeau & Higgins, 1995).

- **Frequency of Computer Usage** is the spending of more time with computers in preparation of course materials and communication. It increases with more IT experience (Walker, 2004).

Table 2.3 shows how each computer background element relates to the current research study and its relationship to authors who reference it. This question was based on the responses found from quantitative data summary where staff mentioned about their training. To explore information on staff training further two questions were designed in interviews about their IT experience, computer usage and also online teaching experience. Interviewees found it interesting to answer why they preferred training and why not.
Staff Perceptions of Blackboard as an online teaching tool in tertiary Education

<table>
<thead>
<tr>
<th>Elements</th>
<th>Research relevance</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Computer Experience</strong></td>
<td>Staff’s prior computer experience and online teaching experience were asked to identify their computer experience and how much IT experience is required to use Blackboard.</td>
<td>Igbaria et al., (1997)</td>
</tr>
<tr>
<td><strong>Computer Self-efficacy</strong></td>
<td>Unitec staff were asked about their training to know what they think of their capability to use course tools on Blackboard. Various opinions were taken on the impact of their training with their pedagogical practices.</td>
<td>Compeau &amp; Higgins (1995)  Nelson (1990)</td>
</tr>
<tr>
<td><strong>Frequency of Computer Usage</strong></td>
<td>Unitec staff were asked their opinion on online teaching experience to see the relation of usage with IT experience.</td>
<td>Walker (2004)</td>
</tr>
</tbody>
</table>

Table 2.3: Elements that determines Staff’s Computer Background  
(Source: Landry, 2003)

As mentioned by Wingard (2004) the study done by Learning Technology Consortium held in 2001 on assessing the effect of web based teaching and learning in face-to-face education environments revealed the following:

- Requirement of ongoing staff training
- Collaboration in finding the capabilities of technologies
- Redesign of course materials

By bringing together teachers from the same key learning area, training synergy can be achieved by which the participants learn more from each other than from the training itself. Such sessions would create a culture of innovation and best practice (Grainger & Tolhurst, 2005).

Summarising, therefore the variables PEOU, PU and Computer Background have been used as a framework to design questionnaire for the data collection instruments i.e. staff interviews and survey.
Table 2.4 describes the variables identified from TAM Models and the related items along with author information.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Adopted from</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Usefulness</td>
<td>1. Using Blackboard enables me to complete my job quickly</td>
<td>Walker (2004)</td>
</tr>
<tr>
<td></td>
<td>2. Blackboard makes it easier for me to do teaching related tasks easier.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. I find Blackboard useful</td>
<td></td>
</tr>
<tr>
<td>Perceived Ease of Use</td>
<td>1. Learning to use Blackboard was easy</td>
<td>Walker (2004)</td>
</tr>
<tr>
<td></td>
<td>2. Using Blackboard it is easy to become skilful</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. I find Blackboard is easy to use</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Using Blackboard is frustrating</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. I found it complicated to use Blackboard</td>
<td></td>
</tr>
<tr>
<td>Computer Background</td>
<td>1. Communicating with user using technologies</td>
<td>Igbaria et al. (1997)</td>
</tr>
<tr>
<td></td>
<td>2. Attitudes and beliefs to use technology</td>
<td>Nelson (1990)</td>
</tr>
</tbody>
</table>

Table 2.4: Identified constructs with related items linked to literature

2.5 Chapter summary

This chapter presented literature pertaining to e-Learning adoption in education, LMSs and literature related to theories of Technology Acceptance Models (TAM). The significant variables that impact usage of LMS such as Blackboard drawn from literature are Perceived Ease of Use, Perceived Usefulness and Computer Background. Chapter 3 describes the methodology used for this research to collect the appropriate data for this study that uses the literature around PEOU, PU and CU as a framework.
CHAPTER 3  METHODOLOGY

3.0 Introduction

The previous Chapter described a review of the current literature concerning staff perceptions using the Blackboard. This chapter presents the methods to address the problem including details of the population sample, data collection instruments, data collection methods and data analysis. The major part of the research data was interpretive in nature that is taking interviews, transcribing and analysing the responses followed by a short survey. The aim of the survey data was to explore further the most triggering factors of staff perceptions and generalised opinions on using Blackboard.

The objective of this research was to collect data from multiple resources. This is to gather data from the literature, annual reports, surveys, interviews, previous research work. This broad range of data helps to identify and understand staff perceptions clearly and assures quality of research findings.

3.1 Research Approach

The research conducted as a Mixed Method Design using a combination of qualitative and quantitative methods. To gain better clarity of results from research findings this study follows two data collection methods i.e. qualitative interviews and quantitative survey. However, there is no comparison of data collected from multiple sources as described in section 3.0. However, the participants chosen for data collection are same in both the research methods.

Exploratory Design

In this design, data from the qualitative interviews becomes a source for themes by developing generalisations used later in quantitative surveys as items. The specific statements expressed by staff and themes were developed from staff interview
transcripts where staff were asked about their experiences using Blackboard in a descriptive way. This approach has similarity with the opinion of Creswell (1994) “In qualitative studies the research problem needs to be explored because little information exists on the topic. The variables are largely unknown”. The Table 3.1 describes the most suitable method for this research and the reason for choosing the method.

<table>
<thead>
<tr>
<th>Mixed Method</th>
<th>Suitability for this Research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Triangulation</strong></td>
<td>This method collects both quantitative and qualitative data simultaneously and compares the results from both methods.</td>
</tr>
<tr>
<td>(QUAN AND QUAL data collected simultaneously)</td>
<td>In this current research data was collected qualitatively through interviews followed by quantitative surveys in two stages and no comparison of data has been done in the current research.</td>
</tr>
<tr>
<td><strong>Explanatory</strong></td>
<td>This method explains how the opinions are comparable on a variable. The opinions of participants further analyzed in qualitative methods.</td>
</tr>
<tr>
<td>(QUAN followed by QUAL)</td>
<td>This method is NOT suitable for this research study as data was collected qualitatively first which is followed by data collection by quantitative surveys.</td>
</tr>
<tr>
<td><strong>Exploratory</strong></td>
<td>This method is suitable for this research study as qualitative interviews were conducted first. The initial instruments were used to develop themes in the first phase.</td>
</tr>
<tr>
<td>(QUAL followed by QUAN)</td>
<td>In the next phase, the identified themes were used as items in the survey instrument.</td>
</tr>
</tbody>
</table>

Table 3.1: Suitability of Mixed Method to Current Research  
Source: Creswell (2002)

Among the three designs of Mixed Methods, Exploratory method found to be suitable design for this research as explained in Table 3.1. Addressing the integration of qualitative and quantitative designs, Flick (2006, p.39) explained the exploratory design that follows qualitative followed by quantitative approach “attempts to quantify statements of open or narrative interviews”. Results from interview analysis can be further analysed by frequency of occurrence through
quantitative methods. The statistical frequencies found in surveys may provide confirmation of the identified themes of the qualitative data. Miles and Huberman (1994) conducted similar interpretation of mixed research design by integrating quantitative and qualitative researches. It found data obtained from a qualitative study followed by a quantitative survey provides a deeper insight to the results generated.

From the above observations on exploratory method, staff were interviewed for their views on using Blackboard. The interview questions were designed in the format mentioned by Wixon (1995, p.2) as “Questions such as what do users do and when do they do it; what is the intention behind user work; and how do users think about their work, are the types of questions that qualitative research methods answer”. In the qualitative data collection method i.e., interviews from Unitec staff, the idea was to collect a rich source of information with open-ended questions. This followed a short quantitative survey designed with questions based on the statements and themes of the qualitative data findings. This approach gives a generalised view of how faculty uses Blackboard and their attitude.

Various data gathering designs suggested by Creswell (1994) were analysed. The most appropriate design for this research was a single-stage case study. This involves collecting data on a single entity that bounded by activities such as processes, groups, and institutes. This information collected using various data collection tools for a specific period of six months at Unitec campus on staff from three different schools. Their perceptions on using Blackboard obtained through data collection from interviews and a short survey.

**3.2 Sample Selection**

Participants from three different schools i.e. School of Computing and Information Technology (SCIT), School of Education and School of Communication agreed to participate in the surveys and interviews.
Out of forty surveys sent fifteen respondents had given their feedback. Eight staff from the three schools agreed to be interviewed. Most of them were from SCIT and use Blackboard for all of their online courses. Out of eight interview participants six were males and two were females.

3.3 Qualitative Data Collection

The required data was collected using qualitative interviews with open-ended questions to get rich source of information. Staff interviews taken in the initial phase identified the categories of staff opinions and themes. The results in the forms of categories, themes and statements from the interview transcripts were then further explored using the survey instrument to understand them in a statistical data analysis as explained by Creswell (2002).

Creswell (2002) explained the different modes of data collection in a qualitative research in four ways:

1. Observations

Data is collected at the field sites by observing the people that produces unstructured observational information. Taking the role of an observer than a participant and taking field notes. As it is very difficult for staff to spend time to demonstrate their usage of course tools on Blackboard practically, this method was not used.

2. Interviews

This method involves asking open-ended questions, using audiotapes, handwriting or recording the views of the participants and focus group discussions. As per this method, interviews are taken with staff at Unitec to obtain a rich source of data for analysis on Blackboard.
3. **Documents**

Documents were scanned on-site and information from various sources were accessed through data archives, memos, reports, drawing of maps etc. Unitec Annual Reports were also a useful source of information for this research.

4. **Audio-Visual Materials**

This method uses recording of sounds, collecting of audio tapes, video tapes, emails, documents, visual images that can be transcribed from the field location. This method was not suitable for this research because the voice of staff was recorded in only interviews.

Of the four data collection methods, the two most suited for this research were interviews and documents

**3.3.1. Interview Participants**

The participants chosen for the interviews were from three different schools i.e. the School of SCIT, the School of Communication and the School of Education.

**3.3.2. Staff Interviews**

Although qualitative proposals allow the research to emerge with the views of stakeholders, most of the qualitative researchers follow an open proposal format, which is flexible (Creswell, 1994). The data is collected from the staff members of Unitec in the month of January and February 2008 through interviews to evaluate their perceptions. The interview questionnaire has been attached in Appendix B and Information sheet sent to participants has been attached in Appendix A.

**Pilot Interviews**

The interviews conducted by taking initial pilot interviews to assess the reaction of the staff whether they are feeling comfortable with types of questions. This method enabled few changes to incorporate from the feedback of the first two interviews.
The researcher had taken two interviews initially and then amended the interview questions from their feedback. This was done to avoid problems as stated by “The data are missing even when researchers collect and analyze data concurrently so as to be able to adapt interviews to new questions as they emerge” (Miles & Huberman, 1984 as cited by Singh & Richards, 2003).

Staff interviews emphasized the following points.

1. How the course tools are being used and for what purpose
2. What new features can be incorporated to utilize Blackboard more efficiently
3. What features of Blackboard can be used most frequently
4. How specific tools are used such as how far does the staff use Blackboard for the course assessments
5. What difficulties staff face while using Blackboard application in the teaching process.

The questions enabled the staff to decide how appropriately Blackboard is suitable as a teaching aid in Unitec. The questions were framed to ascertain if student learning outcomes are fulfilled using the Blackboard. Cohen and Manion (1994) suggested that when conducting interviews reactions from the participants such as more time, cancellation of interview time, non-relevant answers became notable issues. Staff addressed these issues to cooperate with the researcher’s time schedule. Even though all the answers were in the form of descriptive opinions and experiences there were few brief questions. These questions were about their IT experience, training, courses taught by staff and were used for developing quantitative statistical reports.

