

# **A needs assessment evaluation of the suitability of e-learning options in teaching hotel management**

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# 1. Executive Summary

This report describes the result of a needs assessment evaluation carried out during June 2009. The needs assessment evaluation was carried out to evaluate the suitability of flexible learning options to be introduced into teaching hotel management papers within the Bachelor of Applied Management degree programme at Otago Polytechnic. The overarching purpose of the evaluation was to determine: How existing hotel management papers can be re-developed using e-learning methods which will best meet the needs of the target audience and lecturers.

The evaluation focused on two questions, based on two e-learning Guidelines (Milne & Dimock, 2006)

- TD1 Is the use of e-learning the most appropriate way to achieve the intended learning outcomes?
- TD10 Is good e-learning practice available to staff in a way they can adopt and adapt in their own work?

Due to the time limits of the evaluation a needs assessment was carried out using the evaluation framework, called the 'eclectic-mixed methods-pragmatic paradigm' (EMMPP), which allowed multiple perspectives of data collection through interviews with an educational expert and e-learning users, a review of relevant documentation and a survey of a group of degree students.

The analysis of the collected data, review of current documentation and interview information highlighted some common themes that were crucial

The needs assessment highlighted that the move to e-learning is in line with strategic plans and current pedagogical thinking. Despite this there is a need to motivate and engage with lecturers so they have a better understanding and knowledge of e-learning tools and to support them with the transition to e-learning.

The evaluator has made recommendations based on the analysis of the information collected and the main themes within the discussion. Successful e-learning opportunities may be provided through using familiar resources and starting out simply and ensuring both the engagement of the learner and motivation of the lecturer. By allowing easy access of materials to student in small chunks will allow improved learner engagement.

## **2. Introduction**

This report describes the result of a needs assessment evaluation carried out during June 2009. The purpose of the needs assessment evaluation was to evaluate the suitability of flexible learning options to be introduced into teaching hotel management papers within a degree programme.

### **2.1 Background**

The Bachelor of Applied Management degree programme has been offered in its current format since 2007, after its initial development in 2006, further to an amalgamation of the Bachelor of Hospitality and Tourism Management degree. At present students may study the degree programme on a full or part time basis at the Dunedin campus (face to face), however, due to internal strategic plans there is a move towards the use of more flexible delivery methods. As the evaluator currently teaches hotel management papers, the focus of the needs assessment related to these papers, however, the information could be extended to other majors within the degree programme.

### **2.2 Aim**

The aim of the needs assessment plan was to evaluate the suitability of flexible learning options that could be introduced into teaching hotel management papers within a degree programme, which has traditionally been taught face to face.

## **3. Purpose and Questions**

The overarching purpose of the evaluation was to determine: How existing hotel management papers can be re-developed using e-learning methods which will best meet the needs of the target audience and lecturers.

The evaluation focused on two questions, based on two e-learning Guidelines (Milne & Dimock, 2006)

- TD1 Is the use of e-learning the most appropriate way to achieve the intended learning outcomes?
- TD10 Is good e-learning practice available to staff in a way they can adopt and adapt in their own work?

To ensure that the e-learning guidelines were answered through the needs assessment a subset of questions was formed to enable each of the e-learning guidelines to be researched adequately.

TD1 Is the use of e-learning the most appropriate way to achieve the intended learning outcomes?

- What are the most appropriate options available to transfer a face to face course to an online (flexible) course?
- What are the most appropriate learning methods for delivering a course on line?
- How can you ensure that learning objectives are met through on line methods?
- How do students prefer to learn?

TD10 Is good e-learning practice available to staff in a way they can adopt and adapt in their own work?

- What institutional support is available to staff to engage in e-learning?
- How can staff engage in e-learning practice?
- What e-learning training or professional development is available for academic staff?
- What on-going support is available for people new to e-learning?

## 4. Methodology

The evaluation plan was based on a needs assessment which Rossett (1995, as cited in Reeves & Hedberg, 2003) explained as a way to gather information to assist professionals in making recommendations about how to solve a problem or introduce new technology. Due to research time limits a needs assessment was seen as the most appropriate choice, as a formative evaluation would require development of online materials. A needs assessment can save time and money during development as it will ensure only approaches which suit the intended audience are used and money will not be wasted on something which is either unsuitable or not relevant. Gosper, Woo, Muir, Dudley and Nakazawa, (2007) fully supported the use of a needs assessment as it allows the evaluator to be able to fully engage in all aspects of curriculum design and the need to be able to analyse educational needs and requirements before exploring the software solutions, innovation and development requirements..

As part of this evaluation, the evaluator made use of the evaluation framework, called the 'eclectic-mixed methods-pragmatic paradigm' (EMMPP), which is a theoretical framework that allows for a flexible approach to the design, delivery and evaluation of interactive learning systems (Reeves & Hedberg, 2003). The EMMPP allows evaluators to adopt different

perspectives and theoretical approaches depending on the practical needs of a project and allows for measurement of different variables. This framework recognises that multiple perspectives are necessary to “triangulate information and conclusions regarding complex phenomena” (Reeves & Hedberg, 2003, p. 35). Different philosophical perspectives engender particular pedagogical approaches which, in turn, influence the roles and expectations of teachers and students (Gillani, 2003). The use of triangulation also adds richness to the evaluation.

