

# 2006 E-learning Benchmarking Project

Final Report

I & J Management Services

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## Summary

*“Use of the Internet is a big help to me. I am a quick learner and grasp concepts in a visual manner when online. It is the technology of today that enables people quick access via Internet rather than having to wait for paperwork. It’s more effective and convenient, and it’s a limitless boundary for those with disabilities.”*

The uptake of e-learning is increasing. Students find e-learning convenient and fun, and believe their increased confidence and skills in using technology will deliver better employment outcomes. Teachers have more confidence in using e-learning applications, and are expanding their use of online, mobile and voice technologies to deliver more engaging vocational and technical education (VTE) programs.

These are the key findings of the Australian Flexible Learning Framework’s (Framework) 2006 E-learning Benchmarking Project, which is a sub-project of the Research and Policy Advice Project. The Framework is the national training system’s e-learning strategy, collaboratively funded by the Australian Government and all States and Territories. It provides the VTE system with e-learning skills, professional development opportunities, products, resources and support networks to meet today’s increasingly technology-driven learning environment.

Following on from the first national surveys of the uptake, use and impact of e-learning conducted by the Framework in 2005, the 2006 benchmarking surveys of registered training organisations (RTOs), VTE students and VTE teachers and trainers show significant growth in the use of e-learning and reinforce the positive attitudes towards e-learning found in the 2005 survey.

In 2003-04 it was estimated, from the piecemeal information available at the time, that around three to four percent of VTE activity involved e-learning. The baseline surveys in 2005 found that the use of e-learning had increased to six to eight percent of all VTE activity. In 2006, the E-learning Benchmarking surveys indicate that around 17% of VTE activity now involves e-learning.

The doubling of the uptake of e-learning in the space of 12 months is indicative of e-learning becoming more embedded in the range of training delivery options offered by training providers and the approaches taken by VTE teachers and trainers. However, the uptake of e-learning is not consistent across the VTE system.

The growth in the uptake of e-learning in the last year has primarily come from those RTOs that were previously delivering e-learning now doing more. Teachers that were previously ‘dabbling’ in e-learning are extending their use of e-learning by employing more e-learning applications with more of their students.

Although 49% of RTOs in 2006 are delivering some form of e-learning, 51% are not, a situation which has not changed substantially since 2005. Furthermore, 70% of small private, industry and community-based training providers report that they do not deliver any e-learning, even though another 16% of small providers have extensive use of e-learning. This polarisation of e-learning delivery is of interest when considering the future capability of the VTE system to respond to emerging VTE client demand for flexibility of training delivery.

The 2006 surveys also show:

- 60% of VTE students said that the e-learning in their course had increased their confidence and computer skill levels. This is despite the finding that 70 to 75% of students said they were confident and skilled in the use of information and communication technologies (ICT) prior to their course.
- 28% of VTE students said that they thought the e-learning in their course had already helped them to get a better job, get a future promotion, or get more responsibility in

their job. Sixty-one percent of VTE students said that they thought the e-learning in their course would in the future improve their employment outcomes.

- Around 60% of VTE students said that the e-learning components of their course gave them flexibility in where (eg home, workplace, campus) and when (ie the time of day) they did their study. The convenience of e-learning was strongly stressed with many students commenting on the ways in which this flexibility had enabled them to study or made it easier for them to combine study with other family and work responsibilities.
- As a measure of client satisfaction, 65% of VTE students said that they would recommend e-learning to their peers, with less than 10% saying that they would not do this.

The 2006 E-learning Benchmarking surveys also found that 86% of teachers and trainers use some form of e-learning, and that while this proportion has not changed from 2005, the range of e-learning applications used by individual teachers has increased, so that they are now doing more e-learning with more of their students.

- Although only 68% of VTE teachers and trainers initially indicated that they delivered VTE units that used e-learning, when asked about the way in which they used ICT in their teaching and learning activities, 85% said they used at least one of the e-learning activities mentioned. These included online access to learning materials and resources, electronic submission of work, remote and classroom use of multimedia interactive learning resources, and use of online chat, bulletin boards and simulations. In 2006, teachers report increased use of interactive multimedia resources in the classroom and increased use of online assessment activities.
- 82% of VTE teachers and trainers indicated that they now use technology to draw on a wider pool of teaching resources and 84% said that they now encourage students to draw on more web- and computer-based resources.
- 80% of VTE teachers and trainers said that they now have access to more learning resources than they did two years ago and 70% said that they now use more e-learning resources than they did two years ago.

