



MINISTRY OF EDUCATION

*Te Tāhuhu o te Mātauranga*

# Extramural students' participation and achievement

*Trends, patterns and highlights*

This report forms part of a series called Learners in tertiary education. Other topics covered by the series are access, pathways, support, participation, retention and qualification completions.

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# EXTRAMURAL STUDENTS' PARTICIPATION AND ACHIEVEMENT

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## SUMMARY

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This report looks at extramural study (or distance education) in tertiary education in New Zealand. It covers the years 2004-2011, looking at patterns of participation and achievement in courses taught extramurally.

The report's main findings are:

1.	Relatively few students participated in extramural courses. The majority of extramural provision was delivered by e-learning. Extramural courses had lower completion rates than intramural courses. Among extramural courses, there were higher completion rates in paper-based courses than e-learning courses.
2.	<p>Polytechnics had a larger share of extramural provision than other sub-sectors, and private training establishments had the smallest share of extramural sub-sector provision. Wānanga had the largest proportion of their provision delivered extramurally, while universities had the smallest.</p> <p>For wānanga, extramural paper-based courses had higher completion rates than intramural face-to-face courses.</p> <p>Universities had the highest extramural course completion rate, while polytechnics had the lowest.</p>
3.	Women were more likely than men to be in extramural e-learning courses, and also more likely to be successful in extramural paper-based courses.
4.	The 40+ age group had the highest participation and completion rate in extramural courses and the under 25s age group had the lowest participation and course completion rate in extramural courses.
5.	<p>Māori had the highest participation in extramural courses and Asians the lowest.</p> <p>Asians had the highest extramural course completion rate.</p>
6.	<p>Students who entered tertiary study from a house-person/retired background had the highest participation in extramural courses. School leavers had the lowest participation in extramural courses.</p> <p>Students from a non-working background had the lowest extramural course completion rate.</p>
7.	Part-time students had higher participation in extramural courses than full-time students, but full-time students had a higher extramural course completion rate than part-time students.
8.	Certificate-level courses had the largest proportion of course-level extramural provision. Postgraduate and masters courses had the smallest proportion of extramural course-level provision.

# 1 INTRODUCTION

---

New Zealand has a relatively low population density, which means that many people live far from where tertiary education institutions are located. And many people who do not live far from tertiary institutions are also unable to access on-campus tertiary education because of work and/or family commitments. Distance education or extramural study allows these people to participate in tertiary education.

New Zealand's tertiary education network needs to have some distance education capacity to help people in remote communities and those who have caregiving and/or work responsibilities that preclude their accessing on-campus tertiary education. However, not every provider needs to offer distance education – as long as there is extramural provision at every level and reasonable opportunity to transfer credit between providers.

It is generally accepted that extramural students have lower levels of achievement than intramural students. This is for a range of reasons. Extramural students are more likely than their intramural peers to have additional work and family commitments, which often prevent them from devoting as much time to their study as intramural students (Brown, Keppell, Hughes, Hard, Shillington, and Smith, 2012).

Extramural students generally have fewer opportunities to interact with their teachers, institutions and peers. As a result they can feel or become isolated, which in turn increases their chances of withdrawal (e.g. Davies and Graff, 2005; Deka and McMurry, 2006; Giddings, Campbell, and Maclaren, 2006; Stodel, Thompson, and MacDonald, 2006; Tyler-Smith, 2006<sup>1</sup>). Extramural students also have more opportunities to drop out, because they usually take longer to complete their studies than their intramural peers (Engler, 2012).

Lower achievement can be the result of students lacking the attributes required for success in extramural study. Inappropriate teaching practices or ineffective institutional support can also contribute to lower achievement for extramural students (Gee, 1990; Schlosser, C. A. and Anderson, 1994; Garrison, 2000; Palloff and Pratt, 2003; Packham, Jones, Miller, and Thomas, 2004; Wojciechowski and Palmer, 2005; Schlosser, L. A. and Simonson, 2010; Guiney, 2013a).

While extramural students typically have lower achievement, results from the Australasian Survey of Student Engagement suggest that some distance students may be more engaged with some types of learning than their on-campus peers (Poskitt, Rees, and Suddaby, 2011).

Lower completion rates for extramural students are of particular interest and concern because both government and providers are increasingly focused on student achievement. Qualification completions and course completion rates are two of the four educational performance indicators the Tertiary Education Commission calculates and publishes for each provider. They are used to calculate the performance-linked component of their funding. One of the consequences of this focus on student achievement is that some providers have lost funding and may consider reducing the extent of their extramural provision in an attempt to improve their qualification completions and course completion rates so they can secure future performance-linked funding.

This report presents a view of extramural students' participation and achievement from 2004 to 2011.

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<sup>1</sup> Other researchers supporting this view include Hramiak, 2007; Rovai, Ponton, Wighting, and Baker, 2007; Sherifdeen, 2007; Stacey and Gerbic, 2007; Wilson and Sayles, 2007; Coldwell, Craig, Paterson, and Mustard, 2008; Johnson, Hornik, and Salas, 2008; Lamond and White, 2008; Nichols, 2008; Thompson, 2008; Ke and Xie, 2009; Kelly and Stevens, 2009; Rhode, 2009; Uzuner, 2009; Abdous and Yen, 2010; Boyle, Kwon, Ross, and Simpson, 2010; Brooks, 2010; Ferguson and DeFelice, 2010; Hartnett, 2010; Khoo, 2010; Ross, 2010.

## Why are we doing this report?

Some sub-groups of learners have a preference for extramural study. This is most likely because it allows them to access tertiary education when they may not otherwise have been able to do so (Guiney, 2011; Poskitt et al., 2011).

In addition to facilitating participation, some researchers argue that e-learning can improve extramural students' outcomes. This is because of its ability to increase the frequency and quality of students' interactions with teachers, institutions and peers, thus countering some of the factors identified in the literature as reducing student performance (e.g. New Zealand Council for Educational Research, 2004; Rovai, Ponton, Wighting, and Baker, 2007<sup>2</sup>).

But our report on e-learning achievement showed that extramural students had higher levels of achievement in courses delivered by traditional methods<sup>3</sup> than in courses delivered by e-learning methods (Guiney, 2013a). This report allows us to assess in more detail the role that e-learning plays in extramural students' participation and achievement.

## Report objective and structure

The report's objective is to assess the extent to which we can attribute extramural students' participation and achievement to the following factors:

- demographic characteristics
- full-time or part-time study
- institutional factors
- course level
- field of study.

In chapter 2, we construct an extramural student profile. We then examine extramural and intramural students' participation and achievement:

- across the New Zealand tertiary education system (chapter 3)
- by demographic characteristics (chapter 4)
- by study-related characteristics (chapter 5).

We also briefly examine extramural students' participation and achievement in courses delivered by traditional and e-learning methods. And in Appendix A below, we also highlight some of the key findings from courses delivered by the Web-Supported, Web-Enhanced and Web-Based delivery modes (also referred to as the e-learning categories).

## Analytical approach

We have weighted each course by its Equivalent Full Time Student (EFTS) factor, which is a measure of the 'size' of a course<sup>4</sup>. This has been aggregated at a system, sub-sector, institutional and course level. We use this measure to quantify student participation and achievement in extramural and intramural courses delivered by e-learning and traditional methods. This is because EFTS is a standardised measure of volume, so it is a more accurate indicator of extramural student participation and achievement than enrolment numbers.

---

<sup>2</sup> Other researchers supporting this view include Sheriffdeen, 2007; Stacey and Gerbic, 2007; Wilson and Sayles, 2007; Coldwell et al., 2008; Lamond and White, 2008; Nichols, 2008; Nora and Snyder, 2008; Thompson, 2008; Kelly and Stevens, 2009; Uzuner, 2009; Westberry, 2009; Abdous and Yen, 2010; Brooks, 2010; Hartnett, 2010; Khoo, 2010; Lynch and Paasuke, 2010.

<sup>3</sup> Traditional methods of delivery refers to face-to-face in intramural courses and paper-based in extramural courses.

<sup>4</sup> 1.0 EFTS represents a full-time full-year load for a student. The EFTS factor of a course is a number between 0 and 1 that gives the proportion of a full-time full-year load represented by that course. A course with an EFTS factor of 0.25 requires a quarter of a full-time full-year load. Note that, in using EFTS-weighted rates, we are not taking account of the number of students in the course, simply the size of the course.

## Calculating provision and participation rates

We quantify learner groups' extramural participation and each sub-sector's, level of study's and field of study's extramural provision by dividing the extramural EFTS by the corresponding total extramural course-level EFTS. So, for example, if a learner group has a total of 1,000 EFTS and 550 of these are in traditional delivery courses and 450 are in e-learning courses, the participation shares would be 55 percent for traditional delivery courses and 45 percent for e-learning courses.

We are analysing data for the years 2005-2011. We selected 2005 because the collection of e-learning data for the Single Data Return only began in 2004 and that year is therefore less likely to be reliable than 2005. We chose 2011 as the comparison year because it is the most recent one used for this report. Comparing 2005 to 2011 allows us to track growth over time and identify any trends or patterns.

## Measuring completion rates

We give a completion rate that is an aggregate of 2004-2011. This is because we are more interested in comparing achievement between different learner groups, institutions, and extramural and intramural study rather than year-on-year differences between them.

There are marked differences between different levels of study in their completion rates, with higher-level courses having much higher completion rates than lower-level courses (Wensvoort, 2011). In our earlier report on e-learning provision and participation, we showed that higher levels of study had much more e-learning provision and participation than lower levels (Guiney, 2011).

Given the link between level of study and course completion rates and the imbalance in the uptake of e-learning between levels, differences between extramural and intramural students' course completion rates in courses delivered by e-learning and traditional methods will reflect differences in levels of study (at least in part). In other words, the difference in extramural and intramural students' completion rates between e-learning courses and traditional delivery courses may reflect the balance of levels in each mode, not the influence of the delivery method.

To allow for these differences and to avoid distortion, we use a course-level-adjusted completion rate, which measures successful completion rates for e-learning and traditional delivery courses as if the mix of levels between the two groups had been the same. This is intended to remove any differences in completion rates due to course level so we can focus on the effects of delivery method on extramural and intramural students' course completion rates<sup>5</sup>.

---

<sup>5</sup> The report's completion rates were calculated as follows: Let sample completion rate at level =  $CR_k$ . Let number enrolled in the sample at level =  $N_k$ . Then the overall completion rate =  $[\sum CR_k * N_k] / \sum N_k$ . If across the whole system, the number enrolled at level =  $M_k$ , then the adjusted completion rate is  $[\sum CR_k * M_k] / \sum M_k$ .

## 2 DEFINITIONS AND DATA

---

In this chapter, we outline the definitions of extramural study and e-learning as well as the details of the data used in this report. We also construct a profile of an extramural student based on the critical personal attributes they need to be successful and the demographic characteristics most often associated with them as identified by the research literature.

### 2.1 Extramural study data and definition

#### **Data on extramural study**

New Zealand's main tertiary education data collection, the Single Data Return (SDR), provides data on extramural students and the type of courses they study. This field (called the Attend field) is used to create the extramural and intramural student populations.

The Attend field is a course-level variable that shows whether or not a course is extramural (provided off-campus) or intramural (delivered on-campus) in New Zealand or overseas. For the purposes of this report, only extramural and intramural courses offered in New Zealand are examined. These are defined as:

- extramural and residing in New Zealand – covers students who are resident in New Zealand and unable to attend on-campus courses in New Zealand. These courses use postal services and distance communication technology. These courses may, however, also include short periods of on-campus attendance
- intramural and residing in New Zealand – covers courses where students must be physically present in scheduled teaching sessions in New Zealand in order to meet the course requirements. These courses may, however, also include periods of supervised research and clinical or field experience which may take place outside the campus (Ministry of Education, 2013).

But there are differences between and within providers in their interpretation of extramural study and how courses are mapped to them. For example, some providers differentiate between their main and satellite campuses, defining delivery occurring at their satellite campuses as extramural study, even when the students attend classes on a common site at a common time. This difficulty means that the criteria applied in deciding how to complete the Attend field may differ subtly between providers. As a result, the data related to extramural students in the report must be treated with some caution.

#### **Definition of extramural study**

We define extramural study in this report using the SDR definitions above. We interpret the term 'postal services' as courses that use traditional delivery methods, and 'distance communication technology' as courses that use e-learning delivery methods.

### 2.2 Extramural student profile

#### **Personal characteristics of extramural students**

Students are more likely to be successful in extramural study if they possess certain study-related characteristics. These include being proactive, motivated and self-disciplined, setting and achieving realistic goals, having effective time management skills and high concentration levels, being able to prioritise, and feeling they are in control of their learning. Being able to collaborate effectively and to strike an effective balance between their study and

other commitments is also critical (e.g. van Merriënboer and Ayres, 2005; Smith and Ferguson, 2005; Eom, Wen, and Ashill, 2006; Kickul and Kickul, 2006; Tyler-Smith, 2006<sup>6</sup>).

### **Attitudinal characteristics of extramural students**

Students are also more likely to be successful in extramural study if they adopt certain behaviours, beliefs and attitudes. For example, students' level of engagement is associated with improvements in performance. Students' expectations of how well they will do and an alignment between their study and career or wider aspirations also improve their engagement and increase the likelihood of their success (Brown et al., 2012<sup>7</sup>). Positive attitudes towards extramural study, and higher levels of self-efficacy<sup>8</sup>, can also influence student success (Schlosser, C. A. and Anderson, 1994; Palloff and Pratt, 2003; Bay of Plenty Polytechnic (BoPP), 2012; Brown et al., 2012; Massey University, 2012; Nelson Marlborough Institute of Technology (NMIT), 2012<sup>9</sup>).

Evidence from the Australasian Survey of Student Engagement suggests that distance students are, on average, more focused on their career goals than on-campus students (Poskitt, et al., 2011).

### **Demographic characteristics of extramural students**

The research literature suggests that extramural students are more likely to be female, older, Māori, a caregiver, in paid employment, come from lower socio-economic backgrounds, and study part-time (Brown et al., 2012<sup>10</sup>).

## **2.3 E-learning definition and data**

For the purposes of this report, e-learning is defined as: 'learning that is enabled or supported with the use of ICT'<sup>11</sup>. The e-learning data used in this report is also taken from the SDR, which has a field (the Internet field) that identifies whether a course uses e-learning. This variable is split into different delivery modes based on the course's requirements for student access to the internet.

The traditional delivery mode is referred to in the Internet field as No Access, but for the purposes of this report this is referred to as No ICT. The e-learning delivery modes in this field are referred to as Web-Supported, Web-Enhanced and Web-Based. However, for the purposes of this report, these delivery modes are combined to form a single delivery mode – referred to as e-learning.