## **4.2 Data collection methods**

As part of the triangulation of the chosen method, the evaluator used three data collection methods to collect relevant information:

- Interviews with e-learning users were carried out (n = 3)
- Interview with educational expert carried out (n=1)
- A review of current documentation allowed the evaluator to understand the strategic importance behind the move towards a more flexible delivery method, a list of documentation reviewed may be found in Appendix 1
- A survey consisting of fourteen questions was completed by a cohort of current students on the degree programme to investigate their experience with technology and the use of technology within an educational environment (n = 11) A copy of the survey may be found in Appendix 2

## **5 Analysis**

Overall the information from the student surveys, interviews and documentation support one another.

### **5.1 Analysis of interviews**

The interviews gave insight into the use of e-learning in both fully online courses and blended delivery to help answer the two key questions of the needs assessment. A copy of the interview questions may be found in Appendix 3.

100% of the interviewees started to use flexible delivery methods as they were ‘asked to’, however, in one particular case, this was also due to changes to the framework of their programme so it was also seen as an ideal opportunity and time to move towards e-learning options. 67% stated that institutional support was lacking and they relied on colleagues within

their department as support. 33% stated that they had support with their initial set up via the Educational Development Unit and they had been very fortunate with this support, however, with future changes to the polytechnic structure and a move towards departments becoming business units, they were unsure if they would be able to continue to use this support due to financial constraints.

The interviewees agreed that there should be training for staff not familiar with e-learning and that the approach should be graded from beginner's level through to more advanced training. Peer support and discussions can be very useful, but as one interviewee said, often you want 'training on demand', when you want to be shown something. Also one interviewee stated that staff involved in e-learning need to be motivated and need to want to be part of e-learning and this is not always the case. 66% of interviewees were unaware of any internal support for e-learning, whereas 33% stated that there was paid support through the Educational Development Unit.

The table below shows the e-learning options used by the interviewees. 66% of interviewees stated that they had adopted the e-learning options they currently use by trial and error, whereas only 33% stated that they had advice, however, it was still a learning curve, and could not comment on whether they were the most appropriate or not.

Table 1 E-learning options used by interviewees

E-learning option	Number
Blackboard	3
Discussion Board in Blackboard	2
Wiki Educator	2
You Tube	2
Google Documents	1
Email	2
Weblogs	1
Teleconferencing	1

When asked what students prefer, 33% responded face to face, however, 66% stated that there were differences with their students group that may have impacted on this answer due to a group being made up of more mature learners and therefore could work at their own pace or the fact that for another group of students they have only been exposed to a more blended form of delivery so are familiar with the e-learning options they use.

The interview with the e-learning education expert gave a good insight into the use of e-learning options and through the analysis of the interview the evaluator has drawn out five key themes which may be viewed in the table below:

Table 2 Key themes from interview with education expert

Theme	Discussion
Terminology	Important to understand the terminology used and the differences between face to face and on line learning environments.
Learning environment	Cannot presume that all students will have access to technology, internet access and computers. Need to adapt resources to suit individual requirements and needs. Also need to consider an open or closed learning environment.
E-learning course	When adapting a course for an on line learning environment, you must break it down into small chunks. Learners will learn differently and therefore need to take this into consideration. Want learning in short periods of time.
Reflection	This is vital to both the learner and the person delivering the course. It is crucial to gain knowledge from experience and to be able to test whether it works and then be honest in the reflection. Would be good to find a reflective student that would give knowledgeable feedback.
Communication with students	Key point is to keep it simple and think about what they students want and their preferences. Where possible eliminate unnecessary access steps.



## 5.2 Analysis of documentation

The review of documentation allowed the evaluator to gain information on both the strategic and current direction of e-learning within the polytechnic and the wider tertiary sector. Through the review of the documentation, the evaluator has chosen to adopt the definition of e-learning as “learning that takes place in the context of using the internet and associated web based applications as the delivery medium for the learning experience” (ELearning Advisory Group, 2002, p. 63).

## 5.3 Analysis of student survey

Eleven surveys were handed out to a cohort of degree students with a response rate of 100%. The purpose of the surveys was to investigate their experience with technology (Information about technology use) and the use of technology within and educational environment (Technology and education). A full summary of the survey questions and results may be found in Appendix 4. The first question asked students how long they had been using a computer for. The response to this question ranged from 16 years as the highest to 6 years as the lowest. The average length of time was 11.1 years.

Students were then asked how often they used their computers and the location of the main used of their computers. Interestingly, 91% responded that their main use was at home with daily access, whereas 9% stated they accessed a computer a few times a week and this was mainly via a polytechnic computer.