The methods for gathering this information were in the form of questions that gave answers to the research questions mentioned above. The participants in the research were interviewed face-to-face. Cohen and Manion (1994) identified categories of questions such as open type, funnel type, scale type and fixed alternative. Of these combinations, mixed and funnel type questions are suitable for this research because open-ended questions results in different answers, sometimes unrelated depending on participant’s knowledge.
### Data gathering method

<table>
<thead>
<tr>
<th>Data gathering method</th>
<th>Answers to Questions of type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtering</td>
<td>What is relevant?</td>
</tr>
<tr>
<td>Reflection</td>
<td>What is the meaning?</td>
</tr>
<tr>
<td>Comprehension</td>
<td>What is known?</td>
</tr>
<tr>
<td>Action</td>
<td>What can be done?</td>
</tr>
<tr>
<td>Discovery method</td>
<td>What we learnt?</td>
</tr>
<tr>
<td>Decision oriented</td>
<td>What to do?</td>
</tr>
<tr>
<td>Classification of elements</td>
<td>What is it?</td>
</tr>
<tr>
<td>Relationship</td>
<td>Where to place?</td>
</tr>
</tbody>
</table>

Figure 3.1: Data Gathering Methods  
(Source: Wixon, 1995)

### 3.3.3. Interview Data Analysis

The interview data collected from Unitec staff was analysed as per the steps mentioned by Cohen and Manion (1994) as

1. **Transcription**
2. **Listening to the interview for a sense of the whole**
3. **Delineating units of general meaning**
4. **Delineating units of meaning relevant to the research question**
5. **Clustering units of relevant meaning**
6. **Writing a summary of each individual interview**
7. **Contextualization of themes**

According to Creswell (2002) a hand analysis is suitable if the transcripts length is <500 pages and the database is small. If the field notes length is more than 500 pages a large database is required. In this research project, hand analysis used with manual sorting, organizing the data and locating the relevant word was done from the transcripts or field notes. The field notes transcribed in a word document and stored for later reference.
Staff Perceptions of Blackboard as an online teaching tool in tertiary Education

The data required for this research was analyzed in terms of heuristic framework with four types of dimensions designed by Wixon (1995, p.3):

- Filtering vs. Reflection
- Comprehension vs. Action
- Discovery vs. Decision
- Separating vs. Integrating

Of the four dimensions data was analyzed using two of the above methods i.e. filtering and comprehension as shown in Table 3.2.

<table>
<thead>
<tr>
<th>Analysis Dimensions</th>
<th>Relevance to current research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtering vs. Reflection</td>
<td>The interview responses of Unitec staff were filtered basing on relevance to the research context and analyzed by reflection</td>
</tr>
<tr>
<td>Comprehension vs. Action</td>
<td>This method was used as the staff opinions were analysed using comprehension which helps the Unitec management to understand the opinions and suggestions of staff</td>
</tr>
<tr>
<td>Discovery vs. Decision</td>
<td>This is <strong>NOT</strong> suitable for this research and not used.</td>
</tr>
<tr>
<td>Separating vs. Integrating</td>
<td>This is <strong>NOT</strong> suitable for this research and not used.</td>
</tr>
</tbody>
</table>

Table 3.2 Four dimensions of Data Analysis

The data has been filtered based on relevance of the data to the context of the research topic and reflected upon the meaning of responses as shown in Figure 3.2.

Figure 3.2. Data analysis by Reflection
(Source: Wixon, 1995)
As shown in Figure 3.3, the new design actions will arise from the rich collected data and maintains the integrity of data. The resultant actions will reflect in providing benefits to the users. The staff opinions were analysed using comprehension, which helps the Unitec management to understand the opinions and suggestions of staff. These observations were future considerations to incorporate new changes in the course design.

The steps while designing themes were designed by Creswell (2002) as follows:

- Coding text (image) data
- Developing a description from the data
- Defining themes from the data
- Connecting and interrelating themes.

The process is also similar to the coding process described by Creswell (2002) as “using codes to develop themes”. The staff interviews were segregated into segments, labelling was done for each segment and redundancy checks were done. Aggregating similar codes into different categories were represented using quotes. The variable ‘Computer Background’ was analyzed from the responses of demographic questions on years of IT experience, number of courses teaching and Blackboard usage experience. As the population of participants is small, the opinions of individual opinions were different. Therefore, the groups of opinions were identified as categories rather than themes in this research.

The researcher validated the data after transcribing. The transcribed data was sent to the participants to confirm whether the intended views were properly translated which are attached in Appendix F. The transcripts were also corrected by the researcher for accuracy of expression and context as pointed out by Creswell.
To make data more readable and understandable descriptive statistics were applied as mentioned by Mann (1995) to organise data in the form of table shown in Table 3.3.

<table>
<thead>
<tr>
<th></th>
<th>Participant A</th>
<th>Participant B</th>
<th>Codes/Themes</th>
<th>Summary of question from all participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question:1</strong></td>
<td>Response</td>
<td>Response</td>
<td>Same words coded with one color</td>
<td>Identification themes from the color codes and summarisation</td>
</tr>
<tr>
<td><strong>Question:2</strong></td>
<td>Response</td>
<td>Response</td>
<td>Color code for common ideas</td>
<td></td>
</tr>
<tr>
<td><strong>Summary</strong></td>
<td>Summary of interview</td>
<td>Summary of interview</td>
<td>Total summary of all participants responses</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.3: Model of Summary Table of Interview Transcripts

As shown in the Table 3.3 above the summary row is the question summary of all participants. Similar opinions of all participants were given same color to identify themes. Similarly, the column wise summaries were prepared for each participant and join of row and column at the end gives the final responses of the all the staff in using Blackboard.

### 3.3.4. Criteria for Performance Evaluation

A criterion for evaluating the performance was determined by analyzing the descriptive answers from each staff member at Unitec. Answers about how each course tool was used, its frequency of usage, and what tools are difficult to use were recorded. The impact of training on the utility of Blackboard was studied through the findings of the interview answers. Wherever problems identified, reasons for these problems were analyzed and how appropriate Blackboard is for the current teaching needs was evaluated.
3.4 Quantitative Data Collection

Data collected in the second phase used the survey instrument, distributed the survey forms by email request through supervisor email ID. The area of survey is campus of Unitec as mentioned in Appendix C.

3.4.1 Quantitative Survey Data

The survey forms were designed as a short survey. The purpose of the survey was sent to all participants as attached in Appendix D. This survey was conducted to identify the key issues that need to be addressed to evaluate staff opinions on Blackboard. The aim of survey instrument was to explore the results found from staff perceptions in the interviews. The basic framework for the survey instrument has been the categories identified and statements expressed by staff during the interviews. The survey questionnaire has been attached in Appendix E.

3.4.2 Survey Participants

Staff from three different schools who are teaching courses using Blackboard were invited to participate in the survey. Emails were sent to all the staff members from one of the supervisor login on the behalf of researcher requesting the staff to fill the survey forms and send the forms either by email or by submitting hard copy depending on participant’s convenience. Information sheet about the research and the survey questionnaire were attached in the emails. When the response was less in the first phase, reminders mails were sent in the second email. Printouts of survey forms were also handed over to staff personally. In total 15 staff members participated in the survey and gave their feedback. One Staff member from each school was approached for help on collecting the filled forms from their colleagues.

3.4.3 Survey Data Analysis

From the quantitative data, it was identified how different groups of staff express their opinions related to the main research questions. The data was summarized according to categories of course tools in terms of their level of usage and
effectiveness, and how often they were used in the classroom. Participants were also asked to express their opinions on what new features could be incorporated to improve functionality of Blackboard.

The survey responses were analyzed to answer the research questions. The first question was framed to know how staff rates each course tool on its usage. Responses relating to staff training, staff preferences to using Blackboard on an optional basis and percentage of course materials uploaded on Blackboard. Staff were also asked whether the functionality of Blackboard is satisfactory. In another question, the respondents were asked to rate the course tools according to their level of effectiveness. This question answers the research sub-question on how effective Blackboard is in the teaching process. Staff were asked if these course tools support their pedagogical principals. This quantitative data was used to compliment the analysis of the interview data.

3.5 Ethical Approval

An ethics form was submitted to Unitec Research Ethics Committee (UREC). The participants were interviewed and surveyed in accordance with Unitec’s code of ethics and related guidelines. Their names, contact information were kept anonymous to protect privacy of confidential information. As mentioned in the ethical guide of Unitec the following principals were followed strictly while doing research.

- **Informed and voluntary consent**
The participants were informed well in advance and the information sheet was provided before starting the interview so that users were confirmed of the context of research.

- **Respect for rights and confidentiality and preservation of anonymity**
The participants were assured of the anonymity of their contact information, no information was passed on to any other person and kept secured up to five years and the consent form was read in front of them.
• **Minimization of harm**
Proper assessment of research risk-benefit ratio done to benefit the participants with the research and harm can be minimized.

• **Cultural and social sensitivity**
Questions relating to culture issues or sensitive issues were avoided to respect the principals of participant groups.

• **Limitation of deception**
The participants were well informed about the objective and outcomes of research and no way were given false information about the researching context.

• **Respect for intellectual and cultural property ownership**
The research was conducted using judicial use of intellectual property such as copyrights, registered and unregistered trademarks etc.

• **Avoidance of conflict of interest**
Since conflict of interest leads to biased opinions, care was taken to avoid such conflicts during the research. (Unitec, 2008)

### 3.6 Chapter Summary

This research was conducted using mixed method with data collection on quantitative survey and qualitative interviews from staff of Unitec. The variables such as usage levels, usefulness levels, staff training, usage of course tools were identified as common variables of focus when short quantitative survey was conducted. This approach is a combination of a qualitative method followed by quantitative method. Ethical approval was taken from the UREC committee so that the ethical norms were followed while collecting data. Unitec staff from three different departments were interviewed and their opinions summarised using data analysis methods of reflection and comprehension. In Chapter 4 the research findings will be presented with discussion, conclusions and summary.
CHAPTER 4  RESEARCH FINDINGS

4.0 Introduction

The theory behind analysing a LMS, the factors influencing the adoption of such application and design approach for conducting the research as a case study were described in the chapters 2 and 3. In this research study, qualitative data collected in first phase through interviews provides descriptive answers from the respondents. This phase answers the questions such as ‘What is it like’, ‘What is going on’ as depicted by Bauma (2000). In the second phase, survey instrument collects the quantitative data. The data collected in this phase provides responses to questions such as ‘How many?’ and ‘How often?’ as explained by Bauma (2000). The objective of data collection in the form of interviews and surveys was to answer the research questions. This chapter presents the analysis of the collected data and results of the responses.

4.1 Qualitative Data Findings

The aim of Interview questions is to identify staff perceptions based on efficiency, functionality, usage and training factors. The participants of the interviews cooperated very well and responded to all questions of the interview. Even though one participant could not attend the interview, she did send a replacement. The questionnaire asked few demographic questions about their IT experience, in particular the number of years the interviewee had been teaching online.

IT experience ranged from less than 20 years (4 participants), 20 - 40 years (2 participants) and greater than 40 years (1 participant). All participants commented that basic IT knowledge is sufficient to use Blackboard. One participant suggested that it would be an advantage if staff had additional skills in applications such as website navigation, searching, Microsoft Word and Excel. Most of the staff members were teaching approximately one to four courses per term.
The transcript content of interviews was categorised from the staff responses in the following way as shown in Table 4.1:

<table>
<thead>
<tr>
<th><strong>Category</strong></th>
<th><strong>Sub Categories</strong></th>
<th><strong>Related to research question</strong></th>
</tr>
</thead>
</table>
| Level of Usage        | • Most frequently Used  
                         • Less frequently Used  
                         • Ease of Use                                                                                             | 1. *What are the usages of Blackboard as a teaching tool?*                                             |
| Level of Effectiveness| • Course Delivery  
                         • Students Benefits  
                         • More Functionality                                                                                           | 2. *What features staff perceive as effective on Blackboard?*                                            |
|                       |                                                                                                                                   | 3. *What are the difficulties in using Blackboard as a teaching tool?*                                   |
|                       |                                                                                                                                   | 4. *What are staff opinions on making Blackboard more functional?*                                       |
| IT Literacy           | • Demographics  
                         • Staff Training                                                                                               | *What are staff perceptions of Blackboard as an online teaching tool in tertiary education?*              |

Table 4.1: Interview responses categories and related research questions

4.2 **Level of usage**

A question asked in interviews on level of usage of course tools is to elicit frequency rate of tools. The response to such query provides answer to the research question:

*What are the usages of Blackboard as a teaching tool?*

The factor ‘Usage of Blackboard’ describes to understanding whether staff finds it easy to use the tools on Blackboard. It further explores how easy it is to learn the application, become skillful, understand, and navigate through the application. To explore further about the usage of the course tools, three open-ended questions were asked in interviews.
They are as follows.

1. Which tools do you use most frequently on Blackboard?
2. Do you use Blackboard to store course documents for student reference?
3. Do you use Blackboard to store course documents for staff reference?

The responses about the usage of tools have been categorised as most frequent usage and less frequent usage as staff mentioned that it depends on the type of courses they are undertaking.