This was done because there may be differences between and within providers in their interpretation of the different e-learning delivery modes and how courses are mapped to them (Ministry of Education and Tertiary Education Commission, 2010). For example, it is difficult for many institutions to establish clear boundaries between the Web-Supported and Web-Enhanced delivery modes. This difficulty means that the data related to the e-learning delivery modes in the report must be treated with some caution.

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<sup>6</sup> Other researchers supporting this view include Levy, 2007; Rovai et al., 2007; Sherifdeen, 2007; Wilson and Sayles, 2007; Barnard, Paton, and Lan, 2008; Berenson, Boyles, and Weaver, 2008; Nichols, 2008; Nora and Snyder, 2008; Barnard-Brak, Lan, and Paton, 2010; Fillion, Limayem, Laferriere, and Mantha, 2009; Hartnett, 2010; Khoo, 2010; Ross, 2010; Westberry, 2009; Brown et al., 2012.

<sup>7</sup> Evidence for this view is also found in Schlosser, C. A. and Anderson, 1994; Garrison, 2000; Palloff and Pratt, 2003; Schlosser, L. A. and Simonson, 2010; Bay of Plenty Polytechnic (BoPP), 2012; Engler, 2012; Guiney, 2013a; Massey University, 2012; Nelson Marlborough Institute of Technology (NMIT), 2012; The Open Polytechnic of New Zealand, 2012.

<sup>8</sup> Defined here as an individual's belief about whether or not they have the capabilities to successfully complete a task.

<sup>9</sup> Other researchers supporting this view include Deka and McMurry, 2006; Wilson and Sayles, 2007; Barnard et al., 2008; Berenson et al., 2008; Coldwell et al., 2008; Johnson et al., 2008; Müller, 2008; Artino and Stephens, 2009; Pratt, 2009; Sundararajan, 2009; Hartnett, 2010; Ross, 2010.

<sup>10</sup> Evidence for this view is also found in Gee, 1990; Palloff and Pratt, 2003; Packham et al., 2004; Wojciechowski and Palmer, 2005; Guiney, 2011; Massey University, 2012; The Open Polytechnic of New Zealand, 2012.

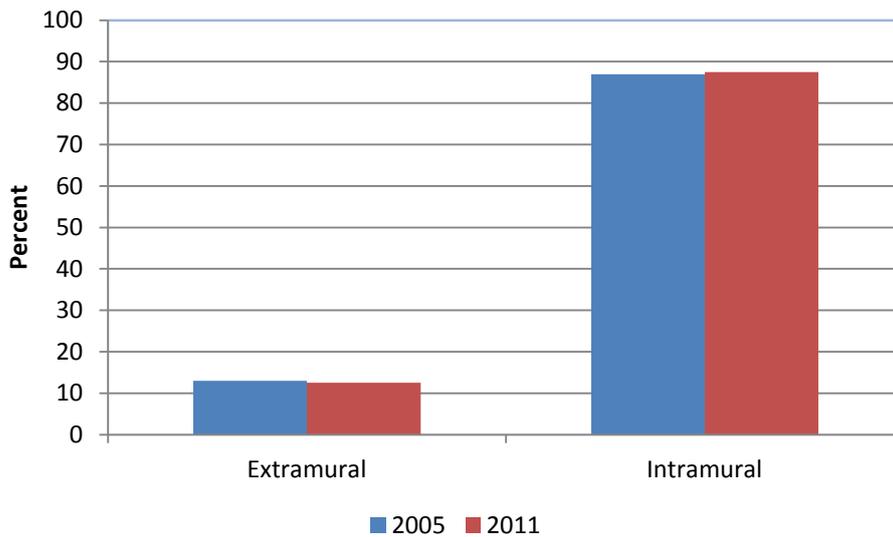
<sup>11</sup> Refer to <http://www.minedu.govt.nz/NZEducation/EducationPolicies/TertiaryEducation/ELearning/WhatIsELearning.aspx> for more details on tertiary e-learning.

### 3 EXTRAMURAL AND INTRAMURAL PROVISION AND ACHIEVEMENT BY MODE OF DELIVERY

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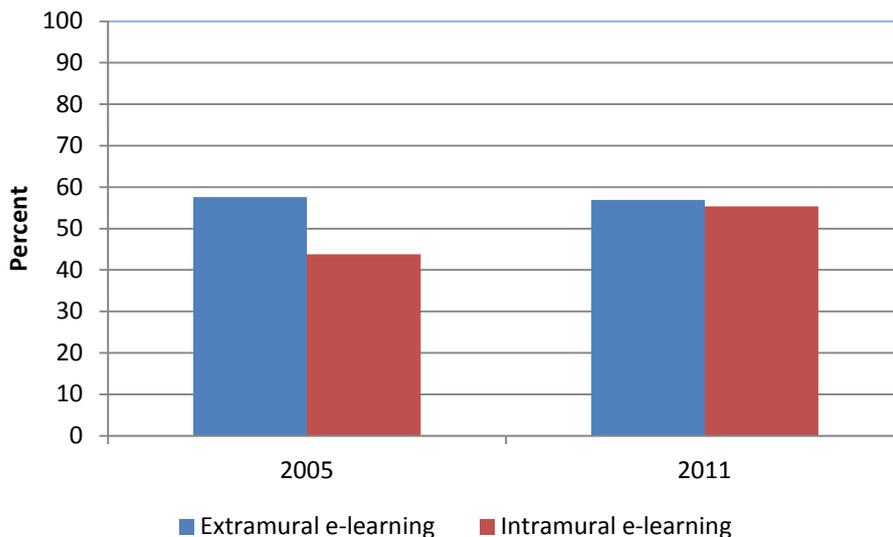
In this chapter, we compare provision of and achievement in extramural and intramural courses at the system level.

**Figure 1**  
Proportion of the total course EFTS in extramural and intramural courses



Extramural courses were a minority of system-level provision in 2005 and 2011. There was no significant difference between 2005 and 2011 in the proportion of EFTS being offered extramurally.

**Figure 2**  
Proportion of the total extramural and intramural course EFTS in the e-learning delivery mode



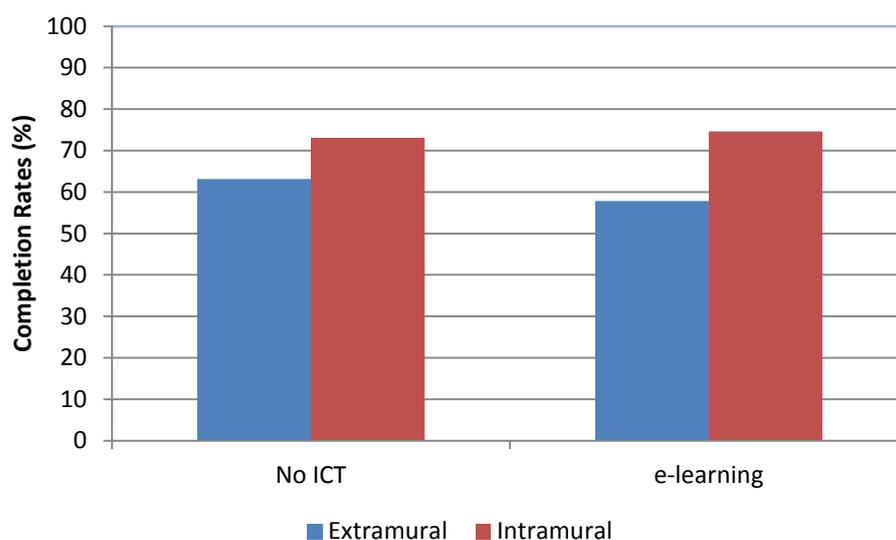
In intramural provision there was a shift over time from courses delivered by traditional methods to courses delivered by e-learning. There was no change over that time in the

proportion of EFTS in extramural e-learning, with more than half of extramural provision delivered by e-learning.

This increase in the proportion of intramural provision delivered by e-learning continues the trend seen in our earlier report on participation in e-learning (Guiney, 2011). Institutions may be shifting more of their provision to e-learning to accommodate changing learner expectations, for its potential to reduce costs or for pedagogical reasons (Garrison, 2000; The Open Polytechnic of New Zealand, 2012; Bowen, Chingos, Lack, and Nygren, 2013; Guiney, 2013b). The extent of the move may be increased by shifts in provision from lower-level courses (which tend to have less e-learning) to higher-level courses (which typically have more e-learning) (Guiney, 2011).

**Figure 3**

System-level extramural and intramural course completion rates 2004-2011 in the No ICT and e-learning delivery modes



Notes:

1. The completion rates are adjusted for the level of courses.
2. Completion rates are EFTS-weighted.
3. The completion rates in this graph are the aggregate over the eight years 2004-2011.

Intramural courses had higher completion rates than extramural courses, regardless of delivery mode. Intramural e-learning courses had marginally higher completion rates than traditional delivery intramural courses; but among extramural courses, those that were delivered using traditional methods had higher completion rates than those delivered by e-learning.

The higher completion rates for extramural traditional delivery courses could be because many of these courses have been offered for some years. Course design is critical to student success in e-learning (Garrison, 2000; Palloff and Pratt, 2003; Schlosser, L. A. and Simonson, 2010). It is possible that the limitations associated with extramural traditional delivery courses (particularly their lack of interaction) have been compensated for by good course design developed over many years.

Research shows that learners in extramural e-learning courses face several challenges over and above those faced by their traditional delivery peers, including the need to access and use the course technologies effectively. Learners experienced in e-learning tend to do better than their less experienced peers because they are more likely to have mastered the necessary skills and capabilities. Less experienced students can also struggle with the new forms of interaction as

well as the differing expectations of them in an e-learning environment. Students who do not have access to the necessary technologies, lack the critical skills to make use of these technologies or are unable to interact effectively with their peers, teachers and institutions are less likely to be successful in extramural e-learning courses (e.g. Garrison, 2000; Palloff and Pratt, 2003; Packham et al., 2004; Wojciechowski and Palmer, 2005; Schlosser, L. A. and Simonson, 2010; BoPP, 2012; Brown et al., 2012; NMIT, 2012<sup>12</sup>).

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<sup>12</sup> Other researchers supporting this view of the importance of institutions, teachers and students in contributing to the success of learners in extramural e-learning courses include Anderson and Simpson, 2004; NZCER, 2004; Zhang, Zhao, Zhou, and Nunamaker, 2004; Davies and Graff, 2005; van Merriënboer and Ayres, 2005; Oh and Lim, 2005; Paas, Tuovinen, van Merriënboer, and Darabi, 2005; Smith and Ferguson, 2005; Giddings et al., 2006; Kickul and Kickul, 2006; Stodel et al., 2006; Tyler-Smith, 2006; Negash, Wilcox, and Emerson, 2007; Sherifdeen, 2007; Stacey and Gerbic, 2007; Gardener, 2008; Lamond and White, 2008; McGrath, Mackey, and Davis, 2008; Müller, 2008; Nesbit, 2008; Nichols, 2008; Nora and Snyder, 2008; Santhanam, Sasidharan, and Webster, 2008; Cartner and Hallas, 2009; Ke and Xie, 2009; Kushnir, 2009; Walker and vom Brocke, 2009; Westberry, 2009; Blyth, Loke, and Swan, 2010; Brooks, 2010; Ellis and Goodyear, 2010; Hartnett, 2010; Khoo, 2010; Loke, Lokman, Winikoff, McDonald, Wass, Purvis, Zeng, Matthaai, and Vlugter, 2010; Naughton, Roder, and Smeed, 2010; Wu, 2010.

## 4 EXTRAMURAL AND INTRAMURAL STUDENTS' PARTICIPATION AND ACHIEVEMENT BY DEMOGRAPHIC CHARACTERISTICS

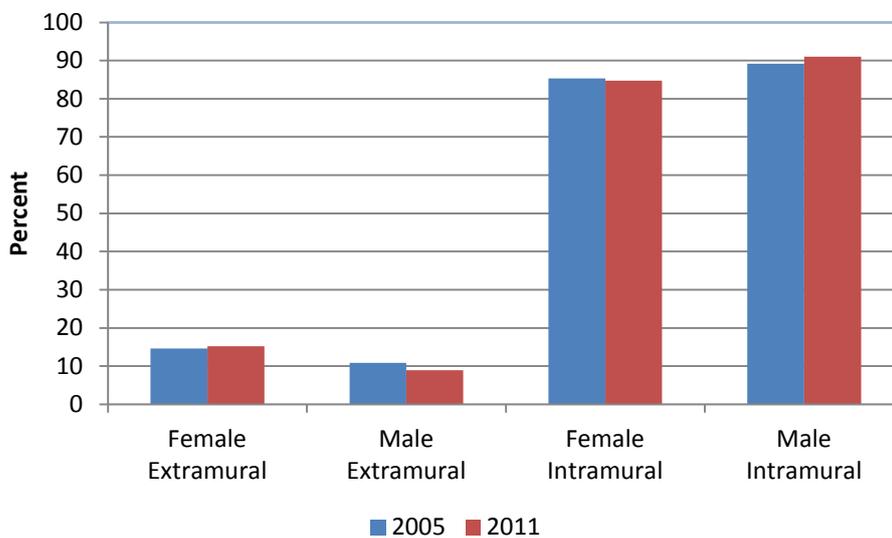
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In this chapter, we look at students' participation and achievement in extramural and intramural traditional delivery and e-learning courses by gender, age, ethnicity, and pre-enrolment activity.

### 4.1 Gender

In this section, we compare men's and women's participation and achievement in extramural and intramural traditional delivery and e-learning courses.