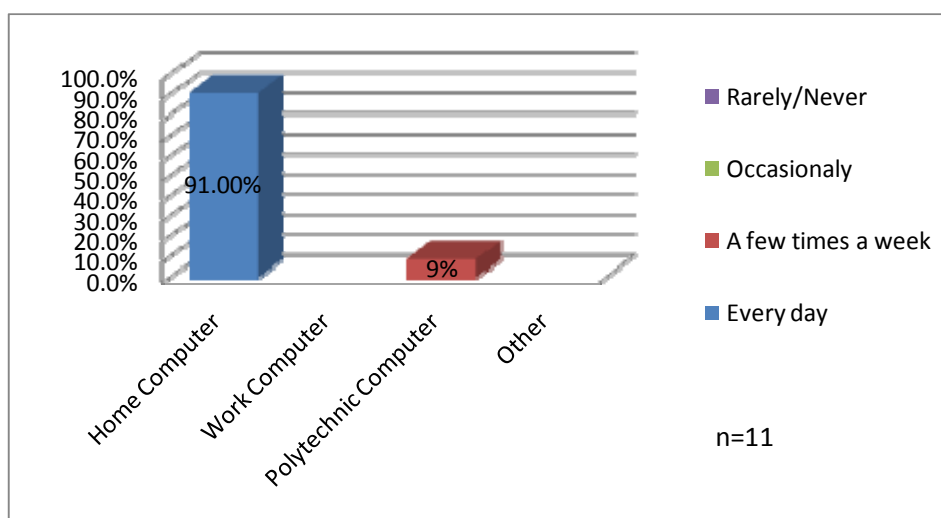


Figure 1 Location of primary computer and usage

60% of the students that used a home computer use wireless only connection, whereas 30% used wireless connection and DVD drive and 10% of students accessed their computer via broadband.

The length of time accessing a computer for work, recreational and educational and email purposes was varied. The least amount of time was 15-20 hours with 18% stating that was their access time, 9% responded approximately 16 hours, 9% stated 20 hours, 18% commented 20-25 hours, 9% person stated 25-30 hours, 28% said it was approximately 30 hours, 9% person said 30-40 hours.

The respondent's main usage of the internet was for educational reasons, although closely followed by communication and social networking. The table below outlines the main type websites and information that is accessed.

Table 3 How the internet is used and the types of websites, information and facilities used.

Outcome	Example	Frequency %
Educational	Polytechnic website, databases, Blackboard	50
Communication	Email, Facebook	36.5
Interest/Personal	Trade me, You tube	13.5

91% of respondents used some form of social networks and/or WebTools, with Facebook being the most common network accessed by the respondents. 82% of the respondents used synchronous text chat or voice over tools every day, whereas 9% responded they would use it a few times a week and 9% stated they rarely or never used it.

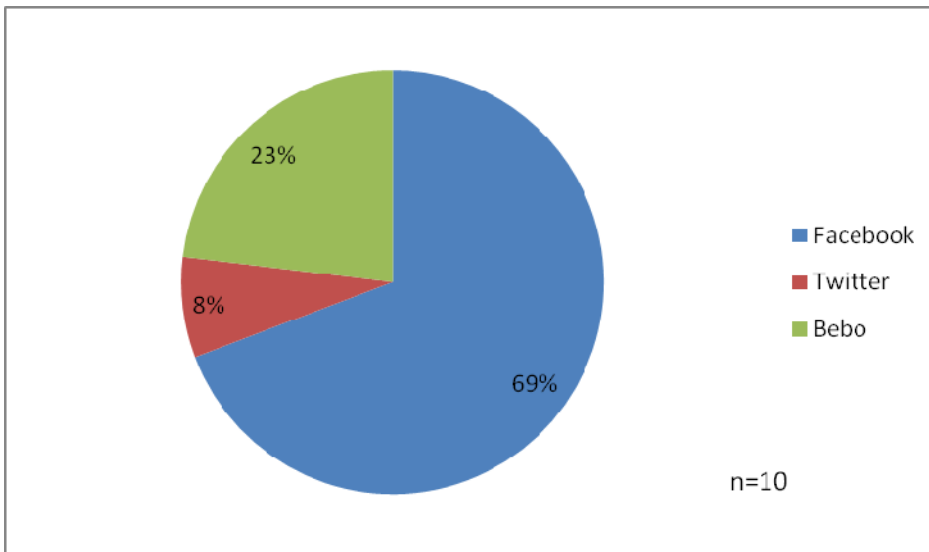


Figure 2 Type of Social networks and Web 2.0 tools accessed by students

When asked which forms of technology they have used or accessed during their course of study at the polytechnic 100% of students responded that they had used blackboard and email which are in line with the support that face to face students have through their current study on the degree programme.