4.2.1 Most frequent usage

Staff mostly used tools such as the course documents and external links for storage and reference of course materials, and information of all students. The email communication tool is a popular tool because staff can readily communicate with their students. The course tools being used mainly for operational purposes and less used for pedagogical purposes. This is because staff use these tools as part of teaching even though it deviates from traditional face-to-face teaching which was also evident from the observations of Wilson (2003). Few responses on most frequently used tools are:

“I also use Announcements and Course documents which is good across the board to provide a good sharing environment” and

“I use mostly emails, Assignments, Course documents, Staff Information, Digital Drop box, User Management” and

“I certainly use communication tools mainly emails” and

“I use the basic tools such as Course tools, External links. As part of the general teaching and assessment, I use discussion boards”

4.2.2 Less frequent usage

It was observed that depending on the course, few tools are suitable for the classroom environment. Certain tools such as the instructor tool are only used once in a semester because this is when a staff member enrols their students. For
communication there is a communication tool. One staff member (participant D) commented that the course tool ‘chat’ is not really used. Out of eight participants, three participants were not using ‘Discussion board’ because it is not a requirement in their course. Some of the responses were as following.

“Less frequently used course tools are Staff Information, External Links”
and
“We don’t use any of the testing tools, assessment mechanism. I don’t set quizzes”
and
“We will be using Discussion board for one course but not for other classes” and
“I don’t use grade book at all. I don’t use discussion board either, but I may have to use it in future”
and
“The tools I use less frequently are books, external links, recycle courses.”
and
“I do not use the collaboration and glossary tools”
and
“I have used chat only once. I have used Digital Drop Box in the past”
and
“Actually the courses I teach are about programming which does not require to be submitted in turnitin”

Instructor tools are occasionally used and therefore are less frequently used tools. Few responses for this type of tools are:

“At the time of enrolment I keep track of who enrolled into the course using the instructor tools and other services like service indicators, log in details investigation”

“I use instructor tools once in a term to setup courses, enroll students in class. Coming to the tools after login into Blackboard”

“I set up the staff accounts and give them access through instructor tools which are attached to Blackboard. I use them for attaching staff names”
4.2.3 Ease of Use

Staff expressed that Blackboard is easy to use and operate for activities such as course delivery, classroom activities and communication. The reason for staff perceiving Blackboard easy to use could be that most of the participants are from School of Information Technology and Communication. They perceived that working with Blackboard makes their jobs easier such as communicating with students. This was evident from staff opinions as:

“No prior experience is required to use Blackboard” and

“I think people get the hang of it pretty quickly and there is orientation for new staff and It is easy to pick up” and

“Experience to use Blackboard depends on how involved you want to be” and

“It is pretty easy to work with Blackboard. If new systems come up, then I forget how to use a few options. I can always find out how to do it by asking my colleagues. Once you get into it is relatively easy”

4.3 Level of effectiveness

One of the determinants for evaluation of Usefulness is effectiveness as mentioned by Walker (2004). The other determinant ‘importance’ was not studied from staff’s responses. Effectiveness is how staff perceives the course tool as valuable to them to fulfil classroom activities. Hence, the course tools were analysed according to their level of effectiveness and responses were found to answer the following research sub-question:

What features staff perceive as effective on Blackboard?

Based on the frequency counts of responses, seven open ended questions were used to identify how effective is the course delivery using Blackboard, and how are
Staff Perceptions of Blackboard as an online teaching tool in tertiary Education

documents managed, what are the advantages instructors experience using Blackboard, and what benefits do students gain.

To answer the above questions the following interview questions were designed such as:

1. What are the benefits for students when Blackboard is used as a teaching tool?
2. How useful is the Blackboard for course delivery?
3. Do you use Blackboard for online course assessments?
4. How appropriate is the digital drop box for assignments?

Participant’s responses are filtered according to their relevance to the research study and grouped based on clusters of similarities such as course delivery, students benefits and functionality.

4.3.1. Course Delivery

There are concerns from staff members that course delivery depends on the nature of courses, mode of instruction such as online and fully online. Four participants expressed that Blackboard is quite useful in the course delivery. Two participants described it as ‘Management tool’ and ‘Course delivery depends on the course’. There was one mixed response answer. This participant commented that even though Blackboard is a useful application in the course delivery, ‘ITC dehumanized’ as students avoid attending classes as the course materials are available online.

However, one participant felt it is ‘bit boring’. In her opinion Blackboard is being used as a simple course delivery tool but there is no provision for students to add their work in Blackboard for reference by saying

“Things tend to become an ossified stack. Stuff you put there cannot get back is a simple delivery of information which is not the best use of Blackboard. You can give students opportunities that if someone has done a class session they can put up their PowerPoint presentation on Blackboard,
and if people can refer it that is good. If we use it as shovel ware or a course delivery tool it becomes a problematic.”

Three questions, i.e. Q7, Q8, Q9 were designed to deduce how effective is document management using Blackboard. With regards to document sharing, all participants commented that they mostly use course documents and external links to post course materials for student reference. One participant said ‘Yes and No’ because he keeps the documents for one semester and then uses them for next semester and to refer them in the future. One participant had answered ‘No’ because he is planning to start soon and wish to add video clips in it. There are few concerns such as ‘copyright problem’ to upload all the reading materials for student reference. One participant also mentioned the relevance of adding ‘large chunks’ or small ‘bits of information’ makes no meaning for student reference.

4.3.2. Students Benefits

All participants expressed about benefits mainly in terms of easy communication amongst teachers and students, and students to students. This is supported by the words ‘any time any place to information’. Also there are comments such as ‘interaction among co-students occurs in class.’ This indicates that too much interaction using the communication tools among students apart from class discussions is one disadvantage.

All participants explained that a major benefit is the uploading and downloading of course materials i.e.:

“There are lot of benefits to students as they share course documents, availability of course materials online, contact and communicate among other students, manage their course work through Blackboard” and

“The good thing is that students put resources into Blackboard and use it as a discussion board. Students share more materials by forming small groups assigned by instructors” and
“Students can communicate each other. I make students store all project documents in Project repository. I set-up students in groups and they can upload project documents into the repository.”

One participant mentioned the advantages of course documents and that there are downloadable student self-training modules which are ‘downloadable to practice for students self training which has modules for practice’.

Using Blackboard apart from regular class room session can be extended by spending more time on reading additional material kept on Blackboard. One typical answer about best utilising the class sessions is given as

“It brings the class to the point of being able to discuss things in their own time so that they are able to reflect on material, which they would not have time in short number of face to face sessions. Most of the teaching we do is blended i.e. we use online as well as classroom sessions. But, It extends the classroom session so that they can continue working on it. Otherwise, it would be a very isolating experience.”

One instructor stated that development of professional skills is possible while participating in class activities which are offered online. Further to this, she explained students develop projects in groups collaboratively and upload them on Blackboard as group work. The response is as follows:

“Students do their professional development while doing their masters course and it depends on which course. To gain from the environment is absolutely vital. In some courses, we get them to produce project materials that they design themselves collaboratively in small groups of 3 or 4 students by working online or sending emails.”
One participant expressed his dissatisfaction that students are not utilising the posted information on Blackboard. His statement was:

“Certainly I put lot of information on Blackboard and I expect students to go there to answer questions rather than asking me or wait until I talk to them. The disappointing thing is that students still ask for information that is on Blackboard.”

Development of communities is one of the students benefits, which improves team collaboration and cooperation. A question was asked about what staff feel about development of communities in their courses. Four participants (A, D, C, E) answered ‘Yes’ as it is part of course requirements to engage students in group activities. The typical answers are:

“Absolutely, it facilitates the growth of student communities. Under discussion board, the general discussion feature enables a community of practice. It gives scope for students to share common ideas through discussion boards”

Two participants (F, H) answered ‘Not Sure’ for the question on development of communities. They expressed that communities are benefited mainly for distant students but not for students who are attending regular classes. The reason being:

“It probably does. But I don’t use it. Because the community is the classroom. For distant courses. There are no offsite students at all”

Two participants (B, G) answered ‘No’ expressing that student participation in discussion board was not satisfactory (participant B) as:

“Not in my courses. I tried to set up a discussion board and very few students used it”
However, one participant showed disappointment that students are losing interest due to other technological tools by saying:

“In the beginning, students are more enthusiastic about Discussion board and at the moment students are putting their energies using blogs, myspace (I guess). There are many places to form communities and Blackboard becomes a lower priority.”

4.3.3. More Functionality

While discussing about online assessments it was observed that none of the participants were using this feature as the assessment is done on submitted assignments either through Digital Dropbox or Turnitin.

What are staff opinions on making Blackboard more functional?

What are the staff perceptions of Blackboard as an online teaching tool in tertiary education?

In the interview, staff were asked whether they would like Turnitin in Blackboard; their responses were positive. Even though many of the staff were not using the Turnitin in their courses, they liked the idea of adding it to Blackboard. All participants agreed that by adding Turnitin to Blackboard would make Blackboard more functional and efficient. One typical answer was:

“It would probably be a good idea. We are not using Turnitin but we may use it next year. In one course when I asked students to discuss about Treaty of Waitangi, I observed that students were cutting and pasting. If students are aware that there is plagiarism tool they will be more conscious about non-plagiarising and the quality of the work will improve. I don’t want to give the students a hard time; I just want them to improve the quality of the work submitted.”

Another participant commented that Digital Drop Box can be used as a backup for assignments even if Turnitin is added to Blackboard.
The participant’s response was:

“If assignments are submitted through Digital Drop Box it works as another backup.”

When interviewees were asked about further improvements to Blackboard, two participants expressed their fear that if technology is added to the learning management it should be done gradually and not all at once, which would make staff overwhelmed by the speed of implementation.

“It is not the change itself but the speed of change should not damage the current functionality. People can be introduced to various workshops and interaction can be changed. At present Blackboard features are comfortable. If we push people out of their comfort zones it gives social and technological problems.” and

“I prefer less refinement than more refinements. In addition, it is quite worthwhile to have more training, which is going on already.”

Two participants expressed they experienced difficulties such as course documents management and re-entry of grades. They suggested a grading mechanism such as:

“It would be useful to allow moving multiple folders under Revision Materials of course materials tool. If I want to remove a few folders together I have to remove them one at a time, this is a lengthy process. It is the same scenario for the Digital Drop Box, to remove multiple documents I cannot do it at once” and

“It will be useful to include a grading mechanism. For bachelor’s degree papers, we are adding the grades in another system. It will be better if there was only one entry for grades provided, instead of double entry. For master’s papers, the grade book is used. But for bachelor’s degree there is a separate entry for grades. A common standard for grading system is very much required”
One participant expressed the difficulty to integrate two systems such as Peoplesoft and Blackboard. He explained it would be better if there is one place to access both course information and student information. Malcolm (2003) also identified the same difficulty expressed by staff in her research on Unitec’s Blackboard. The interviewee said:

“It would be great if Peoplesoft and Blackboard are integrated so that there is one place for course information and also student information. I can access Blackboard anywhere in the world but I can’t access Peoplesoft which has my student’s information i.e. student addresses. I maintain my own integrated system which has a spreadsheet and where all the information is maintained. There are five places I access my information from, to maintain my spreadsheet. Also it would be good if there is a button to ring the student’s telephone number.”

A common observation of the current scenario of Blackboard at Unitec is that at present staff have no control of their document protection and there is no security of Unitec’s intellectual property i.e. the course material developed by staff in their hard drives. Even though the documents are stored at specified locations there is no version control in place. Hence, there is a requirement for a document management system to be developed in Blackboard in order to make best use of course materials developed by staff. The response is:

“When E-learning came, the organizations just implemented Blackboard thinking that they are technically upgraded. Cost benefit analysis is not done and it is not verified what features they need. I think it is a burden that your files are stored in 3 different locations. We are supposed to share the same location. But we need to copy the files from our desktop pc and if we change/edit them there is no control of versions. When files are uploaded it gives access to students. So we need to hide them for student’s access until the final editing is done. We don’t have control over the files on Blackboard. The courses of organization can be accessed by any staff member due to lack of personal space. You have to set up your own space. It is not a document management system. The underlying principles apply for course delivery system but not for document management. The intellectual
property of Unitec is not protected which are course related documents. But if I delete them there is no control.”

The participant also expressed that due to a lack of leadership from IT, the course material is not properly managed. This is one of the major drawbacks of Blackboard.

“European court of human rights generates two thousand of documents per week with documents version control but we at Unitec generate only few hundreds documents which is very small number. Still there is lack of management and control” and

“Even if I put my documents on the network drive, still there is no version control or approval process of the stored documents. Most education establishments are behaving as small business solutions only. The most valuable thing we have is all the course related documents and it is highly possible that they may be damaged as anything can happen to hard disk. All the examinations are paper based. There is no leadership in terms of IT development. We have hardware and networking people managing the Blackboard application but we need business analysts who help the business to use IT technology effectively.”

4.3.4. Technical difficulties

A question framed to know what difficulties staff face while using Blackboard answers the following research the sub-question.

What are the difficulties in using Blackboard as a teaching tool?