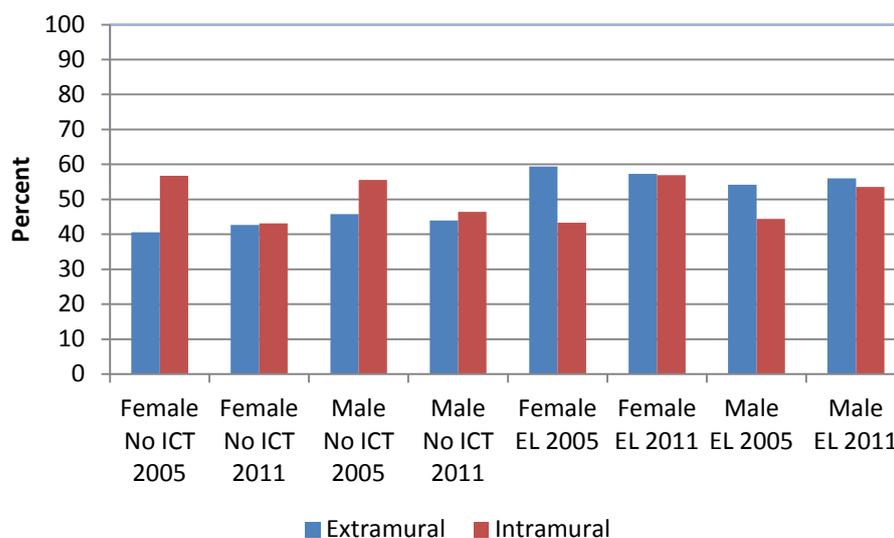
**Figure 4**  
Proportion of the total female and male EFTS in extramural and intramural



Women have a higher proportion of their EFTS in extramural courses than men. This finding is consistent with our chapter 2 extramural student profile. To some extent, the higher incidence of extramural study among women is likely to reflect the fact that more are in caring roles that make it harder for them to attend institutions, while a higher proportion of men are in careers – an alternative source of learning and development.

**Figure 5**

Proportion of the total female and male extramural and intramural EFTS in the No ICT and e-learning delivery modes



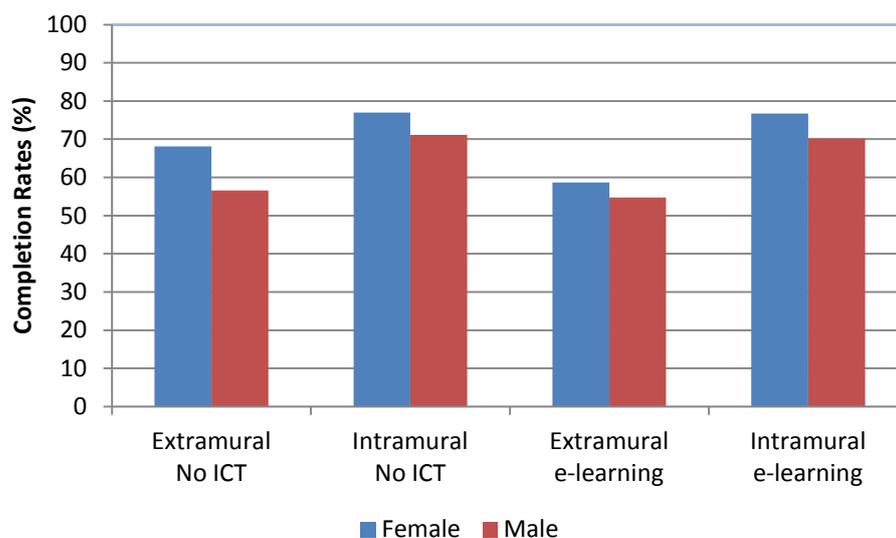
Note: EL stands for e-learning.

The proportion of men and women in intramural e-learning courses increased between 2005 and 2011. Over the same period, the proportion of extramural traditional delivery EFTS increased for women, but fell fractionally for men. However, the majority of both male and female extramural EFTS was delivered by e-learning. These results reflect the system-level findings, which suggest that they were driven by changes in institutional and system-level provision rather than student preferences.

The increase in the proportion of intramural e-learning reflects growth in the Web-Supported delivery mode – the largest e-learning category for intramural courses. But in extramural courses there was a reduction in those that were Web-Supported in favour of Web-Based delivery. This suggests that in intramural courses providers are using e-learning to *support* their face-to-face delivery, while in extramural courses they are using it to *replace* their paper-based delivery.

**Figure 6**

Female and male extramural and intramural course completion rates in the No ICT and e-learning delivery modes



Notes:

1. The completion rates are adjusted for the level of courses.
2. Completion rates are EFTS-weighted.
3. The completion rates in this graph are the aggregate over the eight years 2004-2011.

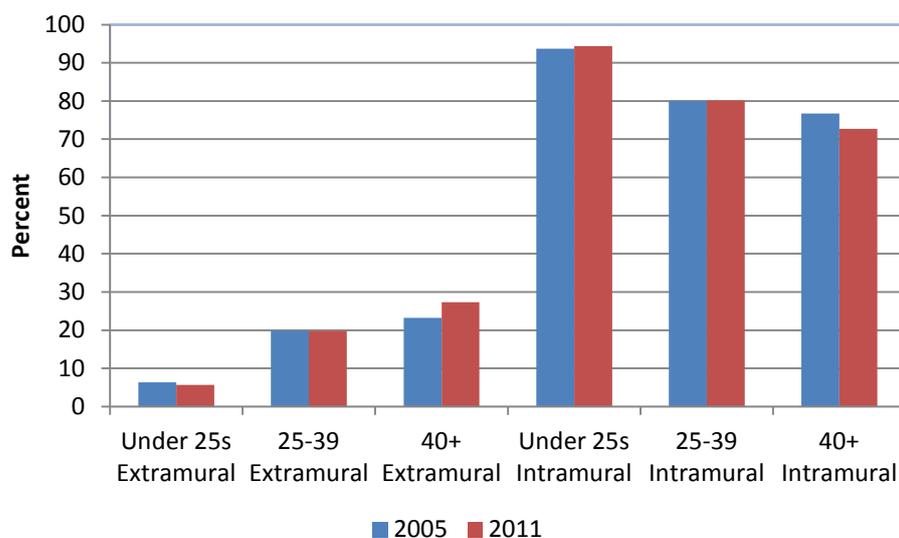
Irrespective of gender or delivery mode, intramural courses had higher completion rates than extramural courses. Intramural e-learning courses had similar completion rates to traditional delivery courses; this applied to both men and women. However, extramural traditional delivery courses had higher completion rates than e-learning courses, especially among women.

## 4.2 Age

Our chapter 2 extramural student profile suggests that they are more likely to be older. But younger students are more likely to participate and have higher levels of achievement in e-learning courses (Guiney, 2011, 2013a). In this section, we compare participation and achievement in extramural and intramural traditional delivery and e-learning courses by under 25 year olds, 25-39 year olds and the 40+ age group to see if older students have higher levels of participation in extramural courses and younger students have higher levels of participation and achievement in e-learning courses.

**Figure 7**

Proportion of the under 25 year olds, 25-39 year olds and 40+ age groups' EFTS in extramural and intramural courses



Those in the 40+ age group were much more likely to take extramural courses than the other age groups. And, unlike the other age groups, their extramural participation increased over time. The under 25 year olds had a much larger proportion of their EFTS in intramural courses than the other age groups. This finding supports our chapter 2 student profile, which indicated that older students had higher levels of participation in extramural courses.

Between 2005 and 2011 there was a large decrease in the number of people aged 40+ participating in tertiary education. Enrolments in that age group fell by about 15 percent, with intramural EFTS falling from nearly 38,000 to about 32,000, slightly offset by a small increase in the number participating in extramural courses (from about 11,700 to just over 12,000 EFTS).

The changes in the patterns of enrolment in the 40+ age group over that period reflect the government's moves to lift quality in the tertiary education system. Those changes led to reductions in the numbers taking some lower-level qualifications and, consequently, to reductions in the number of older students in the system. At the same time, institutions were encouraged to increase the participation of the 18-19 year olds age group through the Tertiary Education Strategies published in 2006 and 2009 (Smyth, 2012).

**Figure 8**

Proportion of under 25 year olds, 25-39 year olds and 40+ age groups' extramural and intramural EFTS in the No ICT and e-learning delivery modes

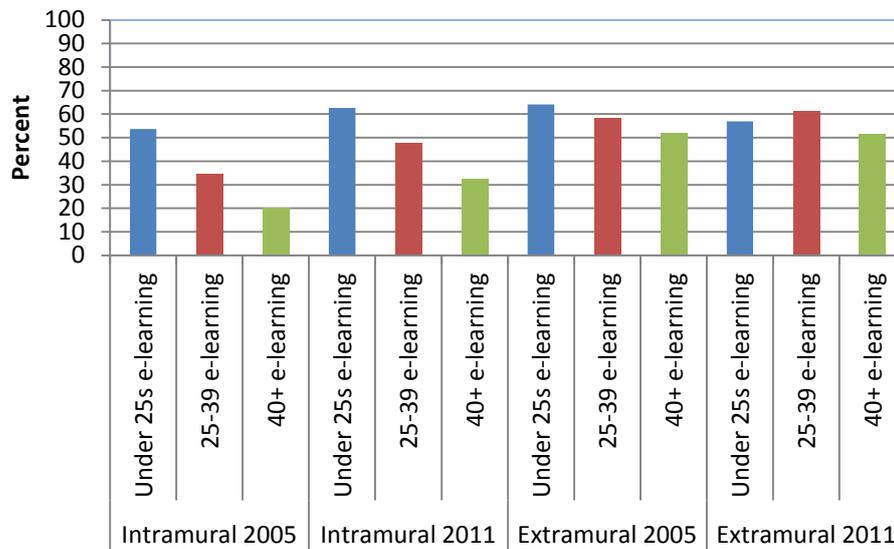
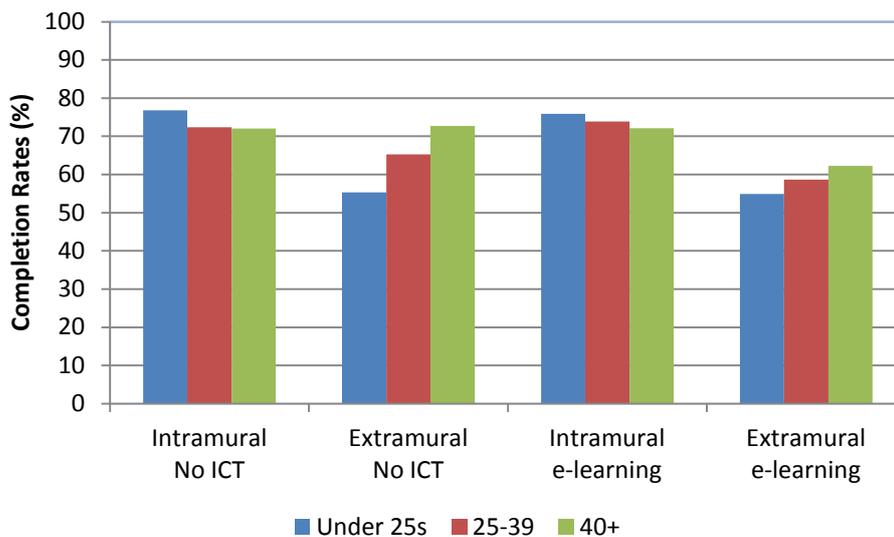


Figure 8 shows the shift in participation in intramural courses from those delivered by traditional means to e-learning, also evident in Figures 2 and 5 above. Among the intramural students, the under 25 year olds had the highest proportion of their EFTS in e-learning (although they still had a majority of their courses delivered by traditional means).

However, when we look at extramural courses, the under 25 year olds had the largest increase in participation in traditional delivery courses. But the 25-39 year olds group had the strongest growth in their extramural e-learning EFTS. So by 2011, the 25-39 year olds age group had higher participation in extramural e-learning courses than the under 25 year olds. This finding is in contrast to our earlier report, which showed that younger learners had higher levels of participation in e-learning courses (Guiney, 2011).

**Figure 9**

Under 25 year olds, 25-39 year olds and 40+ age groups' extramural and intramural course completion rates in the No ICT and e-learning delivery modes



Notes:

1. The completion rates are adjusted for the level of courses.
2. Completion rates are EFTS-weighted.
3. The completion rates in this graph are the aggregate over the eight years 2004-2011.

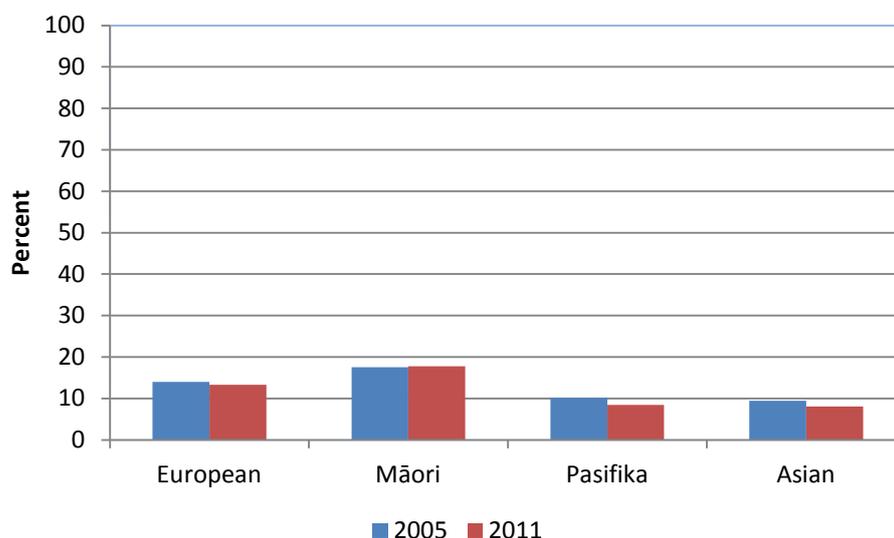
For all age groups, intramural courses had higher completion rates than extramural courses, regardless of delivery mode. The one exception was among those students aged 40+ studying in traditional delivery courses – for that age group and mode of delivery, the pass rate for extramural courses was fractionally higher than the rate for intramural courses. And the 25-39 year olds and 40+ age groups, unlike the under 25 year olds, had marginally higher completion rates for intramural courses delivered by e-learning. All age groups had higher completion rates in extramural traditional delivery courses.

The 40+ age group had the highest completion rate in extramural courses, irrespective of delivery mode. Some of the research literature suggests that those in the 40+ age group are more likely to have higher levels of achievement in e-learning than younger learners because they possess critical study-related characteristics such as motivation and the ability to work independently (Deka and McMurry, 2006; Coldwell et al., 2008; Nichols, 2008; Nora and Snyder, 2008). The fact that those in the 40+ age group are more likely to choose extramural study may also indicate more positive attitudes towards it than the under 25 year olds. And these positive attitudes are more likely to lead to success (Schlosser, C. A. and Anderson, 1994; Palloff and Pratt, 2003; BoPP, 2012; Brown et al., 2012; Massey University, 2012; NMIT, 2012<sup>13</sup>).

### 4.3 Ethnicity

In this section, we compare participation and achievement in extramural and intramural traditional delivery and e-learning courses by ethnic group. The ethnic groups examined here are European, Māori, Pasifika and Asian.