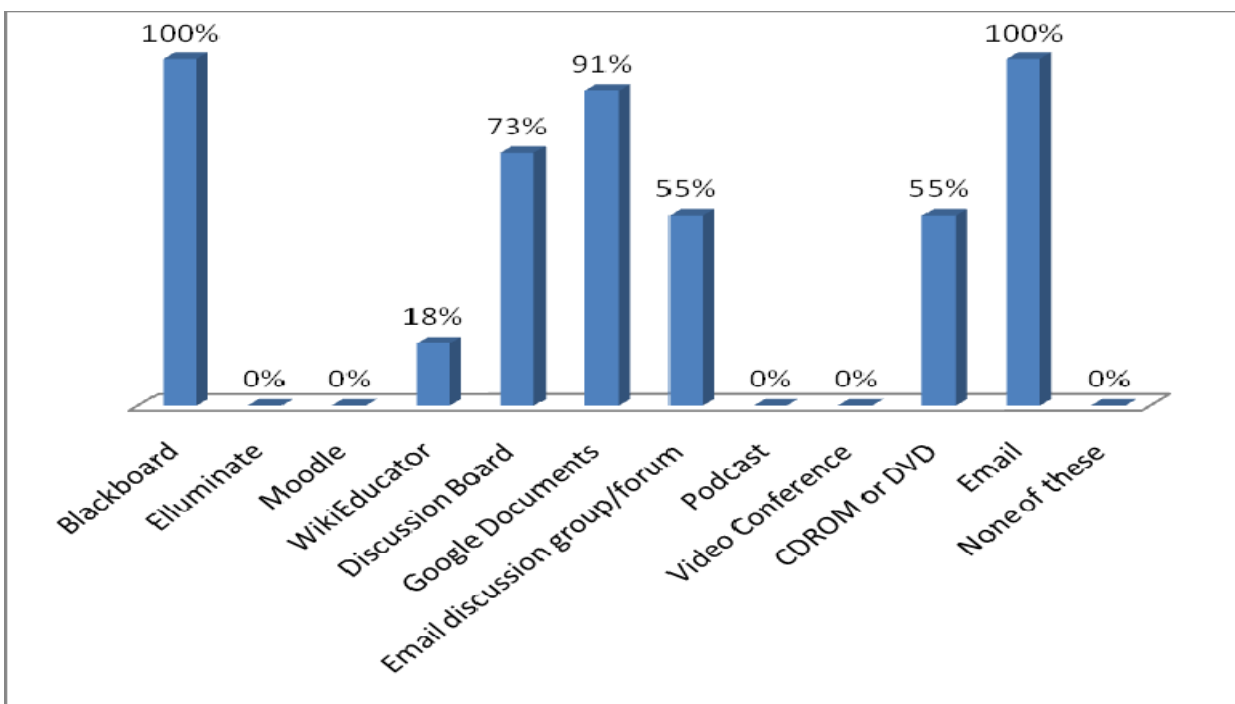


Figure 3 Forms of technology used or accessed during course of study at the polytechnic

The overall opinion of the technology used or accessed was favourable and was seen to be a good way to communicate with lecturers and obtain required information as well as assisting with the efficiency of their learning, which may be seen in the table below.

Table 4 Students opinions of the technology

Themes	Number of references	Description
More on how to use	1	There is a need to know more about how to use the technologies.
Communication and information	5	Regarded as a good or fast way to communicate with the lecturer or between students and lecturers and/or to obtain information.
Efficiency and helpfulness	5	Helpful and make it easier to do the work.

The preferred methods of accessing information and learning were not surprising to the evaluator as they teach on the programme and it is a requirement that each paper uses Blackboard at least for a notice board and repository of assignment material and course outline. Also that 91% of students would prefer email was also no surprise as each student is allocated an email account when they commence their study with the polytechnic. This is also in line with their response to accessing technology and the opinion of fast communication. 82% of students also responded that fast and efficient email communication would be paramount if they did not have face to face contact with their lecturers. Interestingly, 64% stated that they would like video conferencing even though no respondents had used this during their course of study so far at the polytechnic.

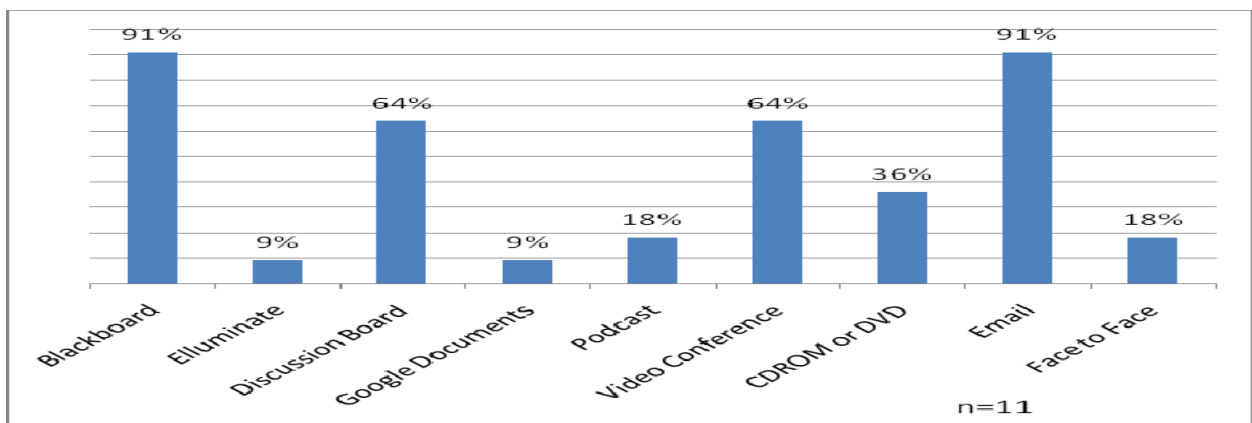


Figure 4 Preferred methods of accessing information and learning if no face to face class time

91% of students stated that they were either confident or extremely confident with the use of computer based and Internet based communication and information methods, whereas only 9% stated that they were extremely unconfident.

## 6 Discussion

The analysis of the collected data, review of current documentation and interview information highlighted some common themes which will be discussed in order to provide further information to answer the main questions of the needs assessment:

- TD1 Is the use of e-learning the most appropriate way to achieve the intended learning outcomes?
- TD10 Is good e-learning practice available to staff in a way they can adopt and adapt in their own work?

The move towards flexible delivery options within departments of the polytechnic is certainly in-line with the overall strategic plans and philosophy of the polytechnic, as well as external influences. Many e-learning initiatives have been justified on the assumption that technology could improve the quality of learning while at the same time improving access to education at reduced costs (Bates, 1997). Developing an e-learning strategy is essential in setting a course, without a strategic plan, short term measurement of costs and return on investment may overshadow the longer term benefits (Rosenberg, 2001).