The following questions in the staff interviews provided responses about technical hitches with Blackboard.

- What are the technical difficulties you faced while using Blackboard?
Interviewees mentioned about few difficulties in the beginning when Blackboard installed but these problems were later resolved. The current problem raised by staff was the uploading of executable files because Blackboard considers these files as virus files and rejects. At present students and instructors, change the file extensions or making zip files to upload them into Blackboard. Another problem mentioned was lack of technical support when using Blackboard inspite of staff training. One of the respondents expressed that business analysts are required to attend issues relating to login problems and technical difficulties that improves the effectiveness of Blackboard to certain extent.

4.4. IT Literacy

Computer Background refers to a staff’s computer knowledge, efficiency and previous IT experience. Demographic questions asked to identify how much online experience each staff has, about how much IT experience is required and how many courses they teach. Staff training facilitates updating their IT knowledge hence training issues have been raised in the interview i.e., how much training taken and how helpful it was for them to use Blackboard tools.

4.4.1. IT Experience and Demographics

Two demographic questions were asked in the interview questionnaire in order to know the IT background of staff and how it impacts on their use of Blackboard. From the responses, it was understood that the previous IT background does not relatively make any difference with the present usage of Blackboard and their online teaching practices. This is reflected from the responses:

“It is easy to pick up” and

“Only basic knowledge is sufficient to use Blackboard”
Demographic question on number of courses each staff teaches provided responses ranging from two to five per term as tabulated in Table 4.2. This question aimed to keep the interviewee on the topic and make them to think about their interaction with Blackboard.

<table>
<thead>
<tr>
<th>Participant</th>
<th>IT Experience (in Years)</th>
<th>Online teaching Experience (in Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>B</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>C</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>D</td>
<td>45</td>
<td>10</td>
</tr>
<tr>
<td>E</td>
<td>10</td>
<td>Not mentioned</td>
</tr>
<tr>
<td>F</td>
<td>5</td>
<td>Not mentioned</td>
</tr>
<tr>
<td>G</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>35</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 4.2: Summarised Responses to Demographics from Staff Interviews

<table>
<thead>
<tr>
<th>Participant</th>
<th>Courses Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4 per term</td>
</tr>
<tr>
<td>B</td>
<td>4 per term</td>
</tr>
<tr>
<td>C</td>
<td>4 per term</td>
</tr>
<tr>
<td>D</td>
<td>2 per year</td>
</tr>
<tr>
<td>E</td>
<td>5 per year</td>
</tr>
<tr>
<td>F</td>
<td>1 per term</td>
</tr>
<tr>
<td>G</td>
<td>5 per year</td>
</tr>
<tr>
<td>H</td>
<td>2 per term</td>
</tr>
</tbody>
</table>

Table 4.3: Courses undertaken by Interviewees
4.4.2. Staff Training and Support

Most of staff mentioned about their training during interviews and explained how the training affected their teaching and usage of course tools. The analysis of staff training answers the main research question to some extent:

“What are staff perceptions of blackboard as an online teaching tool in tertiary education?”

The interview questions asked were:

- **Have you taken training to use the Blackboard application?**
- **How helpful is the training with the teaching process?**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Training Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>No</td>
</tr>
<tr>
<td>B</td>
<td>Yes</td>
</tr>
<tr>
<td>C</td>
<td>No</td>
</tr>
<tr>
<td>D</td>
<td>Yes (Very Little)</td>
</tr>
<tr>
<td>E</td>
<td>Yes (Always updating)</td>
</tr>
<tr>
<td>F</td>
<td>Yes (whenever required)</td>
</tr>
<tr>
<td>G</td>
<td>Yes</td>
</tr>
<tr>
<td>H</td>
<td>No</td>
</tr>
</tbody>
</table>

Table.4.4: Staff training summary of Interviewees

Out of the eight participants, five have attended training sessions on Blackboard and two participants (F and D) have very little training as given in Table 4.4. Three participants (A, C, H) did not attend training due to familiarity with the Blackboard tools and their IT skills. Participant F had training when required, Participant E had training on a frequent basis or whenever a new update is available on Blackboard. Participant B has only had training on the instructor tools. While responding to question whether they had training and how has the training helped them in teaching. Some of the typical responses are:
“It is very helpful. Because when we bring in new systems on Blackboard, it is always changing, so we need to understand these changes. The interactive sessions during training about how we do this, is always useful” and

“I attend training for new issues, for example last time we learnt about Wikis”

Construct Validation

Construct validity is the extent to which the instrument measures the intended measure by content establishment and relevant evidence (Wiersma, 2000). Content validity was conducted by assessing how accurately the interview data has been evaluated in answering the research questions. This was achieved by categorizing and analyzing the transcript data by critical reflection, filtering and by relevance. The researcher framed the interview questions in order to avoid any bias as mentioned by Fielden (2003, p.3) “Whilst bias of any kind is rigorously guarded against in scientific research, it is inevitable in qualitative research” and taken care while designing the interview questionnaire.
4.5 Quantitative Survey Findings

In the survey instrument, the survey questionnaire had two goals. The first goal was exploring the results found from staff interviews. The second goal was designing the survey questionnaire in order to answer the research questions so as to keep the participant focussed on the research topic. From the survey responses, issues triggered were tabulated and the statistics analysed.

4.5.1 Frequency of Usage of Course tools on Blackboard

The first question, about how staff rate their level of usage of course tools made Unitec staff to respond with how the tools on Blackboard were used for pedagogical needs and course delivery. The choice of responses ranged from always, often, fairly-often, occasionally, never as depicted in Table 4.5.
### Course Tool Usage by Unitec Staff

<table>
<thead>
<tr>
<th>Course Tool</th>
<th>Always</th>
<th>Often</th>
<th>Fairly Often</th>
<th>Occasionally</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Documents</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Announcements</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Assignments</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Digital Drop Box</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>External Links</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Instructor Tools</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Discussion Board</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Grade Book</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Staff Information</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Course Information</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Virtual Classroom</td>
<td></td>
<td></td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Emailing Students</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Blogs</td>
<td></td>
<td></td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Wikis</td>
<td></td>
<td></td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Podcasting</td>
<td></td>
<td></td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Glossary Manager</td>
<td></td>
<td></td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Survey Tool</td>
<td></td>
<td></td>
<td>2</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Test Tool</td>
<td></td>
<td></td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Alternative Language support</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 4.5: Course Tools Usage by Unitec Staff

Figure 4.1 shows the percentage of course tools usage. Thirteen out of twenty available tools were most frequently used and were in the order of Course Documents, Announcements, Course Information, Assignments, Emailing students, Staff Information, Instructor tools, Grade Book, Digital Drop Box, Discussion Board, External Links, Student Access Statistics, Test Tool.

Tools such as Virtual Classroom, Blogs, Wikis, Podcasting, Glossary Manager, Survey tool were the least used tools. Alternative Language support was rated as never used tool.
Figure 4.1: Summary of percentage Course Tools Usage Frequency
4.5.2. Effectiveness

<table>
<thead>
<tr>
<th>Tools</th>
<th>Very High</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
<th>Very Low</th>
<th>Can’t say</th>
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<tr>
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<td>4</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
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<tr>
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<td>6</td>
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<tr>
<td>Course Information</td>
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<td>3</td>
<td>6</td>
<td>1</td>
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<td></td>
</tr>
<tr>
<td>Emailing Students</td>
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<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
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<td>4</td>
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<tr>
<td>Instructor Tools</td>
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<td>3</td>
<td>4</td>
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<td>Digital Drop Box</td>
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<td>Test Tool</td>
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</tr>
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<td>Student access statistics</td>
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<td></td>
<td>4</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.6: Summary of course tools rated on Effectiveness

This question explains about what course tools staff perceive as effective for delivering an online course. The results depicted in Table 4.6 correlate with how the functions of Blackboard are used by staff to predict the term usefulness. In other words, staff counts those bits of Blackboard, which they feel relevant to their course or value to them. On the other hand, if usefulness is determined by use of Blackboard, then staff’s expectations from the Blackboard application is driven by what is offered to them by the application.
It is evident that opinions of ‘Can’t Say’ for the lesser used tools showed that participants were unable to make a judgement or had no experience using them. From Figure 4.2., the tool Announcement is used about 73% effectively by Unitec staff. The top six highly effective tools were Announcements (73%), Assignments (60%), Course Documents (60%), Instructor tools (40%), and Digital Drop box (33%), Grade Book (27%). The tool ‘Alternative Language support’ was rated as lowest effective. Staff Information tool was considered as moderately effective by 47% of the staff.

![Graph showing the level of effectiveness of various tools](image)

Figure 4.2: Summary of Course Tools rated on Effectiveness by Unitec Staff
To assess the how useful training is for staff the question framed was, ‘would additional training impact your use of Blackboard.’ It was found from Figure 4.3 that 47% of staff answered there is no significant impact on Blackboard usage from further training.

![Impact of training](image)

Figure 4.3: Impact of more training on Unitec Staff

4.5.3 Demographic Questions

Few demographic questions were asked in order to know how staff uses Blackboard for online course delivery which answers the research question:

*What are the usages of Blackboard as a teaching tool?*

When staff were asked what percentage of course materials they keep online, the highest number of staff answered that more than 80% of course materials was online as shown in Figure 4.4.

![Course Materials Online (%)](image)

Figure 4.4: Percentage of Online Course materials
From the participants opinions as shown in Figure 4.5 it is found that 53% of participants agreed that their perceptions changed as they gained more online teaching experience.

![Figure 4.5: Change of staff perceptions with Experience](image)

**4.5.4 Functionality**

Two questions asked in survey instrument on how the functionality of Blackboard can be improved. Figure 4.6 shows the results of three survey questions. A question was asked on whether Blackboard is used for staff’s pedagogical needs. 53% staff answered ‘Yes’. Instructors were asked if Blackboard has enough functionality and 67% responded with ‘Yes’. Another question asked specially to know participant’s willingness to use Blackboard and 67% respondents said that Blackboard should be made optional.
4.6 Chapter summary

The triggering issues found from the interview responses of Unitec staff were further analysed using the survey on course tools usage, frequency, which shows how Blackboard is used, the level of effectiveness and functionality and staff training and support. The course tools usage frequency was categorised as ‘Level of Usage’. The clusters of factors such as course delivery, students’ benefits, functionality, technical difficulties were grouped under one category ‘Level of effectiveness’. Issues relating staff training and support were grouped as ‘IT literacy’ category. In the next chapter discussions about how these interpretations were analysed to prepare summaries and how conclusions were drawn from the research findings are presented. Chapter 5 further describes the results, explains the implications of the results and recommendation for future research.
CHAPTER 5 DISCUSSION AND INTERPRETATION

5.0 Introduction

This chapter introduces the results found in the research findings of Chapter 4 and presents a comparison with the findings of reviewed literature. The discussion is about match/mismatch of current findings with the literature. It also shows how the findings of this study answers the main and sub research questions. This chapter concludes with suggestions for further research.

5.1 Discussion

This research aims at understanding and analysing different factors that influence adoption and usage of Blackboard application by staff at Unitec. The results are compared with the observations relevant to TAM and Extended TAM theories as observed in the literature. This results in a compatible comparison basis since TAM and Extended TAM theories are the most commonly used models for identifying user intentions in the usage of information technology application. TAM model suggested Perceived Ease of Use and Perceived Usefulness as two determinants of usage of application.

The objectives of this research study are mainly to link the research findings with the research questions. The researcher investigated how Unitec staff use Blackboard in their teaching process and their pedagogical needs to identify the faculty intentions of usage of various course tools and instructor tools on Blackboard. Staffs were interviewed about what course tools were used in their courses through online teaching. The themes identified from staff interviews were Level of Usage, Level of Effectiveness and IT literacy.
5.1.1 Level of Usage

A category of ‘Level of Usage’ has emerged as a significant factor from interview transcripts. This category describes how different course tools are used for their intended purpose and relevance to the course. In the survey instrument, these course tools were rated according to their usage. Walker (2004) observed that Level of Usage has a significant correlation with intended usage of application.

According to TAM, theory Perceived Ease of Use influences intended use of a software application. Perceived Ease of Use as mentioned by Davis (1989) is how the user perceives that the application is easy for them to use, learn and navigate. Staff opinions such as ‘It is easy to pickup’, ‘Basic knowledge is sufficient’, ‘Get the hang of it pretty quickly’, “At present Blackboard features are comfortable” which was mentioned by almost all interviewees were comparable to the determinants of PEOU as mentioned by Segars and Grover (1993). Hence understanding of how easy it is to use Blackboard, how easy it is to learn about the tools, how easy to navigate the course tools on Blackboard explains the Perceived Ease of Use. It was found from staff perceptions that it is easy to pick up using Blackboard without prior knowledge of teaching online courses. The result in this research does not agree with Walker’s (2004) opinion that PEOU determines the intended usage. For Unitec staff, course tools are used not because they are easy to use, but it is the Unitec’s policy to use Blackboard for all the courses in order to facilitate the student needs on 24/7 basis. This was observed from Unitec’s Annual reports also.