The E-learning Benchmarking surveys captured information about the level of uptake and use of e-business services offered by providers and found that 62% of all RTOs report that they deliver some e-business services to their VTE clients. The most common forms of e-business service were online publication of general course information and relevant policies, regulations and strategies (55% of RTOs). Whilst there has been little change in the proportion of providers offering e-business services there has been an increase in the provision of online enrolment services.

- 62% of VTE students reported that they used at least one of the listed e-business services, most commonly general course information online, online payments and electronic forms, or accessing student results
- Around 40% of VTE students said that they would use more e-business services if they were known to available from their training provider
- 58% of VTE students said that they would recommend using e-business services to their peers.

The three E-learning Benchmarking surveys undertaken in 2006 provide a more solid base of information to support decisions about the current uptake and impact of e-learning, and future opportunities to support and enhance flexibility in the VTE system. Additional analysis of the benchmarking will now be undertaken to provide further insights into the patterns of use across different States and Territories and across the VTE system.

In particular, the 2006 E-learning Benchmarking Project has captured information on the use of e-learning in traditional trades (eg building and construction, metals, manufacturing, automotive) and the uptake of e-learning in provision of non-accredited training by RTOs and community training providers. Analysis of the findings from this data will be published along with the additional analysis of 2006 benchmarking data.

## **2006 E-learning Benchmarking Project**

In 2004, the Flexible Learning Advisory Group, which manages the Framework, identified 12 indicators that could be used to measure the uptake and use of e-learning and e-business in the national VTE system, and measure the impact of e-learning on VTE clients and VTE providers. The indicators can be grouped under three broad headings.

### **Uptake of e-learning**

Six primary indicators of e-learning demonstrate the uptake and impact of e-learning in the VTE system.

1. % of VTE unit enrolments that use e-learning.
2. % of VTE providers offering units that use e-learning.
3. % of VTE learners who through e-learning have increased skills and confidence in using ICT.
4. % of VTE learners who through e-learning have or expect to have improved employment outcomes.
5. % of VTE clients who believe e-learning and e-business gave them flexibility in when, where and how they engaged with VTE.
6. Client satisfaction with e-learning experiences in VTE.

### **Uptake of e-business**

Three indicators are related to the uptake and impact of e-business.

7. % of VTE providers offering e-business client, support and administrative services.
8. % of VTE clients using e-business client, support and administrative services offered by providers.
9. Client satisfaction with e-business experiences in VTE.

### **Teaching and training practices**

Three indicators address the uptake, use and outcomes of e-learning on VTE teachers and trainers.

10. % of VTE teachers/trainers delivering units that use e-learning.
11. % of VTE teachers/trainers who through e-learning have changed teaching practices in the design, development and delivery of units.
12. % of VTE teachers/trainers who believe increased access to e-learning resources has improved teaching and learning outcomes.

## **2005 baseline data collection**

In 2005, the E-learning Benchmarking Project measured for the first time the national uptake, use and impact of e-learning in the VTE system. It conducted four baseline surveys targeted at VTE providers, VTE students, employers with employees undertaking VTE training, and VTE teachers and trainers, with more than 400 responses received for each survey.

The results of the baseline surveys were published on the Framework's e-learning indicators website (<http://www.flexiblelearning.net.au/e-learningindicators>) and promoted to encourage establishment of State and Territory-based data collections on flexible learning for long-term measurement of uptake and impact.

The 12 e-learning indicators may also be adapted and used by individual providers to establish organisational goals and benchmarks for e-learning, and assist VTE providers to establish and maintain good data systems. As a result, the 2005 E-learning Benchmarking Project developed a suite of resources and tools to enable providers to undertake their own e-learning benchmarking activities through surveys of their students, teachers and trainers, and employer clients.