**Figure 10**  
Proportion of each ethnic group's total EFTS in extramural

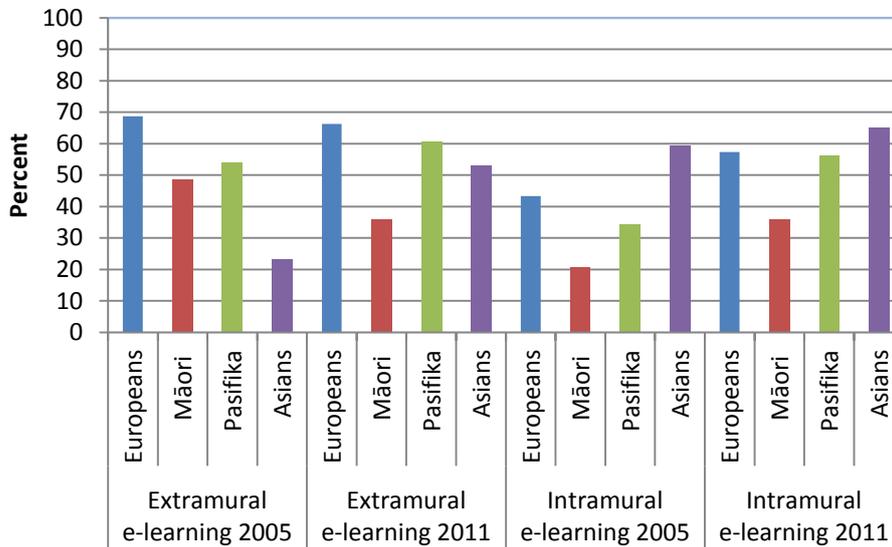


Māori had the highest proportion of their EFTS in extramural courses and they had the largest increase over time in their proportion of extramural EFTS. Asians had the lowest proportion of their EFTS in extramural. They also had the largest decrease over time in their proportion of

<sup>13</sup> Other researchers supporting this view include Deka and McMurry, 2006; Wilson and Sayles, 2007; Barnard et al., 2008; Berenson et al., 2008; Coldwell et al., 2008; Johnson et al., 2008; Müller, 2008; Artino and Stephens, 2009; Pratt, 2009; Sundararajan, 2009; Hartnett, 2010; Ross, 2010.

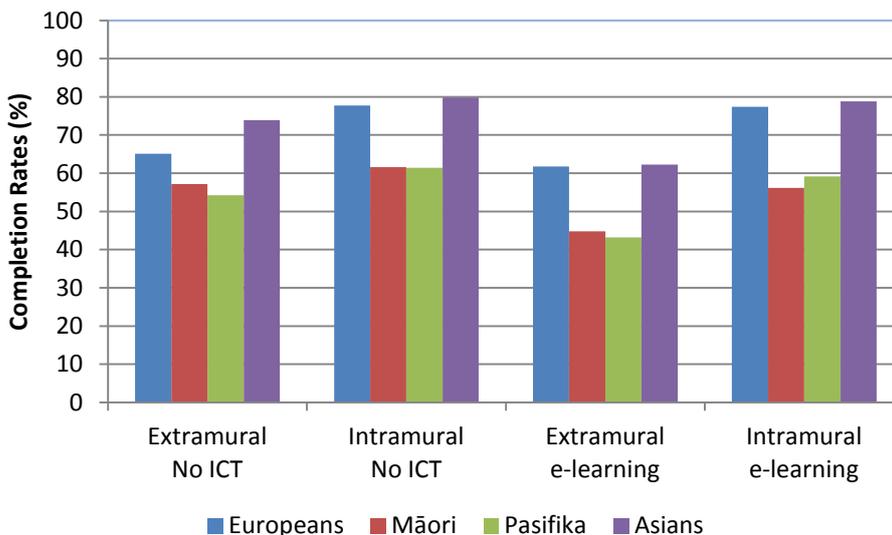
extramural EFTS. This result is consistent with our chapter 2 profile, which suggests that Māori had higher participation in extramural courses than other ethnic groups. This higher participation by Māori in extramural courses could be due to the influence of the wānanga (e.g. the Open Wānanga, which is part of Te Wānanga o Aotearoa, has about 5,000 EFTS<sup>14</sup>).

**Figure 11**  
Proportion of the ethnic groups' total extramural and intramural EFTS in the e-learning delivery mode



Asian students had the highest proportion of their intramural EFTS in e-learning. Europeans had the highest proportion of their extramural EFTS in e-learning, but Māori, unlike the other ethnic groups, had a large decline in their proportion of extramural EFTS in e-learning. By 2011, Māori had the lowest proportion of their intramural and extramural EFTS in e-learning.

**Figure 12**  
Ethnicity extramural and intramural course completion rates in the No ICT and e-learning delivery modes



Notes:

1. The completion rates are adjusted for the level of courses.
2. Completion rates are EFTS-weighted.

<sup>14</sup> According to an estimate from the Southern Institute of Technology.

3. The completion rates in this graph are the aggregate over the eight years 2004-2011.

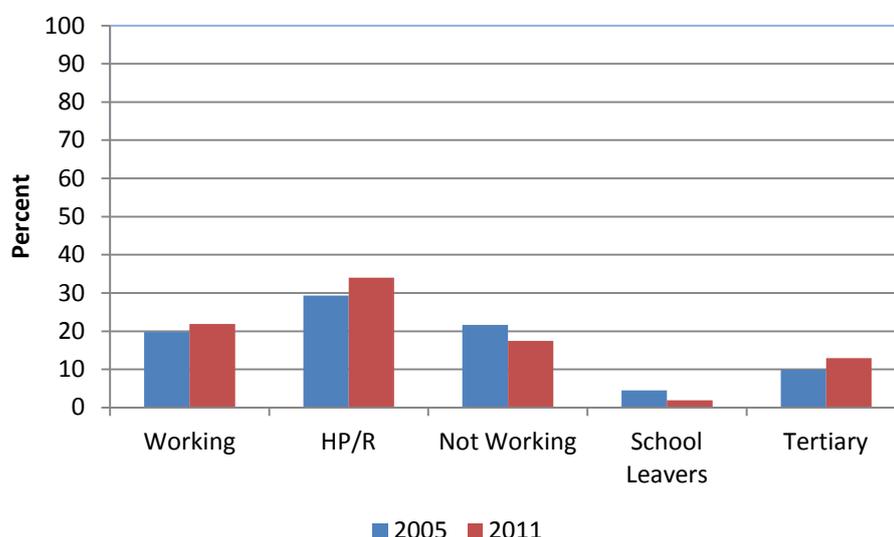
Intramural courses had higher completion rates than extramural courses, regardless of the delivery mode, for all the ethnic groups, consistent with Figure 3 above. Among intramural courses, there was little difference in traditional delivery and e-learning completion rates. This was also the case for Europeans in extramural courses. But students from the Māori, Pasifika and Asian ethnic groups had higher completion rates in extramural traditional delivery courses.

## 4.4 Pre-enrolment activity

In this section, we compare participation and achievement in extramural and intramural traditional delivery and e-learning courses by students' pre-enrolment activity. The pre-enrolment activities examined in this report are working, house-person/retired, not working, school, and tertiary. In this section, we also determine if students who are in paid employment, caregivers or from non-working backgrounds are more likely to participate in extramural courses as suggested by our chapter 2 extramural student profile.

**Figure 13**

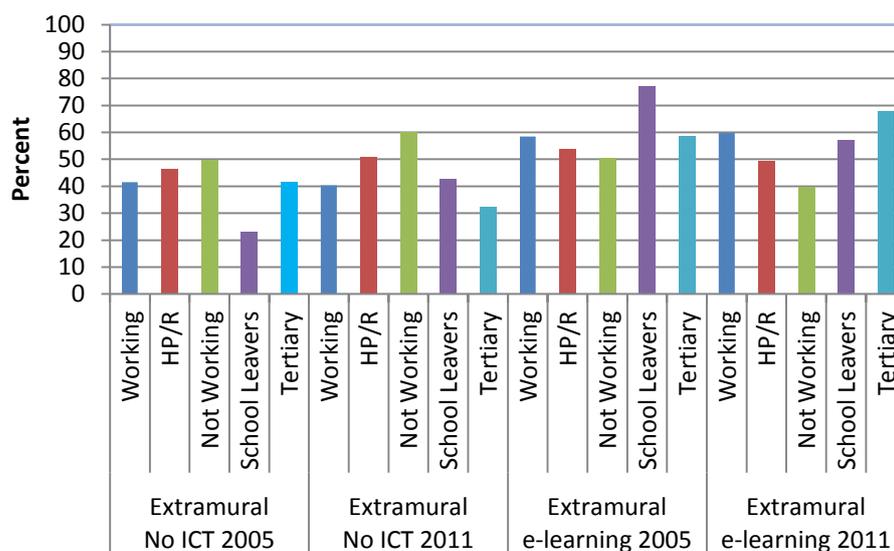
Proportion of the prior activity total EFTS in extramural



Note: HP/R stands for house-person/retired.

The house-person/retired group had the highest proportion of their EFTS in extramural. And they had a large increase between 2005 and 2011 in their proportion of extramural EFTS. The working and non-working groups also had higher proportions of their EFTS in extramural. Consistent with the age distribution of extramural learners, the students who entered the tertiary system directly from school had the lowest proportion of their EFTS in extramural courses. The results shown in Figure 13 are consistent with the profile of extramural learners set out in chapter 2. That profile suggests that students who were in or had come from paid employment, a caregiving role or a non-working background were more likely to participate in extramural study.

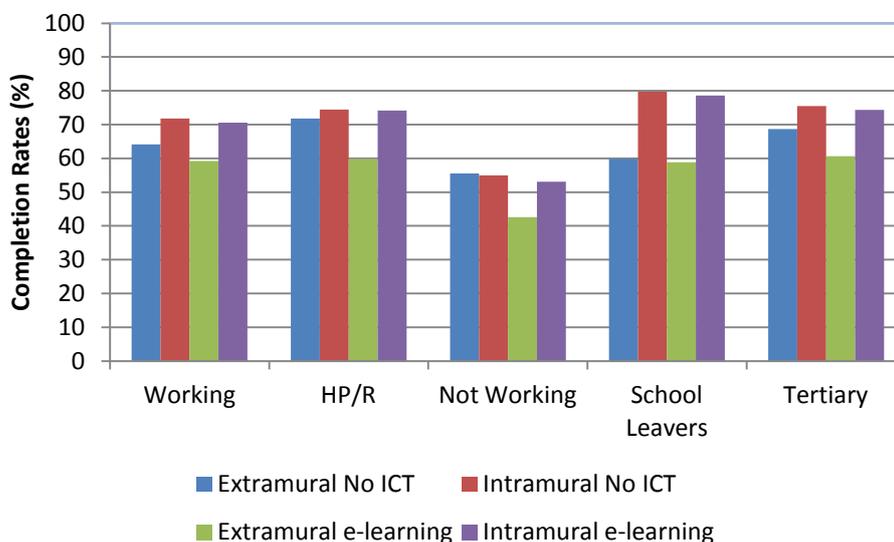
**Figure 14**  
Proportion of the prior activity total extramural EFTS in the No ICT and e-learning delivery modes



Note: HP/R stands for house-person/retired.

The not working group had the highest proportion of their extramural EFTS in traditional delivery courses. But school leavers had the largest increase over time in the proportion of their extramural EFTS that were delivered by traditional methods.

**Figure 15**  
Prior activity extramural and intramural course completion rates in the No ICT and e-learning delivery modes



Notes:

1. The completion rates are adjusted for the level of courses.
2. Completion rates are EFTS-weighted.
3. The completion rates in this graph are the aggregate over the eight years 2004-2011.
4. HP/R stands for house-person/retired.

Figure 15 shows that extramural courses had lower completion rates than intramural courses for all groups, with the exception of the not working group, which had marginally higher extramural completion rates in traditional delivery courses. However, the not working group also had the lowest intramural and extramural completion rates. The house-person/retired group

also had relatively high completion rates in extramural courses – especially in those delivered by traditional methods.

School leavers had very significant differences between their extramural and intramural completion rates. This might be because they are younger than the other student groups and few of their number study extramurally, so they have had less time to establish appropriate study habits and have fewer opportunities to interact with their peers. For all the student groups, there was minimal difference between the delivery modes in intramural courses. In contrast, they were all more likely to be successful in extramural traditional delivery courses.

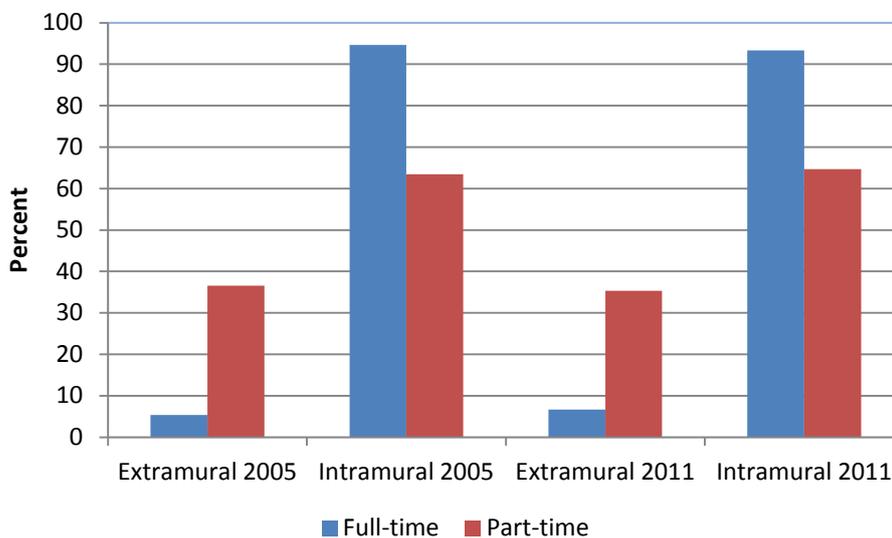
## 5 EXTRAMURAL AND INTRAMURAL STUDENTS' PARTICIPATION AND ACHIEVEMENT BY STUDY-RELATED CHARACTERISTICS

In this chapter, we look at students' participation and achievement in extramural and intramural courses by full-time and part-time status, sub-sector, institution, course level, and field of study.

### 5.1 Full-time and part-time status

Our chapter 2 profile indicates that extramural students are disproportionately part-timers. In this section, we look at participation and achievement in extramural study by full-time and part-time students and compare this to the corresponding rates for their intramural study.