There appears to be some trepidation from both lecturers and learners alike with adopting e-learning practices, however, the key points from the analysis of the needs assessment has been to start off with what you know and are already doing well as they are the foundations. It is important to continue with what is working well and build on from that point. Also remove any barriers that are unnecessary for the learner to achieve a successful learning outcome.

Through the analysis of the data collected and the needs assessment, the evaluator has understood that there is a need to have a clear understanding of the terminology of e-learning and online practices. In many cases, e-learning may be used to supplement either traditional face to face courses or print based distance education courses, which in the case of the polytechnic is already happening, or it may be a complete replacement of the traditional delivery modes. Richards (2002, p. 31) argues that “a distinction must be made between what may be referred to as an add-on model or e-learning and a more integrated approach which goes beyond a mere transmission or delivery of content to promote more interactive and effective

learning". From the analysis of the information gathered, e-learning is used to support a good learning experience and that models focus on pedagogical issues such as online instructional design and the creation of online learning communities (ELearning Advisory Group, 2002).

The increase demand of e-learning practices places new demands on the support and training within an educational facility. The interviewees suggested that there needs to be further support within the institution for users of e-learning technology. There seems to be a gap in the information provided to staff members on the assistance available and support tends to have been provided by peer support. This may also be due to a lack of motivation on the part of staff that do not want to undertake in a new experience or method of delivery. However, it may not necessarily be lack of motivation, but a fear of learning forms of technology, which is consistent with research in this area (Sadik, 2007).

## **7 Conclusion**

In conclusion, the information provided has helped answer the two evaluation questions and has provided a basis for the following recommendations and future work within e-learning. It cannot be disputed that face to face learning is preferred by lecturers and learners, however, there are great opportunities in e-learning that allows flexibility for both the lecturer and learner. E-learning, does not have to mean that there is no face to face contact, but allows flexibility in the way a course is delivered. Although the evaluator has made some recommendations, they would like to continue to research some of the different e-learning methods to ensure they have a full understanding of the needs and requirements of both the learner and lecturer involved in the learning experience.

## **8 Recommendations**

The following recommendations have been made in line with the projects aim of how existing hotel management papers can be redeveloped using e-learning methods which will best meet the needs of the target audience and lecturers.

- Start out by using resources that both lecturers and learners are familiar
- Keep the course simple and ensure that the learning is packaged in 'small chunks'
- Avoid too many different resources or access issues for learners
- Inform and motivate lecturers of e-learning opportunities
- Ensure there is sufficient support for new e-learning users (both student and lecturer)

Once the course has run, it is imperative that reflection takes place to re-evaluate how the course so that any necessary changes may be made.

The evaluator would like to take the opportunity in thanking fellow students of the course and the course facilitator for their valuable input throughout the needs assessment process.

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# 10 Appendices

## 10.1 Appendix 1

### Summary of Documentation material reviewed

The first three documents reviewed were institutional documents that provided information regarding both strategic guidelines and also current thinking of the policies and governance issues required of a higher educational facility.

The fourth document was the 2009 Horizon report was based on a qualitative research project which looked at identifying and describing emerging technologies.

The fifth document reviewed was a report written in 2002 by an E-learning advisory group. Although it was written seven years ago, much of the information was still relevant today and the glossary of terms useful for the discussion aspect of the paper.

#### 1. Otago Polytechnic Te Kura Matatini ki Otago Charter 2006 - 2010

The charter is the underpinning strategic document for the Otago Polytechnic and guides the institution in meeting the further education needs of its students in line with the Tertiary Education strategy. The purpose of the institution is to promote, facilitate and engage people in learning. This is also in line with the institutions mission: "To provide excellent life long learning opportunities relevant to our communities." The charter goes on to state that the institution will also be recognised of delivery of programmes in a flexible manner and a willingness to accommodate the specific learning aspirations of students through individualised and cross disciplinary programmes of learning.

#### 2. Otago Polytechnic Information Technology Framework 2008-2012

The information technology framework goals are to offer information technologically advanced solutions for the benefit of our learners and communities. The framework will build capabilities and allow for developing facilities and systems which support flexible teaching, learning and work practices, and which enable excellence in the services we provide.

### **3. Otago Polytechnic Profile 2006 – 2008**

The Otago Polytechnic Profile is a document that is presented to meet the requirements of an institutional Profile as defined in the Education Act. The profile demonstrates how the institution will give effect to its Charter. The profile discussed the continued technological advances combined with competitive pressures that bring increased expectations from learners and stakeholders in how they may learn. The institution will provide access to more flexible learning.

### **4. The 2009 Horizon Report (Johnson, Levine, & Smith, 2009)**

This report is the sixth annual report of a long running qualitative research project that looks at identifying and describing emerging technologies. This report had many very new and exciting technologies which will be most useful in the future of the evaluator's e-learning projects.

### **5. Highways and Pathways, Exploring New Zealand's E-Learning opportunities**

This document provided some valuable information, especially with the interests of the learner in mind. It discussed the need to e-learning to learner centred and to ensure that learning was informed by excellent pedagogy. E-learning should be quality based. The increased possibilities for lifelong learning, especially with industries being keen to come on board as well as educational institutions. The need for New Zealand to carve its own niche in the global phenomenon of e-learning.