5.1.2 Level of Effectiveness

Clusters of factors such as course delivery, students’ benefits, functionality and technical difficulties were grouped as a category. It is labeled as ‘Usefulness’ that was found to have correlation with Perceived Usefulness, a variable mentioned by TAM’s Model by Davis (1989). One of the determinant i.e. ‘effectiveness’ as mentioned by Segars and Grover (1993) to assess Perceived Usefulness was found to be valid from Unitec staff responses. From staff views, course delivery was explained as how courses were made available for students to access. It was identified from the opinions such as ‘Course delivery depends on the course’.
Staff Perceptions of Blackboard as an online teaching tool in tertiary Education

‘copyright problem’, ‘bits of information for student reference’, ‘Stuff you put there cannot get back is a simple delivery of information’.

The factor ‘students benefits’ was identified when staff expressed about how courses are benefiting students for reference, access and group collaboration etc. Some of the staff opinions such as ‘lot of benefits to students as they share course documents, availability of course materials online, contact and communicate’, ‘Students share more materials by forming small groups assigned by instructors’ made to relate these views to the category ‘students benefits’.

Staff opinions related to online assessments, adding more tools such as Turnitin, usage of Digital drop box for student assignments submission was categorised under ‘more functionality’. Staff’s comments such as ‘We are not using Turnitin but we may use it next year’, ‘If assignments are submitted through Digital Drop Box it works as another backup’, ‘It is not the change itself but the speed of change should not damage the current functionality’ were grouped as ‘more functionality’.

As the effectiveness can be improved by minimizing the problems, it was also studied what technical difficulties staff are facing while using Blackboard. Staff’s expressions about course tools navigation such as ‘It would be useful to allow moving multiple folders under Revision Materials of course materials tool’, ‘for the Digital Drop Box, to remove multiple documents I cannot do it at once’, ‘It will be better if there was only one entry for grades provided, instead of double entry’ were grouped as ‘Technical difficulties’. Thus, the term ‘Usefulness’ is related to how staff perceives the tool, how valuable it is in terms of operational use, students benefits and functional use. It is observed from staff perceptions that few tools are being used by staff as part of teaching rather than staff’s intention to use these tools.

Hence, level of effectiveness identified from staff opinions is dependent on staff’s usage of course tools. It means high frequency use or low frequent use of course tools is influenced up to certain extent by the effectiveness of course tools as perceived by staff. Hence, the observation of Walker (2004) that ‘Usefulness’ of a system has a positive influence on user’s intended usage has been found valid in this research study.
5.1.3 IT Literacy

Staff IT literacy was found as another identified category from this research data analysis. This category was found to be related to Computer Background, a variable found in literature review by TAM 2 model. It is interesting to note that almost all staff mentioned that ‘only basic knowledge is sufficient to use Blackboard’.

Hence the determinant ‘IT experience’ (Igbaria et al., 1997) of the variable Computer Background (Landry, 2003) was not found to be valid in case of Unitec staff. The element ‘Computer Self Efficacy’ has been studied with the question on impact of training. It was identified that there are more than 50% of tools that are ‘less used’, which most of the staff were unable to judge effectiveness. The third determinant ‘Frequency of computer usage’ has no impact on Unitec staff as mentioned ‘No prior knowledge of computers is required to work with Blackboard’ and prior knowledge with teaching online courses has no influence on their usage of Blackboard.

5.1.4. Variables Used

Three variables were found to be affecting intended usage of Blackboard application by Unitec staff. The variables Perceived Ease of Use and Perceived Usefulness were found to be dependent on each other as PEOU increases the PU. On the other hand PU can be improved as the user is habituated to the application i.e. PEOU. It was identified that IT experience i.e. one of the determinant of Computer Background variable has no influence on Unitec staff’s usage of Blackboard. However, staff training influences usage of Blackboard as voiced by staff.

5.2 Application to Research Questions

From the responses of participants in the staff interviews and survey, the following observations were drawn. The summaries to the answers of the four research sub-questions draw the answer to the main research question:
“What are staff perceptions of blackboard as an online teaching tool in tertiary education?”

The summaries of staff perceptions are presented as responses to the following research sub-questions.

**Q1. What are the usages of Blackboard as a teaching tool?**

From the staff perceptions about the usage of Blackboard, it was identified that they use it based on relevance to their course and as per the course requirement that is explained in section 4.3. The most frequently used course tools are as Course documents, external links and email communication. The reason for this is due to the flexibility for course delivery and communication. However, these tools are used mostly for operational purposes rather than pedagogical purposes. This observation found to match with the opinion of Wilson (2003), that staff use tools even though there is less pedagogical use due to the institutional policy though it deviates the environment of traditional classroom.

From the observations made on usage of Blackboard it was found that, staff use some tools more frequently and some tools occasionally. They expressed that their usage of tools depends on the nature of course. Instructor tools are used only once in the beginning of the semester. Certain tools are used for communication such as announcements having a link to course content and others used for learning environment such as course information and course documents. Staff described Blackboard as a Management tool with primary function of communication and course delivery with documents that can be accessed online. However, there are staff concerns that Blackboard is not used at its full potential but used only at the basic level of usage.

**Q2. What features staff perceive as effective on Blackboard?**

**Q3. What are the difficulties in using Blackboard as a teaching tool?**

The above two questions were answered together as these questions are related in such a way that the difficulties perceived by staff if addressed, can improve
effectiveness. The blackboard tools are utilized in an effective way if more tools are used easily without much difficulty in navigation, operations, unawareness about any particular tool, documents uploading and documents access.

From the staff opinions, it was observed that course delivery, students benefits, functionality, technical difficulties play important role to assess the effectiveness of Blackboard, which has been explained in detail in section 4.3. It is possible that by addressing the difficulties perceived by staff, the effectiveness can be improved to some extent. The technical difficulties perceived by staff were explained in section 4.3.4. However, the main points were referred once again to relate the observations to research question.

To find the effectiveness it was evaluated how the course delivery is being done using Blackboard tools, how documents are being managed and what advantages instructors get from Blackboard, what student benefits are achieved. The following observations found which answer the above research sub-questions.

1. The effectiveness of Blackboard can be improved with changes in course delivery procedures by incorporating more usage of tools to make it better effective. However, participants described it as ‘Management tool’ and expressed ‘Course delivery depends on course’.

2. Staff expressed that Blackboard is very useful for course delivery, on the other hand there are opinions that ‘ITC dehumanized’ as students avoid attending classes as these courses are available online. From this statement, it is evident that although staff feel Blackboard is very useful, they expressed that too much flexibility makes students avoid class interaction, which is a disadvantage for students if used improperly.

3. Regarding documents sharing all participants mentioned that they use mostly course documents and external links to post course materials for student reference. It can be said that staff perceive this as a benefit for students.
4. There are few concerns mentioned by Unitec staff that there are “copyright problems” to upload all the reading materials for student reference. One participant also mentioned the relevance of putting either ‘large chunks’ or small “bits of information” makes no meaning for student reference.

5. The effectiveness also depends on what benefits staff and students in terms of easy communication among teachers to students and students to students. This is evident with the words ‘any time any place to information’. Also there are comments such as ‘interaction among co-students occurs in class’ indicates that that too much interaction using communication tools among students apart from class discussions is one of the disadvantages.

6. All participants expressed their acceptance that adding Turnitin in Blackboard adds more efficiency to Blackboard. It is clear from staff views that they are enthusiastic to make use of new tools for betterment of Blackboard functionality.

7. Difficulties such as course documents management, Re-entry of grades could be improved for better functionality of Blackboard as expressed by few instructors. From this opinion, it can be said that staff perceived difficulties in the practices of storing information and were concerned about managing course information effectively.

8. Staff expressed few difficulties relating to navigational problems with tools such as Digital drop box and course documents that they are not able to move multiple folders in one step. These problems need to be looked at to improve operational use that improves effectiveness of Blackboard.

In order to make Blackboard more effective the above mentioned staff concerns need to be considered.
Q4. What are staff opinions on making Blackboard more functional?

The ease of use of Blackboard can be improved by addressing the difficulties mentioned by staff. In order to enhance the functionality staff expressed the following concerns. The functionality has been studied in section 4.3.3.

1. Some staff suggested that if technology is added to learning management it should be done slowly and at correct pace. They fear that enforcing all technologies together at a faster pace will make staff tough to cope with too much speed of implementation.

2. It is possible that Blackboard functionality increases if students utilise the posted information on Blackboard. As pointed out by staff, there is lot of valuable information on Blackboard that students are not referring for their academic queries.

3. Staff expressed that additional training gives cumulative improvement on their teaching process and it was also observed from staff perceptions that they learn something new with every training session. Hence it can be said that regular training sessions improves the functionality of Blackboard and also makes the Blackboard easy to use.

4. It is possible to improve the functionality of Blackboard by making use of the course tools, which were listed as least used tools. For example the course tool ‘Online Assessments’ is not used by any staff which can be made useful.

5. Integration of the two systems such as Peoplesoft and Blackboard make Blackboard more functional.

6. From the staff perceptions, it was noticed that staff have no control of their documents protection and there is no security of Unitec’s intellectual property i.e. the course material developed by staff in their hard drives. The documents needs to be stored at specified locations but still there is no
version control to manage this. Hence, it can be said that there is a requirement of document management system to be developed in Blackboard in order to make best use of course materials developed by staff.

7. Due to lack of leadership for IT development all the valuable work of important course material prepared with lot of effort and time by lecturers is not properly managed even by making use of Blackboard.

8. Information is being accessed by senior management from five different locations to maintain the integrity of data. Hence, it is very much required by staff to have all the systems to be integrated with additional functionality of a button to ring student’s phone.

9. Staff mentioned about requirements such as online documentation, spelling help, Winhelp and HTML help that makes usage of Blackboard easier to search any information.

Hence, the above features need to be looked at and improved in order to add more functionality and utility to Blackboard application.

5.3 Chapter Summary

The research results were validated with the observations identified in literature with most commonly used models TAM and Extended TAM theories using which staff perceptions of Blackboard for online teaching were examined. The TAM model suggested Perceived Ease of Use and Perceived Usefulness as two determinants that influence the usage of information technology application i.e. Blackboard in this case. From the staff interviews and survey data the identified categories that influence staff perceptions were Level of Usage, Level of Effectiveness and IT literacy. The summarised results in this Chapter are combined in Chapter 6 to present conclusions and recommendations for further research.
CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS

In the previous Chapter 5, the discussion and interpretation were summarised and the research questions were answered based on research results of Chapter 4. This chapter presents the conclusions drawn from the research findings recommendations and provides suggestions for further research in the similar area.

6.1 Conclusion

From the responses of interviews, the identified category i.e. ‘level of usage’ that examines the frequency of course tools usage is closely related to the ease of use to identify the intended usage of a software application. The staff’s opinion to use any feature or tool on Blackboard motivates the user to utilize it depending on its nature such as easy to use, easy to understand and easy to operate. As most of the participants mentioned that they could easily operate the tools with basic navigational skills, it determines that Blackboard is easy to use. The reasons for using few tools more and other less is due to their relevance to course requirements and all tools are not suitable for all courses as per interviewees’ opinion.

The usefulness of Blackboard as an online teaching tool has been identified by level of effectiveness from interview transcript content analysis. Here the effectiveness refers to how staff feel about the functionality that is valuable to them in terms of course requirements, class activities, communication, accessibility and assessments. The effectiveness of course tools were assessed based on the function that makes staff feel its importance. Four factors such as Course Delivery (section 4.3.1.), Students Benefits (sections 4.3.2), more functionality (section 4.3.3.) and Technical difficulties (section 4.4.4) were analysed to identify the level of effectiveness. The factor ‘more functionality’ refers to how the current functionality of Blackboard can be improved and what features of Blackboard needs to be improved or enhanced from staff’s opinion. The term effectiveness assesses the Usefulness identified in the literature review as one of the variable to analyse any software application. Walker’s (2004) work on relationship of effectiveness on Usefulness has been proved to match with the current research finding of this study.
When the IT knowledge of staff was analysed with their IT experience and training status, it was concluded that IT experience has no major impact on the usage of Blackboard but only basic knowledge is sufficient.