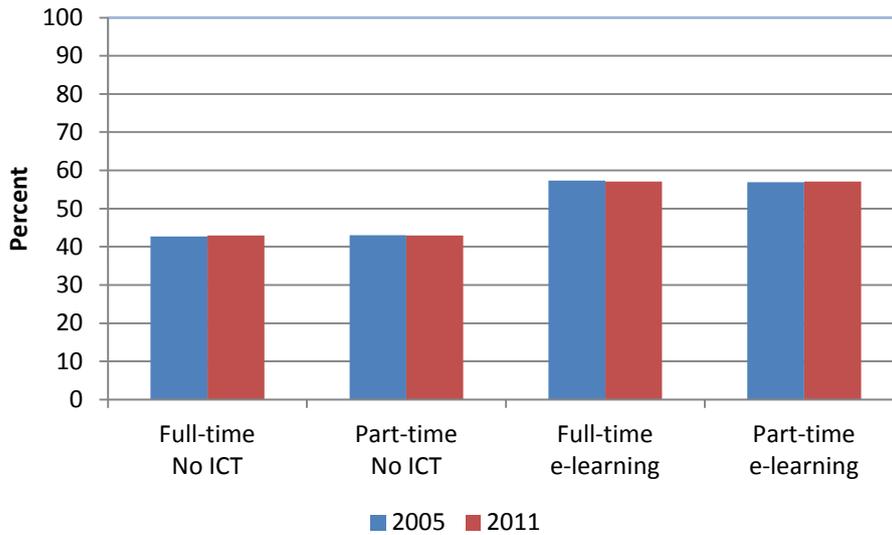
**Figure 16**  
Proportion of full-time and part-time EFTS in extramural and intramural courses



Extramural students were much more likely to be part-time, with about 35 percent of extramural students studying on a part-time basis, compared to about six percent for full-time students. This finding is consistent with our chapter 2 extramural student profile.

**Figure 17**

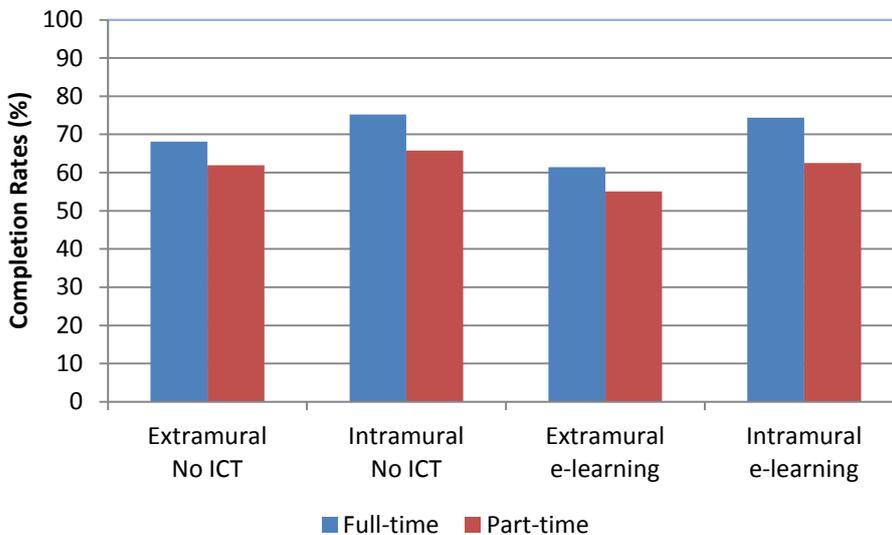
Proportion of the total full-time and part-time extramural EFTS in the No ICT and e-learning delivery modes



Full-time and part-time students had the majority of their extramural courses delivered by e-learning.

**Figure 18**

Full-time and part-time students' extramural and intramural course completion rates in the No ICT and e-learning delivery modes



Notes:

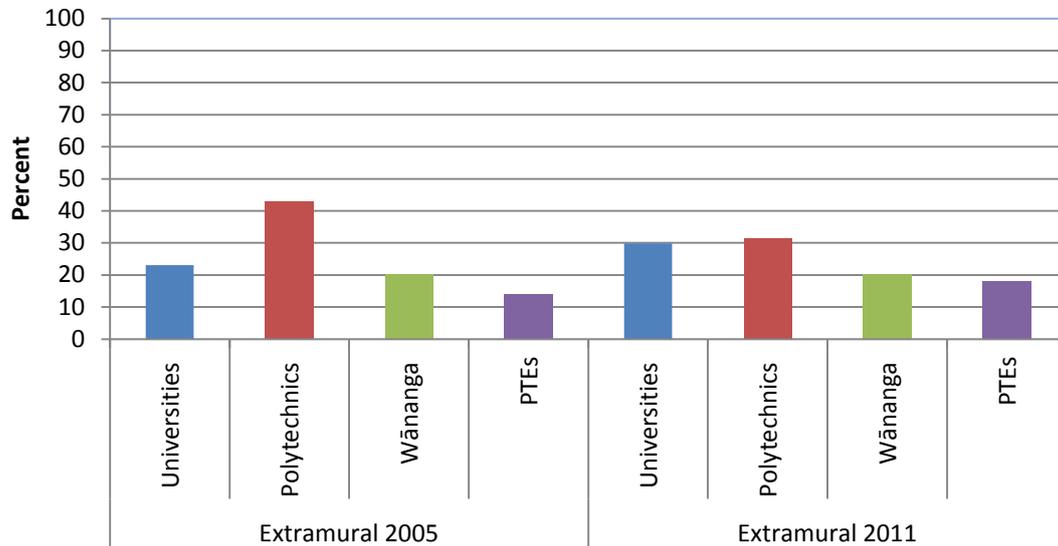
1. The completion rates are adjusted for the level of courses.
2. Completion rates are EFTS-weighted.
3. The completion rates in this graph are the aggregate over the eight years 2004-2011.

Irrespective of delivery mode, intramural courses had higher completion rates than extramural courses, while full-time students had higher completion rates than part-time students studying in the same mode. As noted in previous Ministry of Education reports, full-time students have higher completion rates than part-time students (Scott, 2009; Wensvoort, 2011).

## 5.2 Sub-sector

In this section, we look at how intramural and extramural provision is distributed in and among universities, polytechnics, wānanga and private training establishments (PTEs).

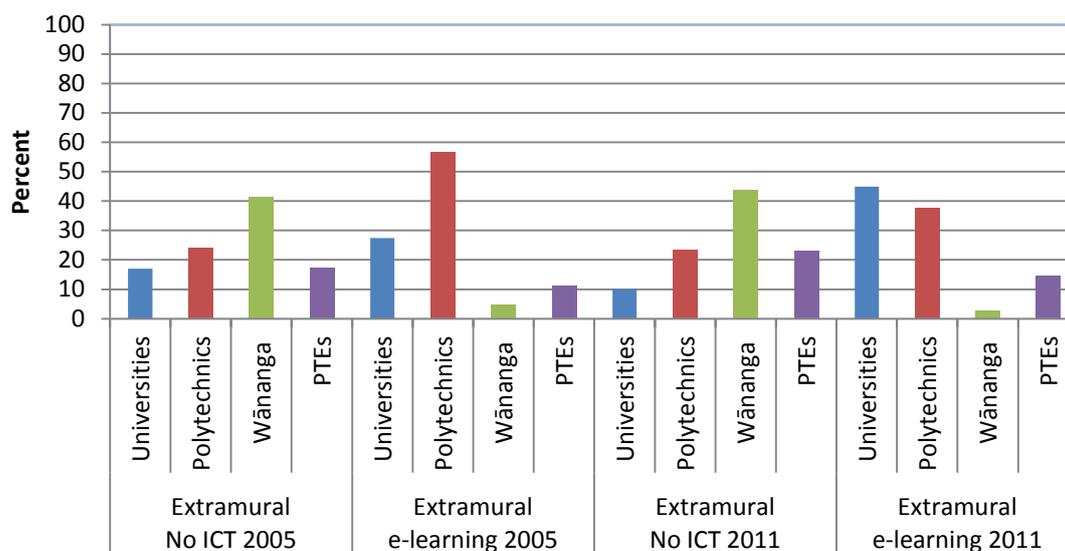
**Figure 19**  
Proportion of sub-sector EFTS in extramural



Polytechnics had the largest share of sub-sector extramural provision and PTEs had the smallest. But universities and PTEs had the largest increase over time in their share of sub-sector extramural provision, while polytechnics had the largest decrease over time in their share of extramural provision. One reason for the higher proportion of extramural EFTS in polytechnics is the presence of the Open Polytechnic of New Zealand, an institution that focuses almost exclusively on extramural delivery and contributes about 50 percent of the extramural EFTS in that sub-sector.

**Figure 20**

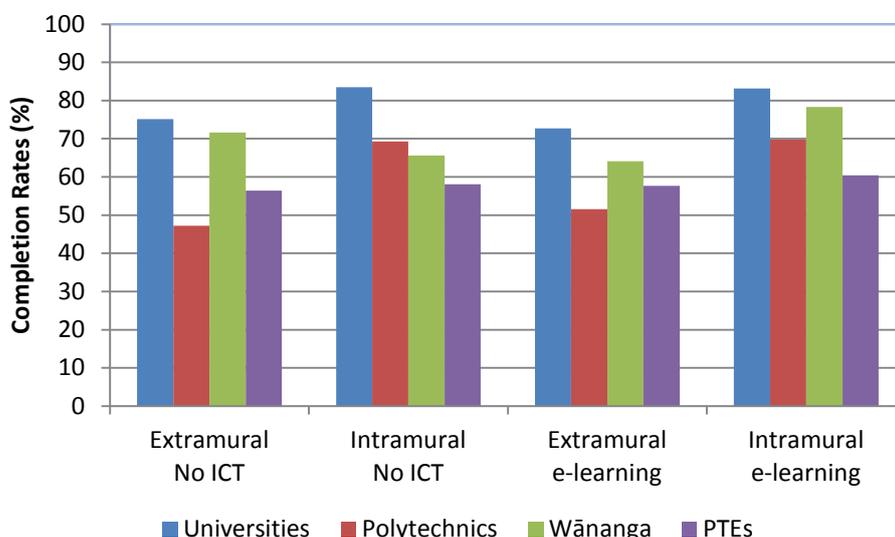
Proportion of sub-sector extramural EFTS in the No ICT and e-learning delivery modes



Polytechnics had the highest proportion of extramural e-learning EFTS in 2005; but universities had the highest proportion of extramural e-learning EFTS in 2011 because of strong growth and a large decline in polytechnics. Wānanga had the highest number of extramural traditional delivery EFTS, but PTEs had the strongest growth.

**Figure 21**

Sub-sector extramural and intramural course completion rates in the No ICT and e-learning delivery modes



Notes:

1. The completion rates are adjusted for the level of courses.
2. Completion rates are EFTS-weighted.
3. The completion rates in this graph are the aggregate over the eight years 2004-2011.
4. PTE stands for private training establishment.

Universities, polytechnics and PTEs had higher intramural than extramural completion rates, irrespective of delivery mode. In e-learning courses, wānanga also had a higher intramural completion rate than extramural; but in traditional delivery courses, wānanga had a higher completion rate in extramural than in intramural. These results for wānanga could be because

two of the wānanga operate a distributed delivery model with some courses delivered at marae. Much of this marae-based provision is classified by the wānanga as extramural.

Universities had the highest completion rates, irrespective of study or delivery mode. PTEs had the lowest intramural completion rates regardless of delivery mode, consistent with previous analyses (Guiney, 2013a; Ministry of Education, 2013). Despite their larger share of provision, polytechnics had the lowest extramural completion rates, irrespective of delivery mode. In all sub-sectors, the completion rates of intramural courses differed little between the delivery modes. There were also minimal differences between the delivery modes in extramural courses taught by universities and PTEs. In contrast, wānanga had noticeably higher completion rates in extramural traditional delivery courses and in intramural e-learning courses.

### 5.3 Institutional provision and achievement

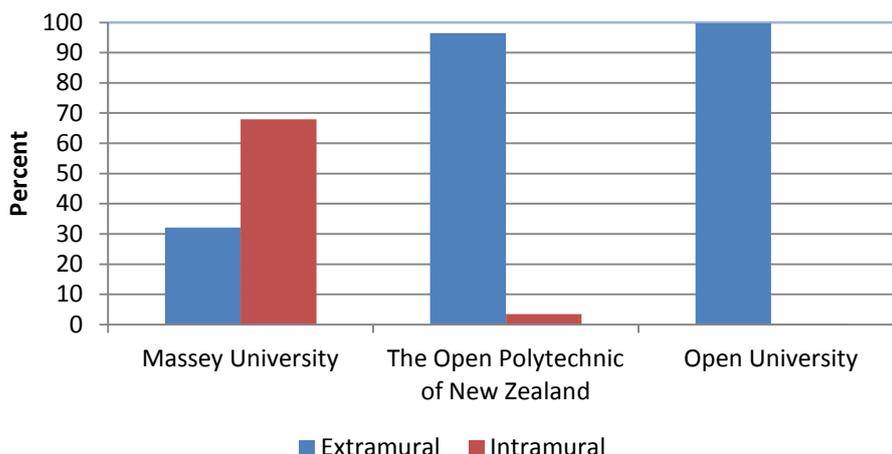
Given New Zealand’s scattered population and the need for opportunities to access tertiary education among those who work or have caregiving roles, it is important for the New Zealand tertiary education system to make some provision for extramural or distance education. In many countries, extramural provision is not widely distributed across providers and is concentrated in specialist institutions (Canada’s Athabasca University, for example).

The same applies in New Zealand, where there are two institutions with a historical focus and a specialisation in distance education – Massey University and The Open Polytechnic of New Zealand. Alongside them are a number of institutions that have acquired a focus on distance education – the Southern Institute of Technology and Waikato Institute of Technology (about 24 percent of whose EFTS are in extramural courses), Te Wānanga o Aotearoa (about 27 percent) and Te Whare Wānanga o Awanuiārangi (about 44 percent).

In this section, we focus on two institutions, Massey University and The Open Polytechnic of New Zealand, and we compare them to the largest provider of degree-level extramural courses in the United Kingdom, the Open University.