## 10.2 Appendix 2

### Copy of student survey

Thank you for taking the time to fill in this questionnaire. This questionnaire is being used to investigate your experience with technology and the use of technology within an educational environment. Your responses will be used as part of a needs assessment evaluation project which the subject teacher is conducting for a professional course of study.

Responses to this questionnaire will be absolutely confidential and no other participants will be able to see your data. The answers to this questionnaire will go only to the project researcher (Rachel Byars) and any information which could potentially identify participants will not be disclosed.

### Section A – Information about your technology use

Q1 For how many years have you been using a computer? \_\_\_\_\_

Q2 I normally use a computer:

Every day	<input type="checkbox"/>
A few times a week	<input type="checkbox"/>
Occasionally	<input type="checkbox"/>
Rarely/never	<input type="checkbox"/>

Q3 Do you mainly use a:

Home computer	<input type="checkbox"/>
Work computer	<input type="checkbox"/>
Polytechnic computer	<input type="checkbox"/>
Other	<input type="checkbox"/>

(please state where)

Comments:

Q4 If you use a computer at home which of the following do you have?  
**Select as many as appropriate**

Wireless connection	<input type="checkbox"/>
Broadband connection	<input type="checkbox"/>
Dial up connection	<input type="checkbox"/>
No Internet access	<input type="checkbox"/>
CD drive	<input type="checkbox"/>
DVD drive	<input type="checkbox"/>

Q5 Approximately, how many hours a week do you spend on the Internet, including using email (for work, recreational and educational purposes) \_\_\_\_\_

Q6 How do you use the Internet and what sort of websites, information and facilities do you access and use?

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Q7 I use social networks and Web 2.0 tools (for example MySpace, Flickr, Facebook)

No       Yes  if you answered yes, please state which you use:

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Q8 How often do you use synchronous (at the same time) text chat or voice over tools at home, work or polytechnic? (for example Skype, MSN, Facebook)



- Every day
- A few times a week
- Occasionally
- Rarely/never

Q9 What is your opinion about the use of synchronous text chat or voice over tools?

**Section B – Technology and education**

Q10 During your course of study at the polytechnic which forms of technology have you used or accessed? Tick as many as appropriate.

- Blackboard
- Elluminate
- Moodle
- WikiEducator
- Discussion Board
- Google Documents
- Email discussion group/forum
- Podcast
- Video Conference
- CDROM or DVD
- Email
- None of these
- Other \_\_\_\_\_

Q11 What is your opinion about using the technologies listed in question 10?

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Q12 If you were to enrol on a course without any face to face class time what would be your preferred methods of accessing information and learning? (list as many as you want from the list available in Q10)

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Q13 What type of support would you expect from your lecturer during your learning if your course was not offered face to face?

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Q14. Overall, how confident are you in the use of computer-based and Internet-based communication and information methods?

- Extremely unconfident
- Unconfident
- Confident
- Extremely confident

## **10.2 Appendix 3**

### **Summary of interviews**

Interview questions for educational expert

1. What would you consider are the most appropriate options available to transfer a face to face course to an on online (flexible course)?
2. What aspects of the course would you change to start with?
3. What are the most appropriate learning methods for delivering a hotel management course on line?
4. How can you ensure that learning objectives are met through on line methods, especially when there are practical components of a course?
5. How can the lecturer ensure that the learners are still gaining the same quality of learning on-line as they do face to face?
6. What are students preferred methods of e-learning tools?
7. What are the most appropriate methods to interact with students when delivering a paper flexibly?

## Interview questions for e-learning users

1. Are the courses you teach on fully online or flexible options?
2. Why did you start to use e-learning options within your teaching?
3. What institutional support was available to you when you started using e-learning teaching methods?
4. What e-learning training or professional development would benefit staff that are not familiar with e-learning?
5. What on-going support is available for your e-learning teaching?
6. What e-learning options do you use within your teaching?
7. How did you choose the most appropriate e-learning methods?
8. Would you consider some e-learning methods more beneficial than others?
9. What e-learning methods are preferred by students?

## 10.3 Appendix 4

### Summary of student surveys

Section A – Information about your technology use.

Question1 – For how many years have you been using a computer?

The responses to this question ranged from 16 years as the highest to 6 years as the lowest.

The average length of time was 11.1 years.

Question 2 I normally use a computer: (every day, a few times a week, occasionally, rarely/never)

Question 3 Do you mainly use a computer: (home, work, polytechnic, other)