It is evident from the staff opinions that prior IT experience has no significant impact on Blackboard. However, staff training has had impact on the usage of Blackboard as more than half participants have taken training and expressed their improvement of Blackboard usage for their courses. Ongoing training therefore increases usage.

Hence, the research question proposed for this research “What are staff perceptions of blackboard as an online teaching tool in tertiary education?” could be concluded that it is a beneficial tool that enhances student learning and mostly used as a management tool. Ways of improving usage and effectiveness with increased use of staff training have been highlighted in this study.

**6.2 Recommendations**

Five recommendations are suggested based on the results of research study. First, TAM model can be used to further analyse staff perceptions and intended usage of LMS such as Blackboard. Second, management to provide on going staff training to make staff aware of the course tools before staff actually use those. Third, there is a necessity for ongoing training sessions to be systematically structured to make staff to understand the importance of transformation of class sessions for online access. These regular training sessions helps staff to better utilize the course tools and use Blackboard for its full potential. Fourth, the use of Blackboard for online teaching should be offered as optional that makes staff feel comfortable to use it for pedagogical purpose. Fifth, as recommended by the staff, there should business analysts specially recruited to give the support to staff about how to make use of each tool for their pedagogical needs rather than technical support and training.
6.3 Suggestions for Further Research

From this research, it is found that TAM model can be used to examine staff perceptions and the usage of software application. Further research requires finding the generalizability of TAM theory for educational institutes with various stakeholders. The study needs to further narrow down to see if staff perceptions differ in each department and compare results based on the programs offered.

Further research required focus on few difficulties as perceived by staff such as interface between Blackboard and Peoplesoft, which was pointed out by Malcolm (2003) and is still found in this research study even in 2008. As this research is focussed on one institute, it is required to apply similar research for other institutes who offer similar courses and compare the results for match and mismatch of staff opinions on Blackboard usage.

6.4 Chapter Summary

In this chapter the research results that were interpreted in the previous chapter were taken to summarise the conclusions and evaluate recommendations for further study. Recommendations were suggested based on the staff opinions observed in this study and the research approach followed with underlying TAM models. The chapter concluded with suggestions for further research on evaluation of Learning Management system by understanding staff intentions to use the Blackboard tools.
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Appendix A: Information Sheet for Interviews

Information for Participants

STAFF PERCEPTIONS OF BLACKBOARD AS AN ONLINE TEACHING TOOL IN TERTIARY EDUCATION

I am a student of Master of Computing at Unitec. Part of my degree programme involves a research paper on a subject of my choice. My research topic looks at staff perceptions of Blackboard as an online teaching tool in tertiary education.

What I am doing
I want to find out the problems currently being faced by staff members of Unitec and evaluate the effectiveness of Blackboard as an online teaching tool.

What it will mean for you
I want to interview you and talk about:

♦ What are the difficulties in using Blackboard as a teaching tool
♦ How to make Blackboard more functional
♦ What is the usability of Blackboard as a teaching tool
♦ How to enhance teaching processes with Blackboard
♦ How effective is Blackboard as an online teaching tool

I would like to meet you for about 45 minutes to talk about these kinds of things. I will come to your office and this will be during working hours. I will tape the interviews and will be transcribing it (typing the conversation out) later. All features that could identify you will be removed and the information on the tapes used will be erased, once the transcription is done. You are free to withdraw from this project for whatever reason within two weeks of the interview.

What will I do with this?
By taking part in this you will be helping me to understand about how appropriate the online teaching tools such as Blackboard are to fulfill the needs of online learning and how staff feel about using Blackboard for the teaching purpose.

Consent
If you agree to participate, you will be asked to sign a consent form. This does not stop you from changing your mind if you wish to withdraw from the project. However, because of my schedule, any withdrawals must be done within 2 weeks after I have interviewed you.
Please contact me if you need more information about the project:

At any time if you have any concerns about the research project you can contact my supervisor:

Confidentiality
Your name and information that may identify you will be kept completely confidential. All information collected from you will be stored on a password protected file and the only access to your information will be by you, me and my supervisors.

Thank you!

UREC REGISTRATION NUMBER: (2007.xxx)
This study has been approved by the Unitec Research Ethics Committee from (xx December 2007) to (xx December 2008). If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 7248). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix B: Interview Questionnaire

1. How many courses do you teach using Blackboard?
2. How much IT experience do you have and how much is required to use Blackboard for teaching?
3. Which tools do you use most frequently on Blackboard?
4. What are the benefits for students when Blackboard is used as a teaching tool?
5. Does Blackboard enable student communities to develop in your course(s)?
6. How useful is the Blackboard for course delivery?
7. Do you use Blackboard to store course documents for student reference?
8. Do you use Blackboard to store course documents for access by all staff?
9. If you answer no to the above question (8), how do you manage common documents?
10. Have you taken training to use the Blackboard application?
11. If you answer yes to the above question (10), how helpful is the training with the teaching process?
12. Can you suggest any other software that would be a better online teaching tool than Blackboard?
13. If you answer yes to the above question (12), what is the software?
14. Would you like a tool that detects plagiarism to be included in Blackboard?
15. How appropriate is the digital drop box for assignments?
16. Do you use Blackboard for online course assessments?
17. Have you experienced any size limit for course documents to be posted in Blackboard?
18. What are the technical difficulties you faced while using Blackboard?
19. What do you suggest to enhance the features of Blackboard?
Appendix C: Survey Area

Unitec Campus, Carrington Road, Mt. Albert

Appendix D: Survey Covering Letter

Information for Participants

STAFF PERCEPTIONS OF BLACKBOARD AS AN ONLINE TEACHING TOOL IN TERTIARY EDUCATION

I am a student of Master of Computing at Unitec. Part of my degree programme involves a research paper on a subject of my choice. My research topic looks at staff perceptions of Blackboard as an online teaching tool in tertiary education.

What I am doing
I want to find out the problems currently being faced by staff members of Unitec and evaluate the effectiveness of Blackboard as an online teaching tool. I am doing an online survey as part of research and would like to request you to fill the survey form attached.

What it will mean for you
I would like to focus my questions on the following:

♦ What are the difficulties in using Blackboard as a teaching tool
♦ How to make Blackboard more functional
♦ What is the usability of Blackboard as a teaching tool
♦ How to enhance teaching processes with Blackboard
♦ How effective is Blackboard as an online teaching tool

Confidentiality
Your name, address and information that may identify you will be kept completely confidential. All information collected from you will be stored on a password protected file and the only access to your information will be by you, me and my supervisors.

Researcher: ...Saroja Missula.........................
Student ID: 1276742

Thank you!

UREC REGISTRATION NUMBER: (2008.795)
This study has been approved by the Unitec Research Ethics Committee from (9 January 2008) to (8 January 2009). If you have any complaints or reservations about the ethical conduct of this research, you
may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 7248). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

**Appendix E: Survey Instrument**

**Survey Questionnaire**

Q1. How do you rate the following according to level of usage (in classroom/for Staff) in your courses?

<table>
<thead>
<tr>
<th>Course Tool</th>
<th>Always</th>
<th>Often</th>
<th>Fairly</th>
<th>Occasionally</th>
<th>Never</th>
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<tbody>
<tr>
<td>1.1 Course Documents</td>
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<tr>
<td>1.2 Announcements</td>
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<td>1.3 Assignments</td>
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<td>1.4 Digital Drop Box</td>
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<td>1.5 External Links</td>
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<td>1.6 Instructor Tools</td>
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<td>1.7 Discussion Board</td>
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<tr>
<td>1.8 Grade Book</td>
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<td>1.9 Staff Information</td>
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<tr>
<td>1.10 Course Information</td>
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<tr>
<td>1.11 Virtual Classroom</td>
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<tr>
<td>1.12 Emailing Students</td>
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<td>1.13 Blogs</td>
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<td>1.14 Wikis</td>
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<td>1.15 Podcasting</td>
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<td>1.16 Glossary Manager</td>
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<td>1.17 Survey Tool</td>
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<td>1.18 Test Tool</td>
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<tr>
<td>1.19 Alternative Language support</td>
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</table>
Q2. How would it affect your usage of Blackboard if further training is provided? *Choose one of the following options.*

1. Not at all  2. Small Increase  3. Significant Increase

Q3. Do you prefer making teaching with Blackboard optional? [Yes/No]

Q4. Does Blackboard support the pedagogical principles that you want to use for teaching with technology? [Yes/No]

Q5. Do you think Blackboard has enough functionality for managing your course documents? [Yes/No]

Q6. What percentage (%) of your course materials are on Blackboard?
   a) 0 – 20      b) 20 – 40     c) 40-60
   d) 60-80      e) 80-100

Q7. Has your perception of Blackboard changed as you have gained more online teaching experience? [Yes/No]

Q8. How do you rate the level of effectiveness of the following tools?

<table>
<thead>
<tr>
<th>Course Tools</th>
<th>Very High</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
<th>Very Low</th>
<th>Can’t Say</th>
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<tbody>
<tr>
<td>1.1 Course Documents</td>
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<td>1.2 Announcements</td>
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<td>1.3 Assignments</td>
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<td>1.4 Digital Drop Box</td>
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<td>1.5 External Links</td>
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<td>1.6 Instructor Tools</td>
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<td>1.7 Discussion Board</td>
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<td>1.8 Grade Book</td>
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<td>1.9 Staff Information</td>
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Appendix F: Interview Transcripts

Interviewee Name: B Date: 22/01/08

1. How many courses do you teach using Blackboard?
   4 courses per semester. I teach a total of 8 courses using Blackboard.

2. How much IT experience do you have and how much is required to use Blackboard for teaching?
   I have 20 years of IT experience. To use Blackboard a basic knowledge of computers is sufficient.

3. Which tools do you use most frequently on Blackboard?
   I use mostly emails, Assignments, Course documents, Staff Information, Digital Drop Box, and User Management.
   The tools I use less frequently are Books, External links and Recycle courses.

4. What are the benefits for students when Blackboard is used as a teaching tool?
   The main advantage for students is accessing of all the materials and course information.

5. Does Blackboard enable student communities to develop in your course(s)?
   No. Not in my courses. I tried to set up a discussion board and a very few students used it.

6. How useful is Blackboard for course delivery?
   It is a management tool to deliver course material.
7. **Do you use Blackboard to store course documents for student reference?**
   Yes. I post useful website links in the External links for student’s reference.

8. **Do you use Blackboard to store course documents for access by all staff?**
   No. Each course is setup for a few instructors who are involved to access it. For exchange of common documents staff members need to negotiate and request the concerned staff member for specific course documents.

9. **If you answer no to the above question (8), how do you manage common documents?**
   There is a J drive to store all common course related documents in different folders. Each folder refers to one course. This drive can be accessed by all staff but not through Blackboard.

10. **Have you taken training to use the Blackboard application?**
    Yes. I did have some training on instructor tools. These training sessions were held at Unitec.

11. **If you answer yes to the above question (10), how helpful is the training with the teaching process?**
    The training was useful especially for administration purpose but not for teaching purpose.

12. **Can you suggest any other software that would be a better online teaching tool than Blackboard?**
    Yes.

13. **If you answer yes to the above question (12), what is the software?**
    I have used ‘FrontPage’ approximately seven years ago. FrontPage is like a teaching tool and provides structured access to the course material.

14. **Would you like a tool that detects plagiarism to be included in Blackboard?**
    Yes.

15. **How appropriate is the Digital Drop Box for assignments?**
    For my courses I use Digital Drop Box. Actually the courses I teach are about programming which does not require to be submitted in Turnitin. I myself submit the assignments in the Turnitin website for students who sent it first to the Digital Drop Box.

16. **Do you use Blackboard for online course assessments?**
    No. The nature of courses I teach do not require assessment through online.

17. **Have you experienced any size limit for course documents to be posted in Blackboard?**
    No.

18. **What are the technical difficulties you faced while using Blackboard?**
    Last year we found that Blackboard got shutdown without any reason, but that could have been a server problem, I’m not sure. It was quite frustrating because some of the students...
| **19.** | **What do you suggest to enhance the features of Blackboard?**  
It would be useful to allow moving multiple folders under Revision Materials of course materials tool. If I want to remove a few folders together I have to remove them one at a time, this is a lengthy process. It is the same scenario for the Digital Drop Box, to remove multiple documents I cannot do it at once |
1. **How many courses do you teach using Blackboard?**
   This year I will be teaching two courses.

2. **How much IT experience do you have and how much is required to use Blackboard for teaching?**
   I have 45 years of IT experience. I think people who are familiar with the Microsoft Windows environment not just someone who use web processing but someone who are familiar with varieties of software like word processing, email, world wide web, spread sheets. It might help a little when we enter student grades and numbers, in some places of the would be nice, but not essential. The minimum skill set required i.e., knowledge of emailing, navigation skills might helps a little to work on Blackboard.