**Figure 22**

Proportion of Massey University, The Open Polytechnic of New Zealand and Open University EFTS in extramural and intramural courses



Source: Ministry of Education and Higher Education Statistics Agency (HESA)

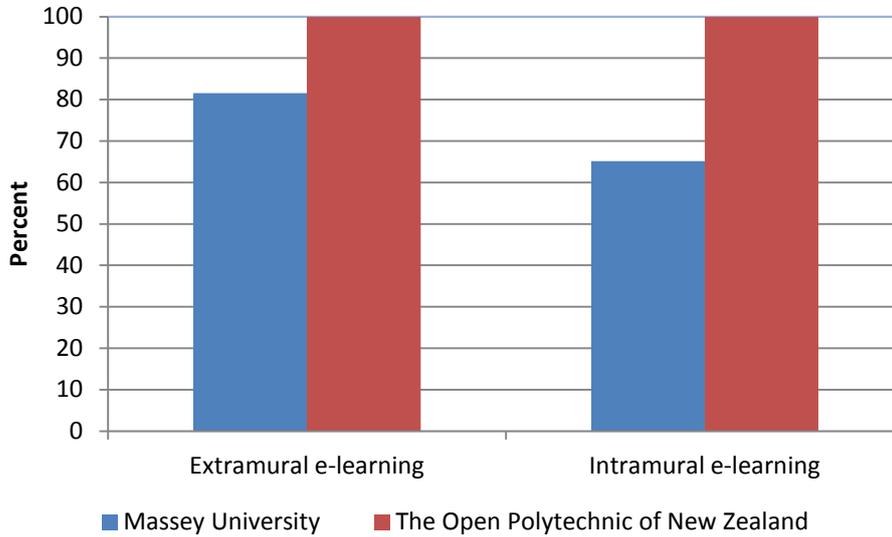
Notes:

1. The Open University data is based on course numbers not EFTS.
2. The Open University’s data covers 1 July 2007 to 31 August 2012.
3. The Open University’s data covers degree and postgraduate courses (excluding post-doctoral) only.

Both the Open University and the Open Polytechnic have almost all of their provision in extramural. Despite its status as a specialist distance education provider, Massey University's extramural courses only represent about a third of its overall provision.

**Figure 23**

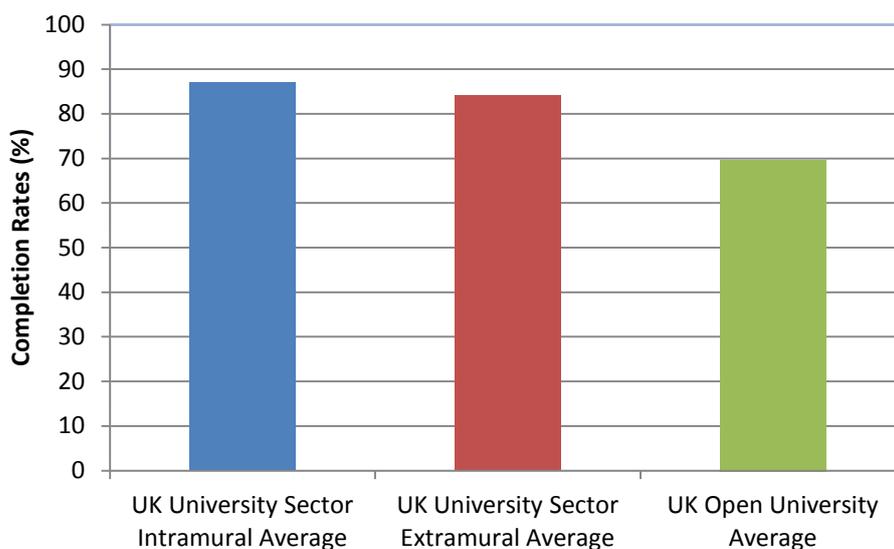
Proportion of Massey University and The Open Polytechnic of New Zealand extramural and intramural EFTS in the e-learning delivery mode



Virtually all the EFTS load of The Open Polytechnic is in courses delivered by e-learning. Massey University also offers high proportions of e-learning, especially in its extramural courses.

As noted earlier in this report, completion rates are much lower in extramural courses. Figure 24 below illustrates the difference in completion rates between intramural and extramural courses at the Open University. This shows that the Open University also has lower completion rates in its extramural courses than other university extramural courses – presumably because the latter are targeted to particular groups, whereas the Open University's mission is focused on widening access.

**Figure 24**  
Open University course completion rates



Source: HESA

Notes:

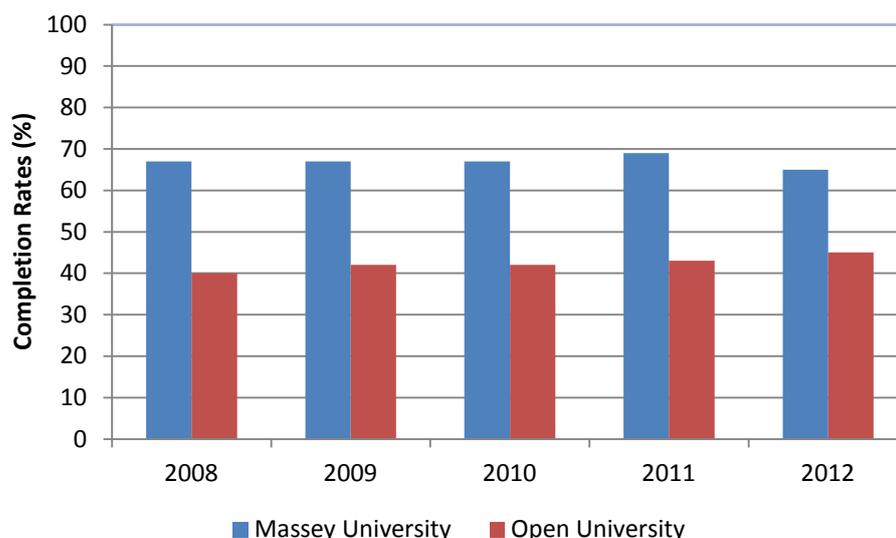
1. The completion rates are an average of all intramural and extramural course completion rates in the United Kingdom's university sector and for the Open University from 1 July 2007 to 31 August 2012.
2. The completion rates are not adjusted for course level.
3. The completion rates are for degree and postgraduate (excluding post-doctoral courses) provision only, which is why they are being examined separately.
4. These completion rates are from courses where results are available. This is not 100 percent of the courses that students have participated in.

Massey's intramural course completion rate was around 85 percent. This is comparable to the median university course completion rate of 86 percent (Tertiary Education Commission, 2013a). Thus, while Massey appears in the educational performance indicators list as having a course completion rate of 80 percent (which is the lowest course completion rate of the eight New Zealand universities), that difference is due to the presence of extramural courses at Massey, which have lower completion rates.

One of the reasons for the low completion rates among extramural students is that they are more likely to be part-time and part-time study is also associated with lower completion rates. Figure 25 below looks at the completion rates of part-time extramural bachelors degree students at Massey University and the Open University.

**Figure 25**

Part-time bachelors degree extramural course completion rates for Open University and Massey University

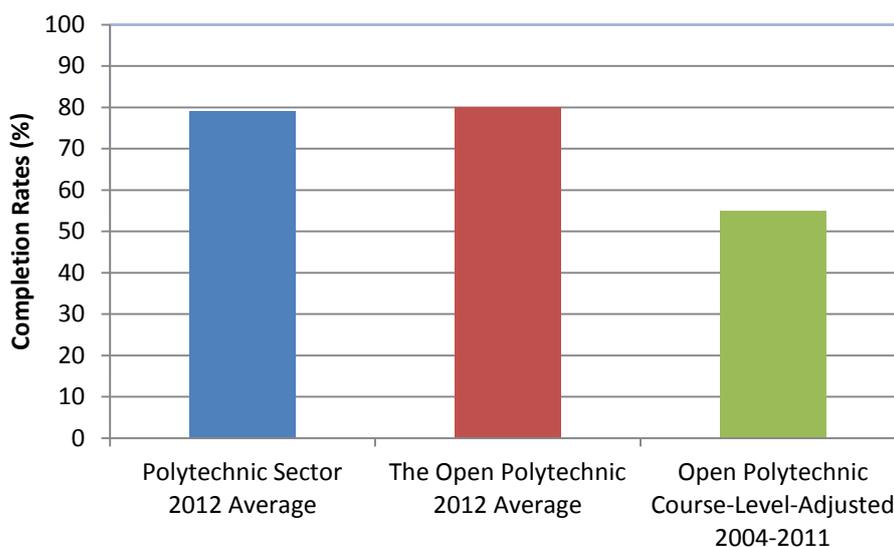


Source: HESA and Ministry of Education

Among that class of students, Massey University had higher completion rates in bachelors degree courses undertaken by part-time students studying extramurally than the Open University. This could be due to differences in the respective student populations. But it could also be due to institutional factors such as the systems and support Massey University and the Open University have in place for their extramural students or differences in the regulatory environments in which Massey University and the Open University operate.

However, when we adjust for course level and do not focus on a particular group of students, Massey University and the Open University have comparable extramural course completion rates. This suggests, in contrast to Figure 25, that Massey University and the Open University are equally challenged by factors associated with low achievement in extramural study that are not confined to particular institutions or jurisdictions. Both Massey University and the Open University have much lower extramural completion rates than their respective sector medians, which tend to be dominated by intramural provision.

**Figure 26**  
The Open Polytechnic of New Zealand course completion rates



Notes:

1. The polytechnic sector and Open Polytechnic averages are derived from the Tertiary Education Commission's 2013 report on the Open Polytechnic's educational performance indicators.
2. Our completion rate is EFTS-weighted.

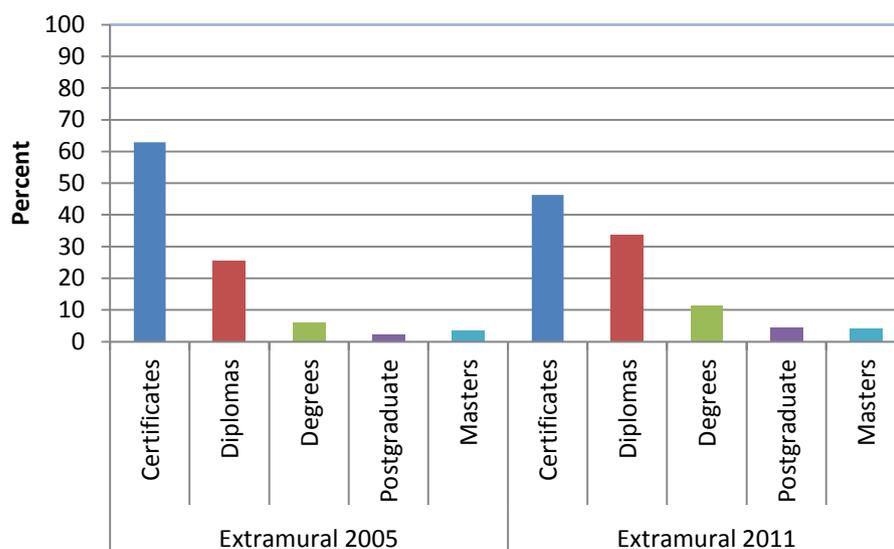
In 2012, the Open Polytechnic had a marginally higher course completion rate than the polytechnic sector average (Tertiary Education Commission, 2013b). But our completion rate calculated over eight years and adjusted for course level shows that Open Polytechnic's extramural course completion rate was about 25 percentage points below the polytechnic sector average.

This could be because the measures taken by Open Polytechnic to improve its performance (many of which are highlighted in our case study in Appendix B below) are most likely the result of the educational performance indicators and so are relatively recent. As a result, they had a limited impact on our longer-term completion rate.

## 5.4 Course level

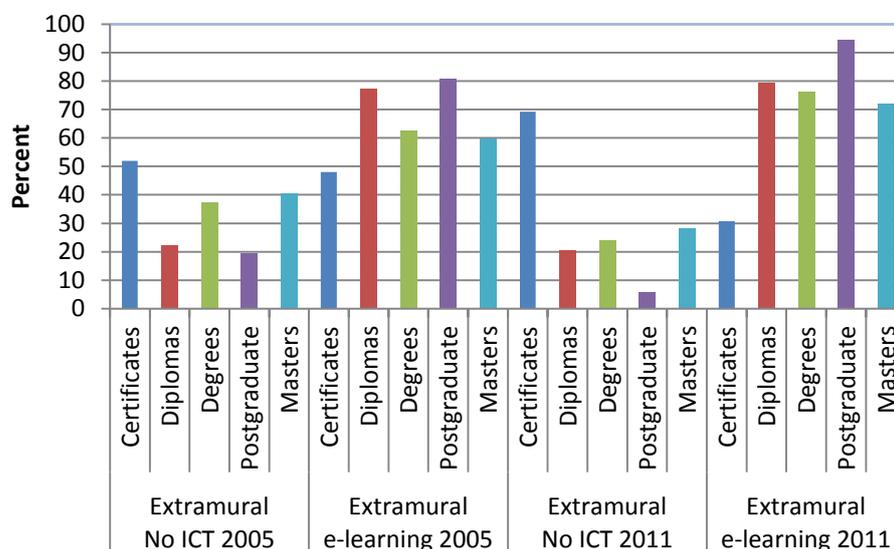
In our earlier report (Guiney, 2011), we found that higher course levels had much more e-learning provision than lower course levels. In this section, we look at the distribution of extramural and intramural provision delivered by traditional and e-learning methods in and among different course levels. The course levels examined in this report are certificates (Levels 1-4), diplomas (Levels 5-7), bachelors degrees, postgraduate (Level 8 bachelors honours degrees and postgraduate diplomas and certificates), and masters degrees.

**Figure 27**  
Proportion of course-level EFTS by extramural



Certificates had the largest share of course-level extramural EFTS. However, they also saw the largest decline in their extramural EFTS. That decline reflects the trends described in chapter 4.2, which saw a reduction of enrolments across the system by older students and in lower-level qualifications. Postgraduate courses had the smallest share of course-level extramural EFTS. While they (along with degrees and masters courses) increased their share over time, the strongest growth was in diplomas.

**Figure 28**  
Proportion of course-level extramural EFTS in the No ICT and e-learning delivery modes



Note: EL stands for e-learning.

Certificates had the highest proportion of their extramural courses delivered by traditional means. They also had the largest increase in traditional delivery extramural courses. Postgraduate courses had the highest proportion of their extramural courses delivered by e-learning and also had the largest increase in e-learning extramural courses.

## 5.5 Field of study

Our earlier reports on provision, participation, and achievement showed differences in e-learning provision and achievement between the fields of study (Guiney, 2011, 2013a). The one common theme identified among the fields with low e-learning provision was that they all had a large workplace or work-based component that was typically not computer-based. Fields with these large workplace or work-based components do not lend themselves as easily to e-learning as fields that are more classroom-based (Guiney, 2011). In this section, we assess whether there are differences in provision and achievement between the fields of study in intramural and extramural courses and if these variations can be attributed to fields that have more (or less) of a classroom component.

Table 1 below shows the aggregate provision over the eight years 2004-2011 for the different fields of study<sup>15</sup> in extramural and intramural provision.