## **Benchmarking in 2006**

Building on the baseline data, three surveys have been conducted in 2006. With some minor modifications to and supplementation of the survey questions used in 2005, the surveys of VTE providers, VTE students and VTE teachers and trainers were repeated in 2006. The employer survey was not repeated as it was considered that a two-year survey cycle would be more appropriate for capturing the views of employers and their changing experiences of and attitudes to e-learning in VTE.

The 2006 benchmarking was administered through short surveys that gave respondents four different response options. Each survey could be completed online, as an electronic form for return email, or in a print form that could be mailed or faxed to the project researcher.

The form and content of the surveys was consistent with the initial 2005 surveys which were approved through the Australian Government Statistical Clearing House to ensure that they did not capture information that already existed, did not represent an unnecessary or undue burden on respondents, and were methodologically sound.

The surveys were run during September/October 2006, with response timeframes in each State and Territory adjusted to accommodate term breaks.

More detailed information on the survey method, the sampling frame and methodology, survey questions and response rates are included in Appendices 1 to 3, which also summarise the results of each of the three surveys.

Refinements of the 2005 survey methodology increased the number of responses for all three surveys. The responses are also considered to be more representative of the broader VTE system with student and teacher surveys received from many more and different VTE providers than in 2005. The number of responses received for each of the three surveys is shown below.

<b>Survey</b>	<b>Number of 2006 responses (2005 in brackets)</b>
Registered training organisations	487 (403)
VTE students	875 (443)
VTE teachers and trainers	733 (478)

This report presents high-level analysis of the results of the surveys against the 12 e-learning indicators. More detailed analysis of the final responses, including analysis against demographic factors such as state, organisation type, and age and gender of respondent will be undertaken during October/November 2006.

## **Definitions of e-learning and e-business**

The survey used the following definition of e-learning.

***E-learning*** uses electronic media to deliver flexible vocational and technical education. It includes access to, downloading and use of web-, CD ROM- or computer-based learning resources in the classroom, workplace or home. It also includes online access to and participation in course activities (eg. online simulations, online group discussions); directed

*use of the Internet, mobile and voice technologies for learning and research purposes; structured learning-based email communication; and online assessment activities. E-learning does not include e-mail dissemination of course information, e-mail communication between a teacher/trainer and learner on a single learning issue, or online administration of learning activities.*

When asking teachers about the way in which they used ICT in delivering VTE units the following activities were identified:

- online access to and downloading of learning materials and resources
- use of multimedia interactive learning resources (eg web-based or CD-ROM learning resources, Flexible Learning Toolboxes (Toolboxes)) in the classroom
- remote use of multimedia interactive learning resources (eg web-based or CD-ROM learning resources, Toolboxes)
- use of Toolboxes
- online access to and participation in course activities
- online simulations
- online group discussion (synchronous/asynchronous)
- posting messages to a group through an online bulletin board
- structured learning-based email communication between learners and other learners or between learners and teachers/trainers
- electronic submission of work
- online assessment activities.
- use of Web 2 technologies (eg blogs, wikis) for learning
- use of mobile technologies for learning, assessment or communication
- use of voice technologies for learning.

When asking RTOs and VTE students about the provision of and use of e-business services the following services were identified:

- online publication of general course information and relevant policies, regulations and strategies
- online enrolment
- online payments and electronic forms
- online access to student records
- online library services
- online information on student support services
- online access to and delivery of student support services
- online access to results.

## **Interpretation of results**

The 2005 and 2006 E-learning Benchmarking Projects have captured data on the uptake, use and impact of e-learning in the VTE system through surveys of RTOs, VTE students and VTE teachers. All results must be interpreted in the light of the statistical variations that exist in any survey process of this type. The nature of most of the questions in the surveys means that a difference between 2005 and 2006 results of +/- four to five percent is not