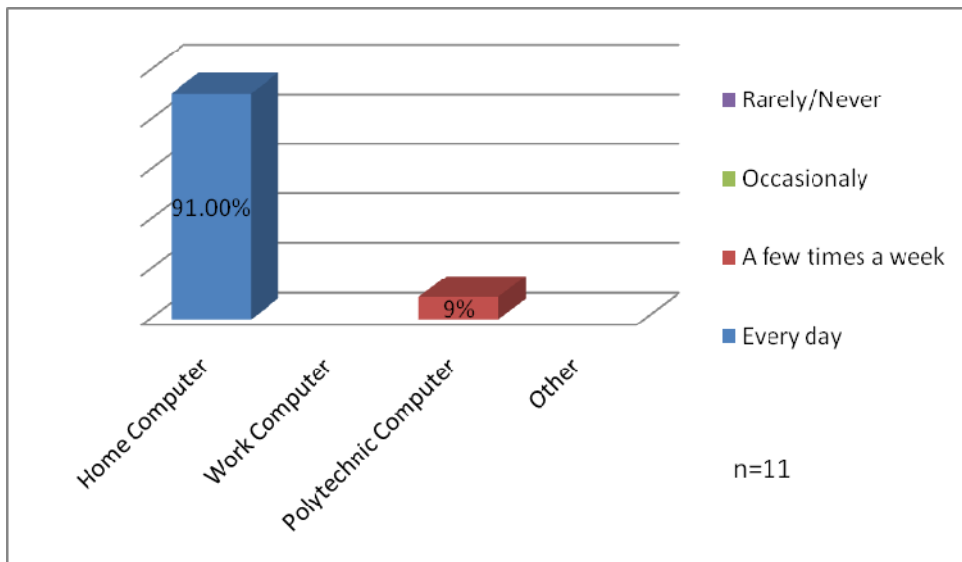


Figure 5 Location of primary computer and usage

Question 4 If you use a computer a home which of the following do you have?

(wireless connection, broadband connection, dial up connection, no internet access, CD drive, DVD drive). 60% of the students that used a home computer use wireless only connection, whereas 30% used wireless connection and DVD drive and 10% of students accessed their computer via broadband.

Question 5 Approximately, how many hours a week do you spend on the Internet, including using email (for work, recreational and educational purposes).

Students were then asked to comment on how many hours a week they spend on the internet, including using email, for work, recreational and educational purposes. The least amount of time was 15-20 hours, 1 person responded approximately 16 hours, 1 person stated 20 hours, two commented 20-25 hours, 1 person stated 25-30 hours, two said it was approximately 30 hours, 1 person said 30-40 hours.

Question 6 How do you use the Internet and what sort of websites, information and facilities do you access and use?

Table 5 How the internet is used and the types of websites, information and facilities used.

Outcome	Frequency %
Google	64
Email	91
Facebook	82
Blackboard	55
Polytechnic Website	18
Library database	36
Internet banking	18
Trade Me	18
Air New Zealand Grabaseat	9
News	9
YouTube	9
Websites for assignments	64

Outcome	Example	Frequency %
Educational	Polytechnic website, databases, Blackboard	50
Communication	Email, Facebook	36.5
Interest/Personal	Trademe, You tube	13.5



Question 7 - I use social networks and Web 2.0 tools (for example MySpace, Flickr, Facebook). 91% of students use social networks and Web 2.0 tools. The networks used were Facebook, Twitter and Bebo.

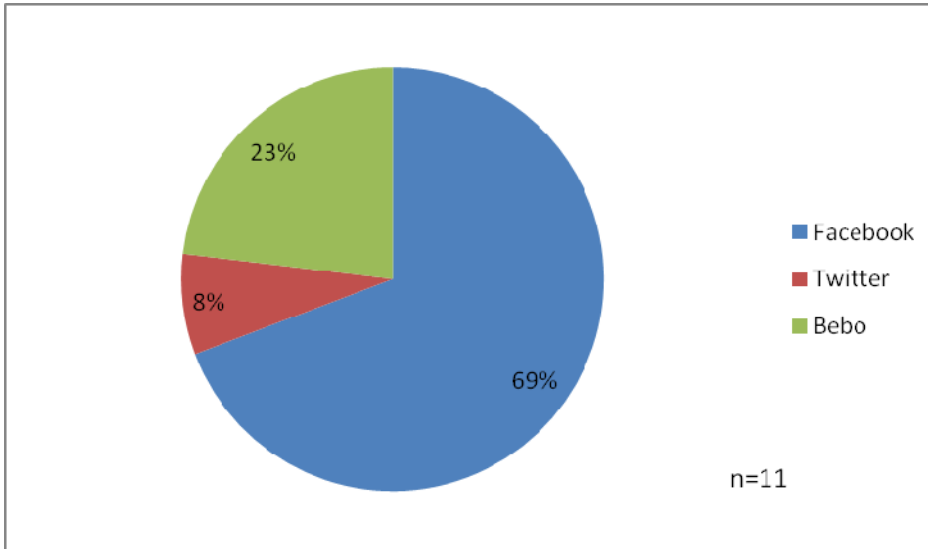


Figure 6 Type of social networks and Web 2.0 tools accessed by students

Question 8 How often do you use synchronous (at the same time) text chat or voice over tools at home, work or polytechnic? (for example Skype, MSN, Facebook)

82% stated that they used synchronous text chat or voice over tools at home, work or polytechnic every day. 9% stated a few times a week and 9% answered rarely or never.

Question 9 – What is your opinion about the use of synchronous text chat or voice over tools? When asked their opinion of the use of synchronous text chat or voice over tools, the answered:

Table 6 Opinion of use of synchronous text chat or voice over tools

Themes	Number of References	Description
Keeping in touch	7	Excellent to keep in touch, good for fast communication
Time wasted	1	Although good to keep in touch, a lot of time is wasted

Section B – Technology and Education

Question 10 - During your course of study at the polytechnic which forms of technology have you used or accessed?