**Table 1**

Proportion of total Field of Study provision by extramural and intramural

Field of study	Proportion of extramural provision	Proportion of intramural provision
Agriculture, Environmental and Related Studies	13.6%	86.4%
Architecture and Building	7.7%	92.3%
Creative Arts	5.6%	94.4%
Education	20.1%	79.9%
Engineering and Related Technologies	8.4%	91.6%
Food, Hospitality and Personal Services	1.0%	99.0%
Health	11.1%	88.9%
Information Technology	7.3%	92.7%
Management and Commerce	7.6%	82.4%
Mixed Field Programmes	35.1%	64.9%
Natural and Physical Sciences	4.3%	95.7%
Society and Culture	14.0%	86.0%

All fields had less extramural than intramural provision. Mixed Field Programmes had the highest proportion of extramural provision, and Food, Hospitality and Personal Services had the lowest proportion. Fields with a greater workplace or work-based component which is typically not computer-based, such as Architecture and Building and Engineering and Related Technologies, tended to have lower proportions of extramural provision. But Health and Agriculture, Environmental and Related Studies, which also have a large workplace or work-based component that is not generally computer-based, had higher proportions of extramural provision than fields such as Management and Commerce and Information Technology, which have a larger classroom-based component.

Table 2 shows the aggregate provision over the eight years 2004-2011 for the different fields of study<sup>16</sup> in intramural and extramural traditional delivery and e-learning courses.

<sup>15</sup> New Zealand Standard Classification of Education (NZSCED) Specification, Education Counts website, Ministry of Education, Wellington, which refers to the broad fields of study and not individual disciplines or subjects within them.

**Table 2**

Proportions of Field of Study extramural and intramural provision in the No ICT and e-learning delivery modes

Field of study	Extramural No ICT	Extramural e-learning	Intramural No ICT	Intramural e-learning
Agriculture, Environmental and Related Studies	56.6%	43.4%	82.9%	17.1%
Architecture and Building	51.5%	48.5%	72.1%	27.9%
Creative Arts	45.7%	54.3%	63.2%	36.8%
Education	36.4%	63.6%	49.0%	51.0%
Engineering and Related Technologies	60.2%	39.8%	63.8%	36.2%
Food, Hospitality and Personal Services	58.2%	41.8%	83.0%	17.0%
Health	46.9%	53.1%	51.5%	48.5%
Information Technology	34.6%	65.4%	42.6%	57.4%
Management and Commerce	37.0%	63.0%	43.3%	56.7%
Mixed Field Programmes	49.6%	50.4%	76.8%	23.2%
Natural and Physical Sciences	22.3%	77.7%	23.9%	76.1%
Society and Culture	56.9%	43.1%	49.9%	50.1%

A majority of fields had higher proportions of their extramural courses delivered by e-learning. Most of these fields had either a larger classroom-based component or a workplace or work-based component that was typically computer-based, such as Education, Information Technology, Management and Commerce, and Natural and Physical Sciences. But Creative Arts, Health, and Mixed Field Programmes which have a large workplace or work-based component that is not typically computer-based also had higher proportions of extramural e-learning provision. Engineering and Related Technologies had the highest proportion of extramural traditional delivery provision. Natural and Physical Sciences had the highest proportion of extramural e-learning provision.

Table 3 below shows the aggregate course-level-adjusted completion rate over the eight years 2004-2011 for the different fields of study<sup>17</sup> in extramural and intramural courses delivered by traditional and e-learning methods.

<sup>16</sup> NZSCED Specification, Education Counts website, Ministry of Education, Wellington, which refers to the broad fields of study and not individual disciplines or subjects within them.

<sup>17</sup> NZSCED Specification, Education Counts website, Ministry of Education, Wellington, which refers to the broad fields of study and not individual disciplines or subjects within them.

**Table 3**

Field of Study intramural and extramural course completion rates in the No ICT and e-learning delivery modes

Field of study	Extramural No ICT completion rates	Extramural e-learning completion rates	Intramural No ICT completion rates	Intramural e-learning completion rates	Difference extramural/intramural No ICT	Difference extramural/intramural e-learning
Agriculture, Environmental and Related Studies	56.8%	60.8%	61.2%	50.3%	4.4% (in favour of intramural)	10.5% (in favour of extramural)
Architecture and Building	47.1%	46.4%	67.7%	71.4%	20.6% (in favour of intramural)	25.0% (in favour of intramural)
Creative Arts	71.6%	59.8%	78.9%	81.7%	7.3% (in favour of intramural)	21.9% (in favour of intramural)
Education	75.0%	79.3%	82.2%	85.5%	7.2% (in favour of intramural)	6.2% (in favour of intramural)
Engineering and Related Technologies	13.6%	51.6%	70.7%	70.1%	57.1% (in favour of intramural)	18.5% (in favour of intramural)
Food, Hospitality and Personal Services	57.3%	30.5%	61.0%	66.2%	3.7% (in favour of intramural)	35.7% (in favour of intramural)
Health	76.9%	74.9%	83.7%	87.3%	6.8% (in favour of intramural)	12.4% (in favour of intramural)
Information Technology	53.0%	57.2%	70.4%	70.8%	17.4% (in favour of intramural)	13.6% (in favour of intramural)
Management and Commerce	52.4%	51.3%	70.4%	71.6%	18% (in favour of intramural)	20.3% (in favour of intramural)
Mixed Field Programmes	68.4%	49.9%	40.5%	47.5%	27.9% (in favour of extramural)	2.4% (in favour of extramural)
Natural and Physical Sciences	70.9%	61.0%	76.3%	78.1%	5.4% (in favour of intramural)	17.1% (in favour of intramural)
Society and Culture	66.3%	60.1%	73.2%	77.9%	6.9% (in favour of intramural)	17.8% (in favour of intramural)

Intramural had higher completion rates than extramural, irrespective of delivery mode. The only exceptions to this were Mixed Field Programmes, which had higher completion rates in extramural regardless of delivery mode, and Agriculture, Environmental and Related Studies, which had a higher extramural than intramural e-learning completion rate.

All fields, except Agriculture, Environmental and Related Studies, and Engineering and Related Technologies, had a higher e-learning completion rate than traditional delivery in intramural courses. In contrast, our data shows that the majority of fields had higher completion rates in extramural traditional delivery courses than e-learning courses.

Health had the highest extramural traditional delivery completion rate and education had the highest extramural e-learning completion rate. Despite their larger share of provision, Engineering and Related Technologies had the lowest completion rate in extramural traditional delivery courses. And Food, Hospitality and Personal Services had the lowest completion rate in extramural e-learning courses.

Our last report (Guiney, 2013a) only examined e-learning achievement up until 2009. The lift in intramural e-learning performance noted here could be due to the impact of the educational performance indicators that were introduced in 2009 and include course completion rates as one of the key indicators. As a result, providers may have identified their lower-performing

intramural e-learning courses and redesigned them to improve their performance or discontinued them.

## 6 CONCLUSIONS

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### 6.1 Extramural provision and participation

Extramural courses represent a minority of provision and participation. As suggested by the research literature, students who were older, female, Māori, studying part-time, or from caregiving or working backgrounds had higher levels of participation in extramural courses than other learners. Students who were younger, Asian or studying full-time were least likely to participate in extramural courses.

Polytechnics had the largest share of sub-sector extramural provision, while PTEs had the smallest share. Mixed Field Programmes had the largest proportion of their provision delivered extramurally; Food, Hospitality and Personal Services had the smallest proportion of their provision delivered extramurally. Certificate-level courses had the largest proportion of extramural provision, with postgraduate and masters courses having the smallest proportion.

The majority of extramural provision was supported or delivered by e-learning methods and more students participated in extramural courses with some e-learning elements than those delivered by traditional methods. In 2005, polytechnics had the largest proportion of their extramural provision delivered by e-learning, but by 2011 it was universities. Wānanga were the only sub-sector that had larger proportions of their extramural provision delivered by traditional means.

Women had higher participation than men in extramural e-learning courses. In 2005, the under 25s age group had the highest participation in extramural e-learning courses, but by 2011 it was the 25-39 year olds age group. The 40+ age group had the highest participation in extramural traditional delivery courses.

Europeans had the highest participation in extramural e-learning courses. By 2011, Māori were the only ethnic group to have higher participation in extramural traditional delivery courses.

School leavers had the highest participation in extramural e-learning courses in 2005, but by 2011 it was students who had previously participated in tertiary study.

### 6.2 Extramural achievement

In nearly all cases, extramural completion rates were lower than intramural. However, there were some exceptions. Students in the 40+ age group, those from non-working backgrounds, and wānanga had a higher extramural completion rate than intramural in traditional delivery courses. Agriculture, Environmental and Related Studies had a higher extramural completion rate than intramural in e-learning courses, and Mixed Field Programmes had a higher extramural completion rate than intramural, regardless of delivery mode.

Universities had a higher extramural completion rate than the other sub-sectors, irrespective of delivery mode. Despite their larger share of extramural provision, polytechnics had a lower extramural completion rate than the other sub-sectors, regardless of delivery mode. Asians, women and full-time students taking extramural study were more likely to complete than the other ethnic groups, men and part-time students. Māori and Pasifika had a lower extramural completion rate than the other ethnic groups regardless of delivery mode.

The under 25s age group had the lowest extramural completion rate, while the 40+ age group had the highest. The house-person/retired group had the highest extramural completion rate in traditional delivery courses. But students who had previously participated in tertiary study had

the highest extramural completion rate in e-learning courses. Students from non-working backgrounds had the lowest extramural completion rate regardless of delivery mode.

All student groups had a higher completion rate in extramural traditional delivery courses than e-learning courses. However, polytechnics, PTEs, and the Agriculture, Environmental and Related Studies, Education, and Information Technology fields of study all had a higher completion rate in extramural e-learning than traditional delivery.

## APPENDIX A E-LEARNING CATEGORY ANALYSIS

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### **Gender e-learning category analysis**

There was little difference between the e-learning categories in intramural courses and extramural courses for females. But males were less likely to complete extramural courses using the Web-Enhanced delivery mode compared to the other e-learning delivery modes. This is in contrast to the system-level finding, where extramural Web-Enhanced courses had higher levels of achievement than the other e-learning delivery modes.

### **Age group e-learning category analysis**

The under 25 year olds and the 25-39 year olds had their highest extramural course completion rate in the Web-Based delivery mode. In contrast, the 40+ age group had their highest extramural completion rate in the Web-Supported delivery mode. All of the age groups, unlike our system-level finding, were less likely to complete extramural courses delivered through the Web-Enhanced delivery mode.

### **Ethnic group e-learning category analysis**

All the ethnic groups had a large decline in their Web-Supported extramural courses and strong growth in Web-Enhanced extramural courses. However, despite a large decrease in their extramural Web-Supported courses, Pasifika and Asians still maintained higher levels of participation in them. All the ethnic groups had growth in extramural Web-Based, which meant that by 2011 Europeans and Māori had higher levels of participation in extramural Web-Based courses.

Europeans had a higher participation rate than the other ethnic groups in extramural Web-Enhanced and Web-Based courses. But Asians had the highest rate in extramural Web-Supported courses. Pasifika had the lowest completion rate in extramural Web-Supported and Web-Based courses; however, Māori had a lower rate in extramural Web-Enhanced courses.

### **Pre-enrolment activity e-learning category analysis**

Regardless of pre-enrolment activity, all students had a major decline in their participation in extramural Web-Supported courses and large growth in their participation in extramural Web-Enhanced and Web-Based courses. Despite these growth patterns, the house-person/retired and not working groups by 2011 were more likely to participate in Web-Supported extramural courses. However, the other groups were more likely to participate in Web-Based extramural courses.

### **Sub-sector e-learning category analysis**

PTEs had the highest proportion of extramural Web-Supported and Web-Enhanced provision. However, wānanga had the highest proportion of extramural Web-Based provision.

### **Field of study e-learning category analysis**

Education and Creative Arts were the only fields that did not have Web-Supported as the e-learning category with the highest proportion of their extramural e-learning provision. For Education, Web-Based was the e-learning category with the highest proportion of extramural e-learning provision, and for Creative Arts it was Web-Enhanced. Information Technology, Architecture and Building, Agriculture, Environmental and Related Studies, Management and Commerce, Society and Culture, and Food, Hospitality and Personal Services had Web-Enhanced as their smallest share of extramural provision.

## APPENDIX B THE OPEN POLYTECHNIC OF NEW ZEALAND CASE STUDY

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### Student profiles

The Open Polytechnic provides most of the extramural courses in the polytechnic sector. Each year approximately 41,000 people study with the Open Polytechnic. Around 96 percent of these students are studying part-time (compared to the polytechnic sector average of 57 percent).

One of the Open Polytechnic's key student markets is people in work who are seeking to up-skill; 72 percent of its students are studying while in employment compared to the polytechnic sector average of 46 percent. Workplace learners want flexibility and convenience to fit their study around their work and other commitments. These workplace student groups include professional groups such as pharmacy technicians, justices of the peace, and real estate agents.

In 2011, 90 percent of the Open Polytechnic's students at Level 1 were Māori or Pasifika. And 83 percent of all Pasifika students and 26 percent of all Māori students studying in the polytechnic sector at Level 1 on the New Zealand Qualifications Framework were studying at the Open Polytechnic. The Open Polytechnic also has a large number of older, female learners, and provides options for students returning to tertiary education who are unable to commit to full-time study. Other student groups include those who cannot study at a physical institution, such as prisoners, those in the armed services who wish to study while on active duty overseas, and learners in remote locations.

While there are many degree-level students, large numbers also study shorter vocational qualifications such as certificates and diplomas. A further group takes some courses with the Open Polytechnic while completing their qualification at another provider.

The Open Polytechnic uses student profiles to help determine the most effective learning approaches. These profiles are constructed on a programme-specific basis. Data from various sources including past programmes and liaisons with partner providers is used to construct the profiles.

### 2012 EFTS load differences between The Open Polytechnic and the polytechnic sector

	Heads	EFTS	Ratio
The Open Polytechnic of New Zealand	26,518	6,056	0.23
All other polytechnics	126,191	74,293	0.59

Source: Ministry of Education, Education Counts website

### Distance learning support

Learners who are highly motivated and self-directed typically require minimal support. But others, particularly those studying at lower levels or those new to distance learning, require much more support. The Open Polytechnic provides a variety of support models for their different student groups.

The Open Polytechnic has developed a repository of resources to help students acquire the skills needed to study online successfully and supports students to develop academic literacy skills. It is now targeting these measures at first-time students and/or courses with low completion rates.