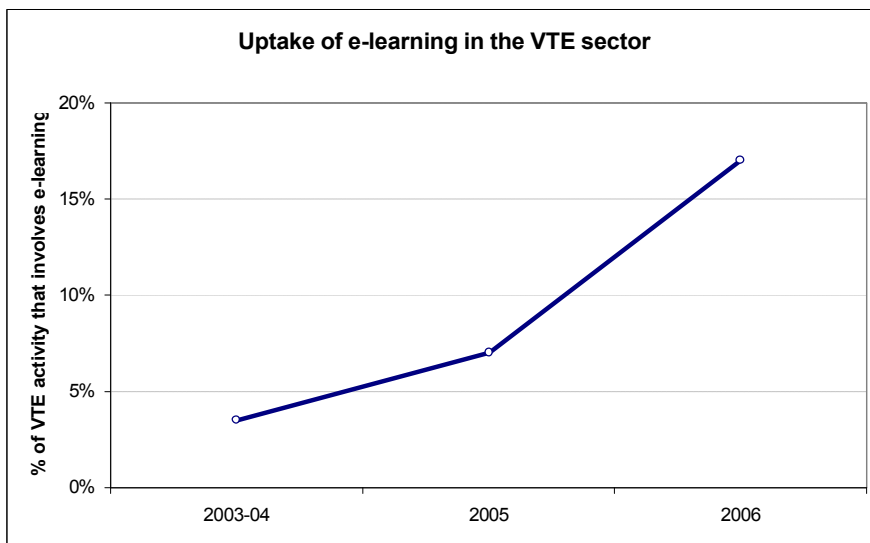
statistically significant. The estimate of the overall uptake of e-learning in VTE activity is calculated using different methods and changes of this magnitude would be considered significant.

## Uptake of e-learning

There are six primary indicators of the uptake and impact of e-learning in the VTE system. The 2006 E-learning Benchmarking surveys of RTOs and VTE students indicate a continuing increase in the uptake of e-learning, and that clients are generally satisfied and supportive of e-learning as a means of enhancing education and training outcomes.

### **Indicator 1 - % of VTE unit enrolments that use e-learning**

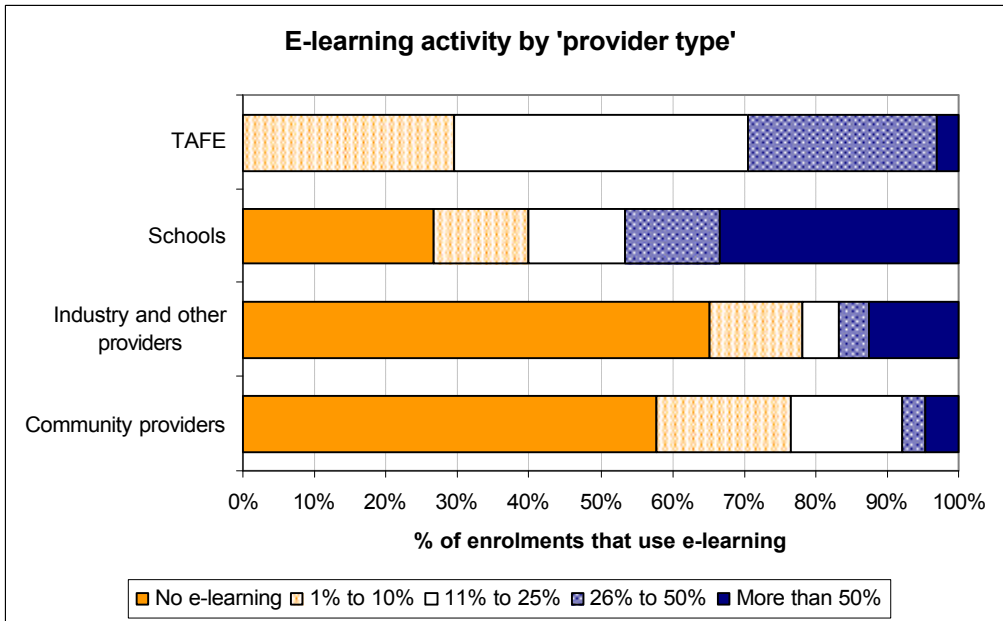
The best estimates of the level of uptake of e-learning in 2003-04 using the little information that was available at the time suggested that around three to four percent of all VTE units involved some form of e-learning. The 2005 baseline surveys showed that around six to eight percent of all VTE units involved some form of e-learning. In 2006, this figure has grown to 17%. That is, around 17% of all accredited VTE uses e-learning in some way.



### **Indicator 2 - % of VTE providers offering units that use e-learning**

Across the entire set of survey respondents, which represents more than 10% of all RTOs, 49% reported that they delivered some units involving e-learning.<sup>1</sup> However, the uptake and nature of e-learning varies by provider type and size.