3. **Which tools do you use most frequently on Blackboard?**
   I certainly use Communication tools mainly in emails, course information, course documents, grade book, discussion board, assignments.
   I have used Chat but only once. I have used Digital Drop Box in the past. I set up the staff accounts and give them access through instructor tools which are attached to Blackboard. I use them for attaching staff names.

4. **What are the benefits for students when Blackboard is used as a teaching tool?**
   I think it is a case of ‘any time any place to information’ and it is the prime benefit to students. Certainly I put lot of information on Blackboard and I expect students to go there to answer questions rather than asking me or wait until I talk to them on phone. The disappointing thing is that students still ask for information that is on Blackboard. Students who are working full time spend less time looking in Blackboard and they think that sending an email to the programme director is easier. I don’t mind that.

   The good thing is that students put resources into Blackboard and use it as a discussion board. Students share more materials by forming small groups assigned by the instructors.

5. **Does Blackboard enables student communities to develop in your course(s)?**
   Yes it can. It has that potential. In the beginning, students are more enthusiastic about Discussion board and at the moment students are putting their energies using blogs, Myspace (I guess). There are many places to form communities and Blackboard becomes a lower priority.

6. **How useful is the Blackboard for course delivery?**
   I think it is very good and quite versatile. We can put documents, clips, audio and video we choose in place. If a student wants to send an email to fellow students they can just
They can communicate with their teachers using Blackboard without memorizing their email address. Two way communication is possible by making resources available to students and I think it can be used very well with data that students and teachers want. I don’t think we use the full potential of Blackboard.

7. Do you use Blackboard to store course documents for student reference?
   Absolutely. I only use one place i.e. Course documents for students reference on Blackboard.

8. Do you use Blackboard to store course documents for access by all staff?
   Yes. It is the same place i.e. course documents to store course documents for staff access also.

9. If you answer no to the above question (8), how do you manage common documents?

10. Have you taken training to use the Blackboard application?
    Very little. I learnt about Blackboard myself.

11. If you answer yes to the above question (10), how helpful is the training with the teaching process?
    Just occasionally through going to group sessions with staff I picked up something new, something I had not been aware of, may be once twice. I have been using Blackboard for the past 10 years.

12. Can you suggest any other software that would be a better online teaching tool than Blackboard?
    Yes

13. If you answer yes to the above question (12), what is the software?
    I certainly heard lot about Moodle… it is wonderful. I have also heard about WebCT while supervising student’s research. I have never used Moodle myself.

14. Would you like a tool that detects plagiarism to be included in Blackboard?
    Absolutely

15. How appropriate is the Digital Drop Box for assignments?
    It is fine, but I don’t use it. We use Turnitin in for electronic submissions so I don’t use Digital Drop Box.

16. Do you use Blackboard for online course assessments?
    No.
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<tr>
<th></th>
<th>Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td>17.</td>
<td>Have you experienced any size limit for course documents to be posted in Blackboard?</td>
<td>Never</td>
</tr>
<tr>
<td>18.</td>
<td>What are the technical difficulties you faced while using Blackboard?</td>
<td>None.</td>
</tr>
<tr>
<td>19.</td>
<td>What do you suggest to enhance the features of Blackboard?</td>
<td>1. Video telephony&lt;br&gt;2. There is little information that goes in two directions. Peoplesoft is used by administration staff to store student information. But it is one directional i.e. information goes from Peoplesoft to Blackboard. It would be great if Peoplesoft and Blackboard are integrated so that there is one place for course information and also student information. I can access Blackboard anywhere in the world but I can’t access Peoplesoft which has my student’s information i.e. student addresses. I maintain my own integrated system which has a spreadsheet and where all the information is maintained. There are five places I access my information from, to maintain my spreadsheet. Also it would be good if there is a button to ring the student’s telephone number.</td>
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</table>
1. **How many courses do you teach using Blackboard?**
   4 or 5 courses in a year as part of the teaching.

2. **How much IT experience do you have and how much is required to use Blackboard for teaching?**
   About 10 years.
   It is pretty easy to work with Blackboard. If new systems come up, then I forget how to use the options. I can always find out how to do it by asking my colleagues. Once you get into it is relatively easy.

3. **Which tools do you use most frequently on Blackboard?**
   I use the basic tools such as Course tools, External links. As part of the general teaching and assessment, I use discussion boards. In one course I used Wiki too. We don’t use any of the testing tools, or the assessment mechanism. I don’t set quizzes.

4. **What are the benefits for students when Blackboard is used as a teaching tool?**
   Well. It brings the class to the point of being able to discuss things in their own time so that they are able to reflect on material, which they would not have time in short number of face to face sessions. Most of the teaching we do is blended i.e. we use online as well as classroom sessions. But, It extends the classroom session so that they can continue working on it. Otherwise, it would be a very isolating experience. Also it acts as a source of developing community of learners which improves the relationship between teachers and students.

5. **Does Blackboard enable student communities to develop in your course(s)?**
   Yes, Most of the benefit comes from their experiences. Students do their professional development while doing their masters course and it depends on which course. To gain from the environment is absolutely vital. In some courses, we get them to produce project materials that they design themselves collaboratively in small groups of 3 or 4 students by working online or sending emails.

6. **How useful is the Blackboard for course delivery?**
   I find it is a bit boring. Things tend to become an ossified stack. Stuff you put there cannot get back is a simple delivery of information which is the not the best use of Blackboard. You can give students opportunities that if someone has done a class session they can put up their PowerPoint presentation on Blackboard, and if people can refer it that’s good. If we use it as shovel ware or a course delivery tool it becomes a problematic.

7. **Do you use Blackboard to store course documents for student reference?**
Yes. The problem is that we can use the study materials but we cannot put all the information on i.e. reading materials in course documents for students’ reference. There is no point in putting large chunks of documents or bits of information. It doesn't work these days due to copyright issues.

8. **Do you use Blackboard to store course documents for access by all staff?**
   Yes. We do share common course information.
   Most of the courses are taught by two or three staff members. This way they have access to the course documents. It is not opened beyond that. It is always not required to give access of all course information to all lecturers. However, if it required sharing any information we give them access on request.

9. **If you answer no to the above question (8), how do you manage common documents?**

10. **Have you taken training to use the Blackboard application?**
    Yes. I took training on earlier stuff and each year I attend training for new issues, for example, last time we learnt about Wikis.

11. **If you answer yes to the above question (10), how helpful is the training with the teaching process?**
    It is very helpful. Because when we bring in new systems on Blackboard it is always changing, so we need to understand the changes. The interactive sessions during training about how we do this, is always useful.

12. **Can you suggest any other software that would be a better online teaching tool than Blackboard?**
    I do not know enough about other software applications. But, I heard about WebCT that, it is technically difficult. My course is always been to keep non-technical level and you still teaching pedagogy as part of the teaching process. Once you put technical issues in between you loose touch with the course. Blackboard seems to be sometimes tricky, we need to take technical help sometimes.

13. **If you answer yes to the above question (12), what is the software?**

14. **Would you like a tool that detects plagiarism to be included in Blackboard?**
    It would probably be a good idea. We are not using Turnitin but we may use it next year. In one course when I asked students to discuss about Treaty of Waitangi, I observed that students were cutting and pasting. If students are aware that there is plagiarism tool they will be more conscious about non-plagiarising and the quality of the work will improve. I don’t want to give the students a hard time, I just want them to improve the quality of the work submitted.
| 15. | **How appropriate is the Digital Drop Box for assignments?**  
I never use it. I get the assignments by emails or CDs. |
| 16. | **Do you use Blackboard for online course assessments?**  
Yes. We ask students to critique, read and discuss about few topics and ask them their experiences. We assess them on five different criteria basing on discussion. |
| 17. | **Have you experienced any size limit for course documents to be posted in Blackboard?**  
No. |
| 18. | **What are the technical difficulties you faced while using Blackboard?**  
Normally we did not face any technical problems. There were few problems once upon a time that few cookies got installed and became problem for few weeks. The problems became less over the years. |
| 19. | **What do you suggest to enhance the features of Blackboard?**  
I heard that Moodle was easier in the beginning and added with more and more refinement gradually. I prefer fewer refinements to more refinements In addition, it is quite worthwhile to have more training, which is going on already. |
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| **1.** | How many courses do you teach using Blackboard?  
Five courses per year. |
| **2.** | How much IT experience do you have and how much is required to use Blackboard for teaching?  
I got my computer in 1994. Since 1997 I use the computer all day long.  
Experience to use Blackboard depends on how involved you want to be. If you want to post information it can be done right away. One can use Blackboard as an interactive resource like running student’s interactive sessions. |
| **3.** | Which tools do you use most frequently on Blackboard?  
I use Announcements, emails, Course documents, Digital Drop Box most frequently.  
Less frequently used tools are discussion board, staff information. I do enroll students myself using instruction tools that I used every semester. I don’t use grade book at all. I don’t use discussion board either, but I may have to use it in future for the PG paper. |
| **4.** | What are the benefits for students when Blackboard is used as a teaching tool?  
Students can download lectures in advance and write notes in the margins on the printouts. I don’t encourage them to interact with each other as it is not a good interactive tool. Campus students will have enough discussions in classroom. However, it is terrific advantage for off-campus students to communicate with others. |
| **5.** | Does Blackboard enable student communities to develop in your course(s)?  
Not in my courses. |
| **6.** | How useful is the Blackboard for course delivery?  
Pretty easy really |
| **7.** | Do you use Blackboard to store course documents for student reference?  
No. However, I am going to start it soon to put learning materials for all students’ access. Also I am planning to post video clips related to course which can be accessed online. I am not using external links but I may use it in future and add video links. |
| **8.** | Do you use Blackboard to store course documents for access by all staff?  
No. I don’t |
| **9.** | If you answer no to the above question (8), how do you manage common documents?  
Our school is still small that we share documents all the time. I teach same subject Media |
and Communication in both graduate and undergraduate courses. I share few documents using emails.

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<th>Question</th>
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<tr>
<td>10. Have you taken training to use the Blackboard application?</td>
<td>Yes</td>
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<tr>
<td>11. If you answer yes to the above question (10), how helpful is the training with the teaching process?</td>
<td>I found it very useful especially when I have taken my course materials for training sessions and started designing them. I did the course twice. First time I did not learn anything. But on the second round I practically designed my Blackboard while they taught and it became much better for me. Instead of reading it is better if somebody tells me how to do this and do that practically.</td>
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<td>12. Can you suggest any other software that would be a better online teaching tool than Blackboard?</td>
<td>No. I heard people saying that Blackboard is inadequate but the people who use Blackboard more than I do, said it is quite useful.</td>
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<td>13. If you answer yes to the above question (12), what is the software?</td>
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<tr>
<td>14. Would you like a tool that detects plagiarism to be included in Blackboard?</td>
<td>I don’t use Turnitin (I don’t like Turnitin) as I check assignments manually and find easily if it is a copied material. Being a professional writer for about 27 years I can ‘catch people up’ by reading their work where as Turnitin has its own limitations as it does not really catch. In computers, It is like garbage in garbage out. Most students don’t cheat as they know what is expected from them. For journalism papers, students need to show quality in writing and maintain the professional quality and I can catch if it is plagiarized. You have to say what you think in a particular way but cannot steal somebody’s work. It depends on course, and in my course If I ask how to run a conference, students need to practically go and interview people but cannot copy from somewhere.</td>
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<td>15. How appropriate is the Digital Drop Box for assignments?</td>
<td>It is good. I give them option if they want to submit softcopy they do it thru Digital Drop Box for geographical convenience. Students submit hard copy and that is sufficient.</td>
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<td>16. Do you use Blackboard for online course assessments?</td>
<td>No. But I think some staff uses it for assessments.</td>
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<td>17. Have you experienced any size limit for course documents to be posted in Blackboard?</td>
<td>No</td>
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<tr>
<td>18. What are the technical difficulties you faced while using Blackboard?</td>
<td>I had some difficulties in the beginning while entering enrolments but now I am</td>
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| 19. | **What do you suggest to enhance the features of Blackboard?**  
I can't think of any enhancements as I don't use it at an advanced level.  
If I use it very interactively then I can tell about the enhancements. |
1. **How many courses do you teach using Blackboard?**  
   I am teaching Digital Communication.

2. **How much IT experience do you have and how much is required to use Blackboard for teaching?**  
   In 1986 I started teaching with computers. My familiarity with online teaching is five years starting with digital communication.  
   I think people get the hang of it pretty quickly and there is orientation for new staff and it is easy to pick up. Initially there were Mac computer users for whom it took little time.