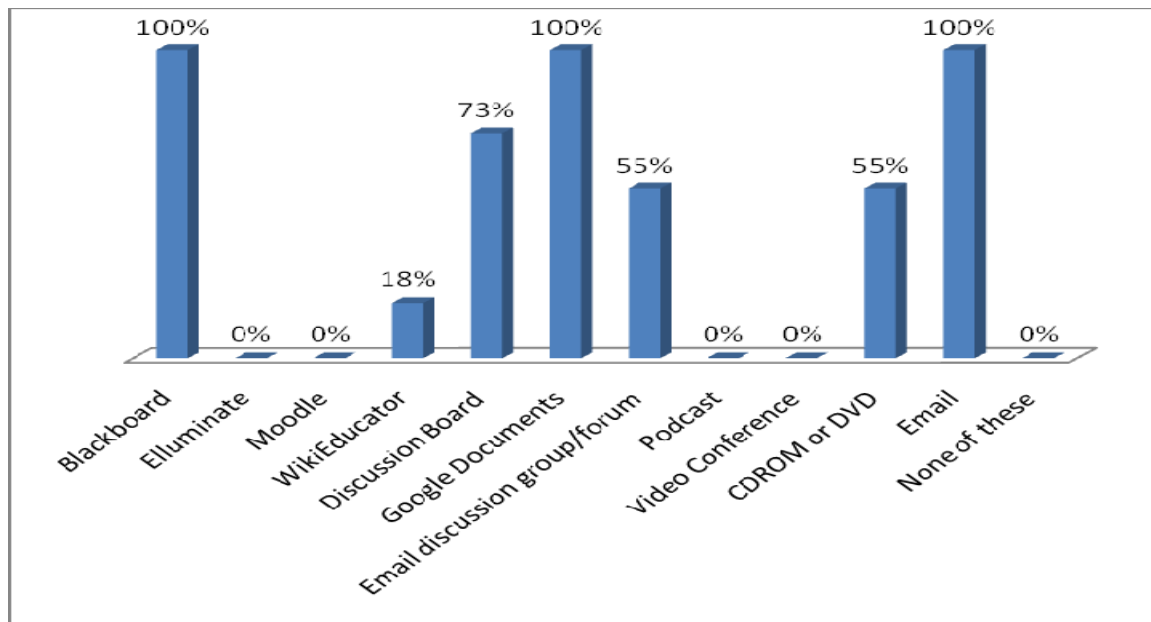


Figure 7 Forms of technology students have used or accessed during time at Polytechnic

Question 11 - What is your opinion about using the technologies listed in question 10?

Table 7 Opinion about use of technology that has been used or accessed at Polytechnic

Themes	Number of references	Description
More on how to use them	1	There is a need to know more about how to use the technologies.
Communication and information	5	Regarded as a good or fast way to communicate with the lecturer or between students and lecturers and/or to obtain information.
Efficiency and helpfulness	5	Helpful and make it easier to do the work.

Question 12 - If you were to enrol on a course without any face to face class time what would be your preferred methods of accessing information and learning? (list as many as you want from the list available in Q10)

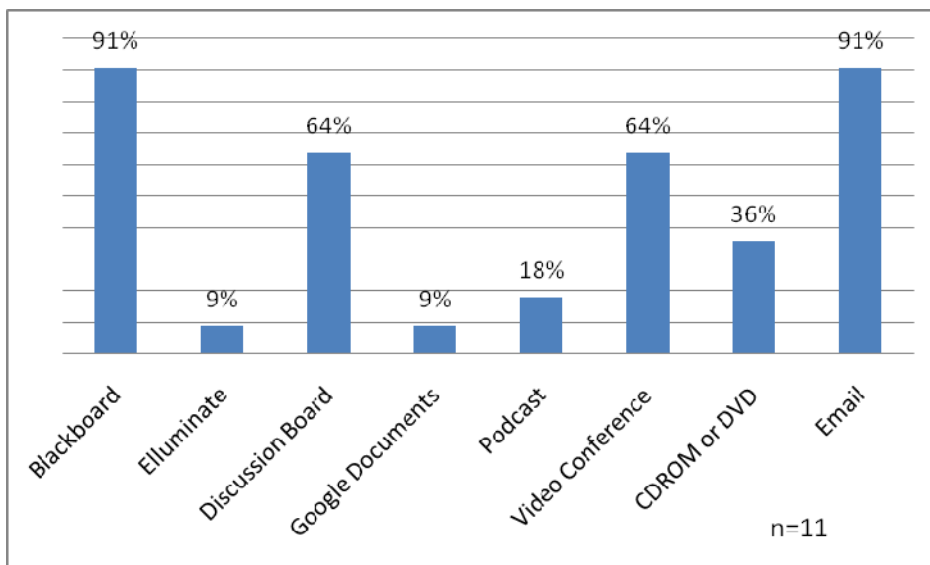


Figure 8 Preferred methods of accessing information and learning

Question 13 - What type of support would you expect from your lecturer during your learning if your course was not offered face to face?

Table 8 Expected support from lecturer if course was not offered face to face

	Number of references	Description
Email communication and support	9	The need for a quick response to communication.
Skype or other chat facility	1	Would be good to have this available if required.
Detailed resources	4	Detailed material and resources, especially of expectations and content of learning documents
Meetings	3	Regular scheduled meetings.

Question 14 - Overall, how confident are you in the use of computer-based and Internet-based communication and information methods?

Figure 9 Confidence in using computer based and Internet based communication and information methods