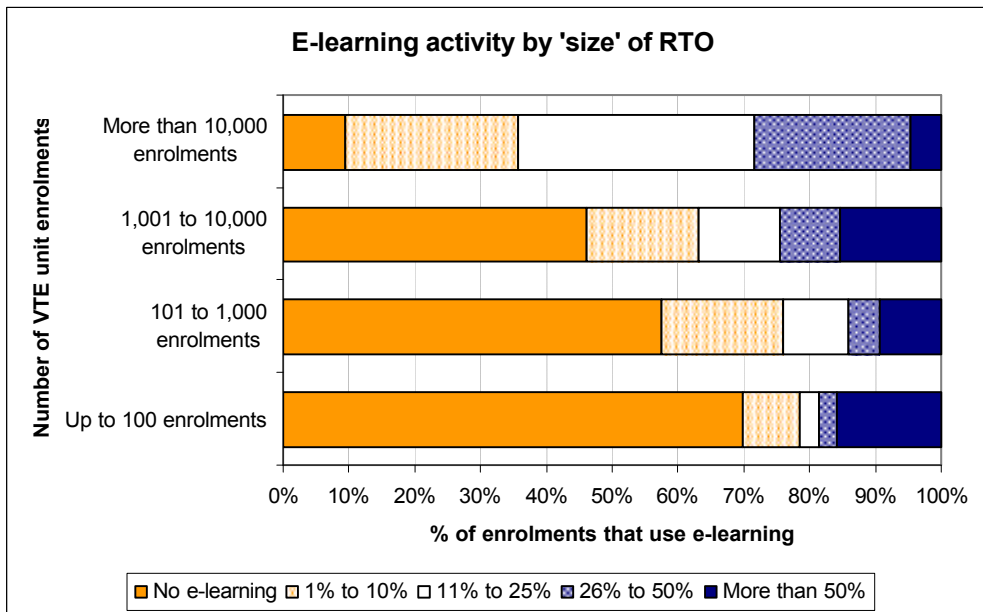
<sup>1</sup> The 2005 survey found that 53% of RTOs delivered some VTE units involving e-learning. The difference between the 2005 and 2006 figures is not statistically significant, and reflects the expanded reach of the 2006 survey, to which more 'smaller' RTOs responded. In general, it can be said that around 50% of RTOs deliver some form of e-learning and 50% do not.



The above chart shows that all TAFE institutes<sup>2</sup> are offering VTE units that use e-learning, as are 42% of community providers, 73% of schools and 35% of other providers (including private, commercial, enterprise, industry and all other provider types).

Estimates from larger RTOS (predominantly TAFE institutes) suggest that on average between 20 and 25% of their VTE activity involves e-learning, although some large non-TAFE RTOs report no e-learning while others report that in excess of 50% of their VTE unit enrolments involve e-learning. At the same time, the response in 'smaller' RTOs that reported less than 100 enrolments is highly polarised, with nearly 70% reporting no e-learning activity (in many cases because e-learning is not seen as an appropriate means of delivering training to meet the needs of their particular clients), while 16% report high levels of e-learning activity. This finding may have implications for the way in which programs are developed and directed to support the uptake of e-learning among different types of RTOs.

<sup>2</sup> This excludes DECA Training (the Driver Education Centre of Australia) in Victoria, which reports no use of e-learning.