3. **Which tools do you use most frequently on Blackboard?**  
   At the time of enrolment, I keep track of who enrolled into the course using the instructor tools and other services like service indicators, log in details investigation (negative service indicators). My course is one of the first course went online and it is hands on learning type of course. The learning modules are kept on Blackboard and students use advanced WP, “teach yourself” softwares. I also use Announcements and Course documents which is good across the board to provide a good sharing environment.

4. **What are the benefits for students when Blackboard is used as a teaching tool?**  
   It is a huge benefit. My course started as first online course i.e. Digital Communication which has modules for students for practice using few softwares.

5. **Does Blackboard enables student communities to develop in your course(s)?**  
   I am not quite sure how students use discussion board on Blackboard. I also use Blackboard as a student. In PG courses students use discussion board. In some courses there is an evaluation based on Discussion Board that requires student participation.

6. **How useful is the Blackboard for course delivery?**  
   It depends on the nature of course. Not all courses are designed to be delivered online. Distance learning is a kind of running parallel with the need for course to interact online. In my courses announcements are used for communication having a link with the course content. Course information, course documents are used in learning environment.

7. **Do you use Blackboard to store course documents for student reference?**  
   Yes. Course Documents folders have exercises which students can access work in their free time. The external links have links of every week’s topics discussed in classes. Students are emails us and share with us topics of their interest.
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<tr>
<td>8. <em>Do you use Blackboard to store course documents for access by all staff?</em></td>
<td>Not within the courses. COMPROGS is a module working as an umbrella website where any communication student or staff will have access to it to any information. Any student enrolled in communication course of any level will automatically get access to use it in school of communication programs in short called as COMPROGS. There is Blackboard users groups, research group citrus group, general notices, and programming information.</td>
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<td>9. <em>If you answer no to the above question (8), how do you manage common documents?</em></td>
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<tr>
<td>10. <em>Have you taken training to use the Blackboard application?</em></td>
<td>Whenever I need some updated training I contact learning technologies (in past) i.e. Unitec center for learning and innovation at present But it is a question how many people avail the opportunities. People can learn Blackboard at a very basic level. Most users think they are good depending on their course needs.</td>
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<tr>
<td>11. <em>If you answer yes to the above question (10), how helpful is the training with the teaching process?</em></td>
<td>I have been in the workshop conducted by CTIL I became wiser. In staff meetings we keep discussing why don’t we use that feature in Blackboard.</td>
</tr>
<tr>
<td>12. <em>Can you suggest any other software that would be a better online teaching tool than Blackboard?</em></td>
<td>I don't have suggestions for any software other than Blackboard with which most of the things done. But looking at the cost of change and training costs it is very difficult bring a change. How far it is worth to change the current application is a point of discussion.</td>
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<tr>
<td>13. <em>If you answer yes to the above question (12), what is the software?</em></td>
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<tr>
<td>14. <em>Would you like a tool that detects plagiarism to be included in Blackboard?</em></td>
<td>It is a bit of concern. I think things will be much easier if a Turnitin kind of filter is added in Blackboard. As soon as a student uploads in Blackboard and compiled at the same for plagiarized content which can only be seen by staff. If Blackboard has the filter then the assignment can be accessed by Digital Drop Box.</td>
</tr>
<tr>
<td>15. <em>How appropriate is the Digital Drop Box for assignments?</em></td>
<td></td>
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<tr>
<td>16. <em>Do you use Blackboard for online course assessments?</em></td>
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No. I think some of the business courses are using this feature. Every time the score changes while doing online tests. Assessments are what people do on Blackboard like a discussion forum. If that is the case then we do assessments in our courses.

17. **Have you experienced any size limit for course documents to be posted in Blackboard?**
   There are no problems with size limit.

18. **What are the technical difficulties you faced while using Blackboard?**
   Requirements like online documentation is required with spelling help file like WinHelp and html help file. When a file is uploaded which is executable, Blackboard stops the file uploading to prevent entry of any viruses. If the students and staff need uploading of exe files they had to make zip files or change the file extension.

19. **What do you suggest to enhance the features of Blackboard?**
   It is not the change itself but the speed of change should not damage the current functionality. People can be introduced to various workshops and interaction can be changed. At present the Blackboard features are intuitive. If we push people out of their comfort zones it gives social and technological problems.
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<tbody>
<tr>
<td>1. How many courses do you teach using Blackboard?</td>
<td>Four courses per semester. Sometimes two courses depending on requirement.</td>
</tr>
<tr>
<td>2. How much IT experience do you have and how much is required to use Blackboard for teaching?</td>
<td>Out of 10 years of teaching experience I have seven years of experience in teaching online courses using Blackboard. No prior experience is required to use Blackboard.</td>
</tr>
<tr>
<td>3. Which tools do you use most frequently on Blackboard?</td>
<td>I use most frequently Course documents, Assignments, Announcements, Course information, Assignment grades, communication, discussion board, user management tools, Digital Drop Box for storing all students’ course work. Less frequently used course tools are Staff Information, External Links.</td>
</tr>
<tr>
<td>4. What are the benefits for students when Blackboard is used as a teaching tool?</td>
<td>Students will be able to communicate well among themselves, can upload and download course materials from Blackboard, can read and understand the course materials before coming to class. It gives better idea about what is going to be discussed in class.</td>
</tr>
<tr>
<td>5. Does Blackboard enables student communities to develop in your course(s)?</td>
<td>Yes. Sometimes I send announcements and emails to all students. Sometimes they use discussion boards and sometimes they ask me to form groups for group work.</td>
</tr>
<tr>
<td>6. How useful is the Blackboard for course delivery?</td>
<td>Very useful. In one way ITC dehumanizes the learning as students think that they need not come to class as the course materials are available online. Actually class interaction not only enables face to face communication but also facilitates the interaction between teachers and students to share their real life experiences while discussing in class.</td>
</tr>
<tr>
<td>7. Do you use Blackboard to store course documents for student reference?</td>
<td>Yes and no. Only for one or two semesters I need to upload before the semester beginning. I keep them for next semester also for referring them and compare them with current changes.</td>
</tr>
<tr>
<td>8. Do you use Blackboard to store course documents for access by all staff?</td>
<td>Only staff who teach the same/similar course can share course documents using Blackboard.</td>
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<td>9. If you answer no to the above question (8), how do you manage common</td>
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Only Blackboard course coordinator can enroll staff to share documents among staff. We use J: drive to access course documents that can be used by all staff.

10. Have you taken training to use the Blackboard application?
   No.

11. If you answer yes to the above question (10), how helpful is the training with the teaching process?
   -

12. Can you suggest any other software that would be a better online teaching tool than Blackboard?
   No. I heard about Moodle.

13. If you answer yes to the above question (12), what is the software?
   -

14. Would you like a tool that detects plagiarism to be included in Blackboard?
   Yes

15. How appropriate is the Digital Drop Box for assignments?
   Sometimes students have problems while uploading assignments into turnitin. I submit their assignment using Digital Drop Box on behalf of students. If assignments are submitted through Digital Drop Box it works as another backup.

16. Do you use Blackboard for online course assessments?
   No. I don’t think it is required. I always see whether students understood the concepts but not the English usage.

17. Have you experienced any size limit for course documents to be posted in Blackboard?
   No

18. What are the technical difficulties you faced while using Blackboard?
   Not many. I don’t have any difficulties with Blackboard.

19. What do you suggest to enhance the features of Blackboard?
   At the moment I don’t have any requirements. I have every tool I need to communicate with students in Blackboard.
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| 1. | **How many courses do you teach using Blackboard?**  
I teach around 13 courses and 4 papers per term. |
| 2. | **How much IT experience do you have and how much is required to use Blackboard for teaching?**  
I have about 30 years professional experience, of which I have 15 years onlineteaching experience using Blackboard. I don’t think we need to have prior experience to use Blackboard, only basic knowledge is sufficient. |
| 3. | **Which tools do you use most frequently on Blackboard?**  
I use instructor tools once in a term to setup courses, enroll students in class. Coming to the tools after login into Blackboard, I use course documents. I use mostly the tools on the left-hand side, and don’t use the tools on the right hand side (showed the tools on the screen). I use Course information & course documents frequently, I do not use the collaboration & glossary tools. |
| 4. | **What are the benefits for students when Blackboard is used as a teaching tool?**  
There are lot of benefits to students as they share course documents, availability of course materials online, contact and communicate among other students, manage their course work through Blackboard. |
| 5. | **Does Blackboard enable student communities to develop in your course(s)?**  
Absolutely, it facilitates the growth of student communities. Under discussion board, the general discussion feature enables a community of practice. It gives scope for students to share common ideas through discussion boards. |
| 6. | **How useful is the Blackboard for course delivery?**  
Blackboard is primarily used for course material delivery. Giving documents which can be accessed online. |
| 7. | **Do you use Blackboard to store course documents for student reference?**  
Yes. I have in most of my courses a list of references for student access, the power point slides etc. |
| 8. | **Do you use Blackboard to store course documents for access by all staff?**  
No. I don’t do that. But the department does store documents available to all staff such as XXX lecture site. But if a staff member asks information about my papers, I send that information to them thru my mail. There is no place that every staff can refer every course. |
| 9. | **If you answer no to the above question (8), how do you manage common documents?** |
Papers such as administration documents and course prescriptions are managed by common shared drive. There is no requirement by staff to store course materials in Blackboard for common access. Some staff do share materials in staff drive and access through central repository.

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<tr>
<td>12. Can you suggest any other software that would be a better online teaching tool than Blackboard?</td>
<td>I don’t have any idea about other software. But I heard there are few course tools which have E-learning components.</td>
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<td>13. If you answer yes to the above question (12), what is the software?</td>
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<td>14. Would you like a tool that detects plagiarism to be included in Blackboard?</td>
<td>Definitely. That will be really useful.</td>
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<td>15. How appropriate is the Digital Drop Box for assignments?</td>
<td>I personally don’t have any requirement for the use of the Digital Drop Box by students. But it helps for new students to submit assignment in time when they don’t know how to post them in Turnitin. I ask them to post thru Digital Drop Box and then I post them to Turnitin thru my login to help new students.</td>
</tr>
<tr>
<td>16. Do you use Blackboard for online course assessments?</td>
<td>No. I have assisted with lecturers who are using Blackboard for online assessment. For business courses the online quizzes are being used by staff. I don’t use Blackboard for assessment in my courses.</td>
</tr>
<tr>
<td>17. Have you experienced any size limit for course documents to be posted in Blackboard?</td>
<td>No. I have not had such experiences.</td>
</tr>
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<td>18. What are the technical difficulties you faced while using Blackboard?</td>
<td>Long ago a bunch of assignments disappeared. No technical difficulties. But if the network goes down it is a big problem but that is not the problem with Blackboard.</td>
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<td>19.</td>
<td><strong>What do you suggest to enhance the features of Blackboard?</strong></td>
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<tr>
<td></td>
<td>1. It will be quite useful to include Plagiarism detection tool.</td>
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<td>2. It will be useful to include a grading mechanism. For bachelor’s degree papers, we are adding the grades in another system. It will be better if there was only one entry for grades provided, instead of double entry. For master’s papers the grade book is being used. But for bachelors there is a separate entry for grades. A common standard for grading system is very much required.</td>
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What do you suggest to enhance the features of Blackboard?

I wouldn’t bother. When E-learning came, the organizations just implemented Blackboard thinking that they are technically upgraded. Cost benefit analysis is not done and it is not verified what features they need. I think it is a burden that your files are stored in 3 different locations. We are supposed to share the same location. But we need to copy the files from our desktop pc and if we change/edit them there is no control of versions. When files are uploaded it gives access to students. So we need to hide them for student’s access until the final editing is done. We don’t have control over the files on Blackboard. The courses of organization can be accessed by any staff member due to lack of personal space. You have to set up your own space. It is not a document management system. The underlying principles apply for course delivery system but not for document management. The intellectual property of Unitec is not protected which are course related documents. But if I delete them there is no control. European court of human rights generates two thousand of documents per week with documents version control but we at Unitec generate only few hundreds documents which is very small number. Still there is lack of management and control.

Even if I put my documents on the network drive, still there is no version control or approval process of the stored documents. Most education establishments are behaving as small business solutions only. The most valuable thing we have is all the course related documents and it is highly possible that they may be damaged as anything can happen to hard disk. All the examinations are paper based. There is no leadership in terms of IT development. We have hardware and networking people managing the Blackboard application but we need business analysts who help the business to use IT technology effectively.