In response to its lower course completion rates and in recognition of its students' differing needs and requirements, Open Polytechnic introduced a range of student support measures that

include providing Programme and Student Advisors (PASAs). Each programme has its own PASA, who assists students with pre- and post-enrolment processes as well as providing general support for their learning journey.

Social media sites such as Facebook are proving useful in helping set up offline study. The Open Polytechnic is also piloting the introduction of online ‘taster’ sessions to provide orientation for students on what their study will involve. Some of these sessions look at initial course choice, while others focus on assessments and deadlines.

The Open Polytechnic is introducing learning plans for its open courses which prescribe what study should be done and by when, along with regular assessments. The due dates for key deadlines are given in programmes that have been identified as having issues with student engagement.

The Open Polytechnic has recently introduced a peer mentoring scheme for first-time students primarily because of their lower retention and completion rates. The peer mentors need to have completed at least two years’ degree-level study and must undertake training for the role. The mentees are contacted within the first four weeks of their course start date and again mid-course, with the aim of helping them to make a successful start to their study and to persist with it.

Through its StudyWise programme, the Open Polytechnic runs online workshops that introduce students to the skills needed for successful study. It has also set up an ExamWise programme, which is offered about three weeks before exams. While this is targeted at first timers, it is available for all students. The programme covers key issues in an examinations context, including how to manage revision stress, how to manage time in examinations and how to structure questions, as well as critical administration information such as directions to the venue.

While there are groups of students who are typically self-disciplined and motivated and need only limited support, a high proportion of the Open Polytechnic’s students are second-chance learners. While it is much easier to demonstrate added value for second-chance learners, as their progress and success are often obvious, they do require much more individualised and intense support. In this context, assessment feedback is critical.

On at least a monthly basis all disabled students are contacted by email. They are assigned a dedicated learning advisor, who offers support, provides a point of contact and raises awareness of available and appropriate services. Disabled students are provided with course materials in an appropriate format (including digital and audio), and can also use their own assistive technologies. PASAs and other relevant staff are included within this support structure for disabled students.

Online student support is available through the general Open Polytechnic website or ‘Online Campus’. Online Campus is a dedicated portion of the website where students can access a range of support, information and materials through mechanisms such as discussion forums and they can also use this space to interact with lecturers. Discussion forums are used to update students in addition to newsletters posted on their Learning Management System (LMS).

### **Māori learners**

The overall direction and responsibility for Māori learner initiatives at the Open Polytechnic reside with its Māori Office and Māori caucus, who are accountable to the Executive Director, Māori. The caucus also acts as a support network for the Open Polytechnic’s Māori staff and has representatives on its Academic Board, and design, multimedia, and research and ethics committees as well as its tutor teams and groups.

The Open Polytechnic attempts to include whānau in learning activities, and Māori pedagogies are built into appropriate Open Polytechnic programmes. Māori concepts are also incorporated into its online support mechanisms such as discussion forums. There is a dedicated online space for Māori learners (iWhare), where tutors, using video, introduce themselves to and interact with Māori students.

The Open Polytechnic provides a peer mentoring service for Māori students (Tuakana Ako) and trains the participants so they can effectively manage non-learning-related dialogues and contexts. In a Māori context, initial interactions are typically about establishing whakapapa and linkages, and this requires an understanding of the mentee's age, background and other relevant details.

The mentors can help with their mentee's study plans and support them to get started with and complete their learning, as well as directing them to wider support networks. The Open Polytechnic plans to put a process in place for Māori learners at the pre-enrolment phase. It is running a pilot regional programme working with local iwi and/or hapū to engage with actual and prospective students.

## **Teaching**

At the Open Polytechnic, some teachers use pre-entry tests to identify students who require or would be better suited to foundation-level study and set up a process for them to complete this and then re-enter the course/programme they originally chose.

LMS analytics can be used to monitor and track student activity and progress. Teachers provide individualised support to students by initially contacting them by email and then with a follow-up phone call where necessary. Staff are also encouraged to provide additional programme- or course-specific support to that provided by the PASAs.

It is a challenge to ensure students have realistic expectations about contact with teachers, as in theory it could be '24/7'. But where students need to be contacted offline, the 'standard' time for doing so is 6-9pm, because this is when most students are available and have the time for study-related conversations. Teachers are expected to initiate learner withdrawals where it is clear that the student will not complete and/or is not suitable for a particular course/programme.

In some programmes, students are encouraged to post their work online for peer review and feedback. This helps build a sense of community and allows the teacher to identify exemplars for distribution to the wider group. Teachers provide pre-assessment advice and guidance, as well as post-assessment feedback. Regular supply of work and timely, constructive feedback are effective strategies for eliminating students' 'mental blocks' and this also assists their motivation and performance.

Important teacher-student interactions do not necessarily require technology. In some trades programmes there is very little online activity and what is provided is typically teacher-led and/or directed. Students in these more practically oriented courses/programmes usually have low levels of language, literacy and numeracy and as a result often struggle with the theory component of their course(s)/programme(s).

Trades students also prefer paper-based materials, which they find much easier to interact with and use at work. Employers typically support employee absence at lectures; but they are less supportive of online study during work hours because most of them expect their employees to do study in their own, not work, time. But despite these obstacles, e-learning does assist trades students by clarifying key points, and modelling good/expected practice. And computer-assisted design programmes and screen sharing can also facilitate interactions between teachers and trades students.

The work of adjunct staff is carefully monitored and their roles and responsibilities are prescribed and limited through formal contracts. These contracts also outline timelines and performance measures. Adjunct staff primarily mark examinations and assessments. They are normally industry experts and academics who can provide additional expertise and interactions with students. Their marking feedback is used to inform assessments.

### **Examinations/assessments**

While some students do assessments and/or examinations at the Open Polytechnic campus, this is an exception. However, it does have up to 51 assessment/examination centres nationwide.

The Open Polytechnic uses its assessment/examination centres and its regional networks to run examinations. For examinations with smaller numbers, this is the sole responsibility of the appropriate regional examiner or team, but for larger groups the Open Polytechnic does the organising. Efforts are made to ensure the examination venues are no further than one hour's drive from the student(s).

For courses at Levels 5-7 on the National Qualifications Framework, the Open Polytechnic has introduced an online marking support system. This system allocates and directs electronically submitted assessments on a pre-determined basis to those who will mark them. The system allows the markers to provide feedback in the form of electronic annotations, highlighted font, 'notes', and tracked changes.

The Open Polytechnic has a policy that if a student submits an assessment electronically they receive a marked-up version back via the LMS. And the LMS allows students to view feedback and comments via an electronic marking sheet as well as providing model answers. When the marking process is complete, the system alerts the student that their assessment is available for viewing.

### **Recognition of prior learning**

The Open Polytechnic is running a pilot for recognition of prior learning (RPL) so it can link this with its enrolment and student support processes. The Open Polytechnic's RPL process involves gathering evidence through mechanisms like professional conversations and questionnaires, to allow learners to demonstrate competence or fulfil credit requirements. The questionnaire precedes and informs the professional conversation(s). Accelerated assessments are used where students who can clearly demonstrate competence are able to complete their study more quickly.

### **Student satisfaction, performance and completions**

The Open Polytechnic uses Colmar Brunton to undertake its student satisfaction survey, which covers pre-enrolment to completion. The surveys consistently show high levels of student satisfaction. The Open Polytechnic's Australasian Survey of Student Engagement data also shows high levels of student satisfaction.

The Colmar Brunton surveys show that the main reasons students enrol at the Open Polytechnic are the flexibility and convenience of its services. But findings from the Colmar Brunton surveys also include inconsistent tutor support, with a wide variation from excellent to inadequate. One of the surveys' common themes was students' concerns, issues and problems relating to perceived or actual isolation. Results from the 2011 Colmar Brunton survey indicated that the Open Polytechnic's assessment feedback and marking were not as timely as students desired and this has led to improvements being made (including the online marking system referred to above).

### **Single Data Return and institutional data**

The Open Polytechnic uses Single Data Return (SDR) for internal as well as external reporting. Internal uses include helping assess its progress against key performance indicators. External

uses include advising clients such as employers and industry training organisations (ITOs) of trainee and employee progress.

The Open Polytechnic's logistics department records critical data including the course delivery mode and channel(s), assessments, programme details such as how it was approved and who did this, and mandatory fields such as funding codes and credits. It uses data to determine the course materials that need to be sent to students as well as confirming that they are correct before dispatch.

Data on prior achievement is used to identify additional support requirements. It is also used to inform recruitment, with an emphasis on student groups who are more likely to enrol and be successful. Data is used by faculty to re-engage with students as well as monitoring their progress and success and the support they have received. It is also used as a reminder to those learners who have completed their enrolment, but have taken no further action.

### **Course type/structure**

The Open Polytechnic has two types of courses: trimester courses, which run for 17 weeks, and open courses. For open courses, students select a start date or 'block'. These open courses run for 32 consecutive weeks from the first of the month after the student's enrolment is accepted.

### **Programme/course development, approval and materials**

In distance education, accessibility for students is critical and learning materials need to assist and contribute to student motivation. To achieve this objective, the Open Polytechnic has a dedicated team of instructional designers which also has input from specialists in print, graphic design, LMS, multimedia, layout, editing, flexible learning, and user interface. External and internal subject matter experts are also involved.

Specialist editors are used to ensure that the grammar, punctuation and spelling in programme materials are accurate. Another critical role they play is in ensuring there is a consistent 'look and feel' to the programme materials, because this assists students' learning. Technical experts, who are typically Open Polytechnic staff, also ensure such items as legislative, technical, and mathematical and scientific concepts and formulas are accurate. The Open Polytechnic also employs project and operations managers to develop its programme materials.

The work of external writers needs to be carefully peer reviewed to ensure it meets expected Open Polytechnic standards and requirements. This peer review also allows for the identification of any copyright breaches or issues.

Their Learning and Teaching Solutions Directorate is responsible for the programme development approval process. This process involves a concept case, business case, academic case, and programme design document. The concept case outlines what the programme is proposing, while the business case focuses on its sustainability. A programme business case focuses on the expected initial investment as well as the ongoing/operational costs.

Programme reviews are carried out by the programme leader, who ensures the course or modules are consistent with the programme and any programme-specific requirements are being met. For revisions and small amendments a reduced process is employed. For these and other programme updates the Open Polytechnic relies on faculty input and directives.

The Open Polytechnic also undertakes a review to ensure its materials are culturally appropriate. Course evaluation reports focus on students' results, how the course is progressing, and the identification of issues and concerns. These reports, along with the student satisfaction survey and annual programme evaluation reports are used to inform programme-specific action plans.

The Open Polytechnic's Academic Board gets an overview of the programme evaluation reports and the progress on the action plans. The focus here is on where improvements have been made and the planned activities for the following year. On a quarterly basis, the Academic Board can consider over 100 programme evaluation reports.

### **Delivery**

The Open Polytechnic's analysis indicates that the uptake of e-learning is increasing, particularly among their fastest growing student group, the 18-24 year olds. However, their delivery is usually a mix of paper-based and online because of technology limitations, external and learner requirements, and student preferences. Furthermore, in the Open Polytechnic's view the available technologies lack the functionality to support fully online learning.

While 52 percent of the Open Polytechnic's students prefer to study through a mixture of online, offline and print, more students are requesting online-only versions of course materials (16 percent of student satisfaction survey respondents in 2011, up from 12 percent in 2010). And strategically, the Open Polytechnic wants to deliver its materials in different media (online, mobile and paper) depending on learner context and requirements, but with online delivery as the core focus.

A large number of courses and programmes are also delivered through various blended models. For example, in many instances, the Open Polytechnic provides the theoretical components while using the services of adjunct faculty or ITOs and workplaces to facilitate activities occurring in the workplace such as assessments and verifications.

The Open Polytechnic's delivery model allows self-directed individual learners to access training and education at a time, place and pace of their choosing, to fit in with their family, work and community commitments. In this model, the student communicates with tutors via email, text and phone, and increasingly with their peers through online forums, rather than through face-to-face contact. The Open Polytechnic also makes extensive use of video and DVDs/CDs to support its learners.

### **Business models/costs**

In recent years the Open Polytechnic has introduced several new business models to enable it to meet the needs of new groups of learners. For example, to ensure greater success of priority learners studying at foundation and transition levels, the Open Polytechnic has evolved its open and distance learning support model and assessments by partnering with community-based organisations such as the New Zealand Home-based Early Childhood Education Association and Barnardos, where:

- the Open Polytechnic obtains accreditation and programme approval, develops and owns the learning materials, provides support for learners, creates and moderates assessments, and trains and moderates mentors
- the community-based organisations recruit priority learners and host mentors/coaches to support face-to-face and practical course components. One-on-one support is available where necessary
- learners in pre-existing communities, including workplaces, prisons and churches, enrol through a community-based organisation at any time throughout the year, and work at their own pace.

The Open Polytechnic is considering leveraging and formalising these partnerships by creating community hubs.

The Open Polytechnic's main asset is courseware that is specifically designed for the self-directed learner. Once the initial investment has been made, additional value is leveraged from the asset over the course of its life through the increasing number of learners enrolled in a

given course or programme. This is the basis of the economies of scale that can be achieved in open and distance learning. But this does not determine value for money. This is typically done by using Colmar Brunton data and industry partnerships.

In addition to being able to achieve economies of scale, the Open Polytechnic, unlike most other institutions, does not need to invest in extensive plant and facilities. But this is counter-balanced by its approach to learning materials and its overall support for students, including the practice of doing numerous follow-ups, as well as the requirement to maintain multiple infrastructures to support paper-based and online delivery.

Advertising activity is increasingly being shifted online, as this provides a highly measurable and targeted means of communication. It also allows for testing and refinement based on results, which continually increases cost-effectiveness.

A key focus for the Open Polytechnic is lowering the cost of delivery. Costs are falling as more Open Polytechnic provision shifts online and to blended models. Further reductions could be made if paper-based materials were provided on a demand rather than mandatory basis. However, lower-level provision tends to be more expensive as this is still largely paper-based and the Open Polytechnic also needs to provide increased levels of support for students in these courses/programmes.

### **ECE programme case study**

The Open Polytechnic's Bachelor of Teaching Early Childhood Education (ECE) programme is not typical of its provision because Teachers Council requirements for registration mean that a minimum of 20 days' face-to-face delivery has to be provided. Face-to-face recruitment processes are also necessary to support authentication of applicants and assessment of their suitability to become an ECE teacher. It uses its regional networks and staff to provide and facilitate these face-to-face tutorials and workshops.

This ECE programme has high completion rates. One factor that contributes to the higher completion rates is the strength of the relationships between regional staff and students as a result of staff being in the same community as their students.

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*Te Tāhuhu o te Mātauranga*