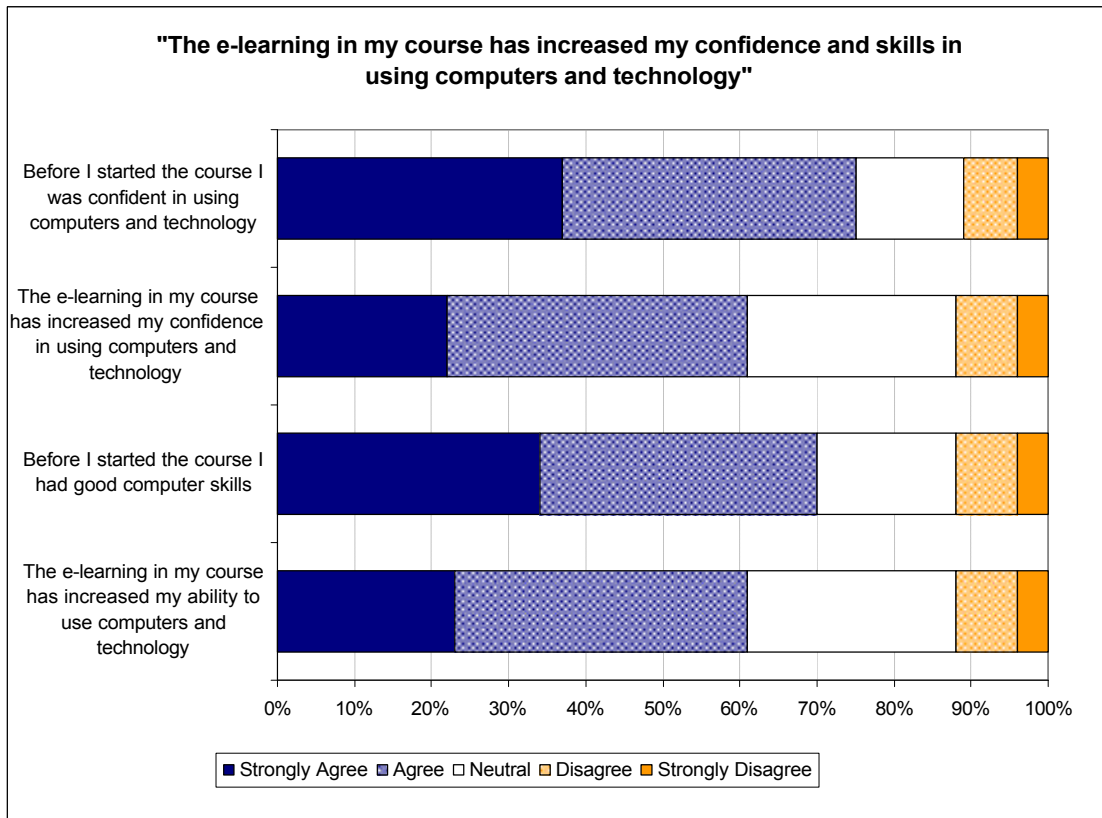


As was the case in 2005, it was noted that while some medium to small RTOs reported no or little use of e-learning in describing the way in which they used ICT to deliver training to their students, they are clearly using e-learning more than they believe. This suggests that there is a misunderstanding that if training is not wholly delivered online it is not e-learning.

**Indicator 3 - % of VTE learners who through e-learning have increased skills and confidence in using ICT**

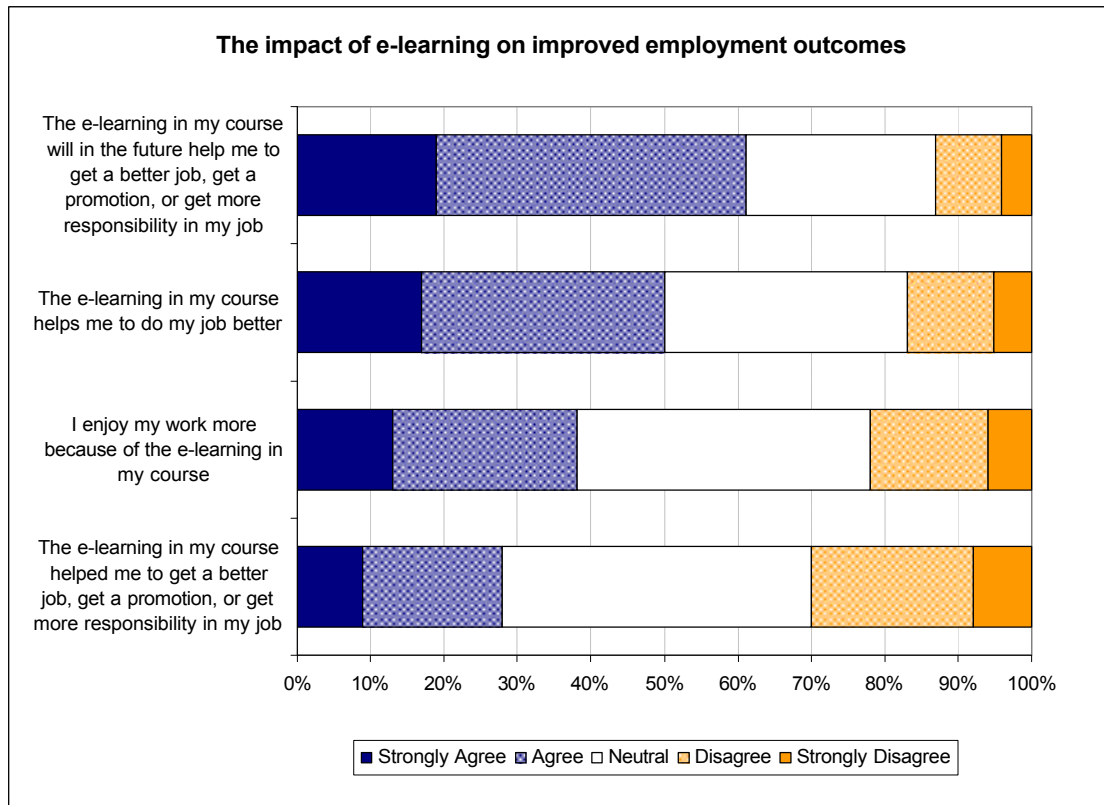
Around 70 to 75% of VTE students said that they were confident and skilled in the use of ICT before they started their course (see following chart). When asked about the effect of e-learning on their skills and confidence in using computers and technology, 60% said that there had been a positive impact, with only 12% saying this had not occurred. That is, e-learning is reported to increase students' confidence and skills in using technology, even though many of those same students say that they were confident and skilled before their e-learning experience.

It is also notable that more than 50% of students said that the e-learning in their course had led them to use computers and technology more in other areas of their life. In this way, e-learning is not only assisting VTE students to achieve their education and training goals, but enhancing their general skill base for using technology at work and home.



**Indicator 4 - % of VTE learners who through e-learning have or expect to have improved employment outcomes**

VTE students have positive expectations of the impact of e-learning on their current and future employment outcomes. Twenty-eight percent of students thought the e-learning in their course had already helped them to get a better job, get a future promotion, or get more responsibility in their job. Sixty-one percent of VTE students said that they think the e-learning in their course will in the future help them to get a better job, a promotion or more responsibility in their job.



VTE students also indicated that e-learning enhanced their ability to do their job and their enjoyment of their job.

Whilst the issue of employment outcomes was not immediately relevant to all students participating in the survey, the perceptions of the actual impact of e-learning and the expectations of improved outcomes are significant. These appear to be linked to the increased confidence students have in their capacity to use technology, which is seen as a skill that enhances their employment prospects.

**Indicator 5 - % of VTE clients who believe e-learning and e-business gave them flexibility in when, where and how they engaged with VTE**

VTE students indicated that e-learning offered flexibility in the way they engaged with VTE and their VTE provider.

- 60% of students said that the e-learning components of their course enabled them to choose where they did their study (eg home, workplace, campus)
- 54% of students said that the e-learning components of their course enabled them to choose when they did their study (ie the time of day).

The E-learning Benchmarking surveys also showed that e-learning gave VTE students flexibility in what they chose to study (43%), how they undertook their learning activities (49%) and when they started and finished their course (39%). Interestingly 38% of students said that access to e-learning was a factor in their selection of a training provider.

These findings reinforce the results of previous analysis of the impact of e-learning, particularly in the flexibility given to students in when and where they undertake their vocational and technical education. When asked to describe their e-learning experiences the word most used by students was ‘convenient’, with particular importance given to their capacity to undertake some or all of their training at a time and place that was convenient to their competing home life and work commitments.

*“I live in the country so being able to participate in my course from home helps me and my parents as I do not have to move to the city and I only have to travel down once a week.”*

*“I found it easier this way as I am a shiftworker.”*

*“I have a three year old child so I found it extremely helpful to be able to do my studies online at night whilst he slept.”*

*“It was very convenient as I am in a wheelchair and could study from home.”*

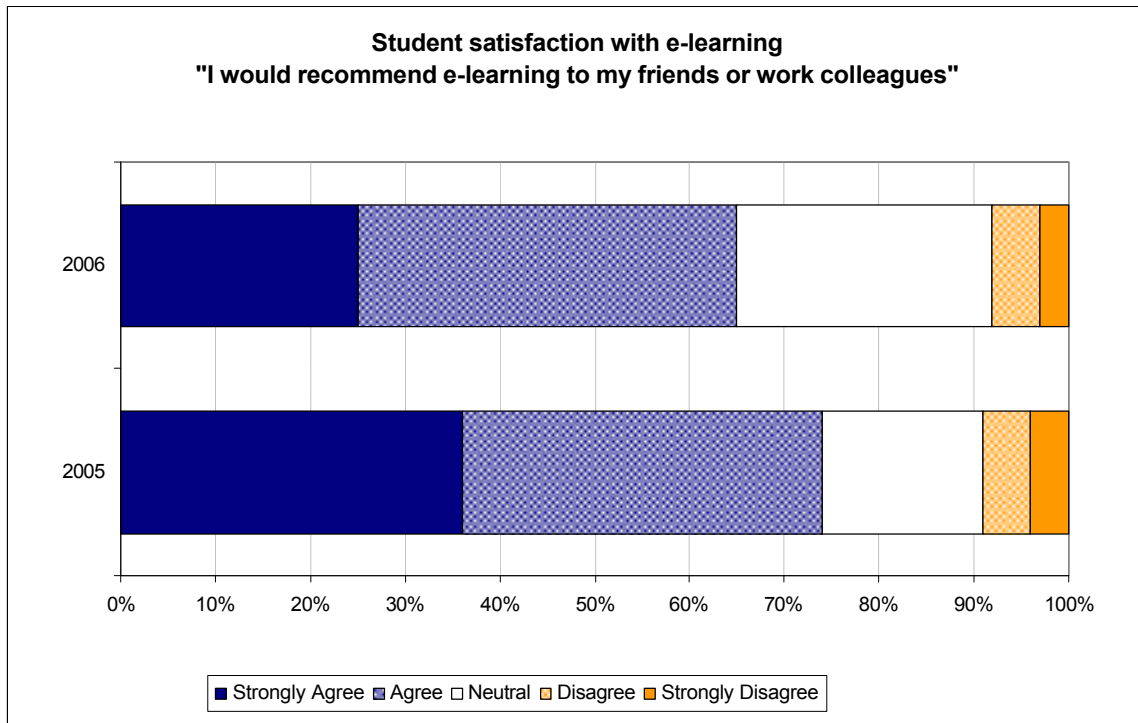
*“E-learning was good as I could choose the time, place and speed of learning.”*

Students also recognised that e-business services offered by their training provider offered flexibility in enrolment and more efficient communication with providers and ease of access to services.

**Indicator 6 - Client satisfaction with e-learning experiences in VTE**

Client satisfaction can be measured in a number of ways, and the results against Indicators 3, 4 and 5 illustrate to some degree the level of satisfaction of VTE clients with e-learning activities. The baseline surveys asked a number of questions related to client satisfaction, the results of which are included in Appendix 2. However, one effective way of measuring overall client satisfaction is to assess the extent to which clients would recommend e-learning to their peers.

In 2006, although the figures are slightly down on the 2005 results, 65% of VTE students surveyed said that they would recommend e-learning to their friends or work colleagues, with 25% saying they would strongly recommend e-learning. Less than 10% said they would not recommend e-learning to their peers.



The qualitative responses of VTE students to e-learning back up these results, with many students saying that their e-learning experience was not only convenient but fun. The use of technology in delivery of vocational and technical education is for many students an

engaging way of learning that increases their enjoyment of (56%) and capacity for (59%) learning.

*“I did a Cert III in Financial Services last year through e-learning and this year I am continuing with Cert IV. It is fun, convenient, hassle-free and most of all I can take my studies with me even if I go on holidays. I am married and have a little kid and never thought that I would have the opportunity to study. But thanks to new learning systems I am now able to study conveniently and fulfil my aims.”*

*“It was convenient because I work full-time and study part-time. It greatly boosted my confidence with computers and technology. I think it is a complement to 'traditional' learning in the classroom and interaction with teachers and other students.”*

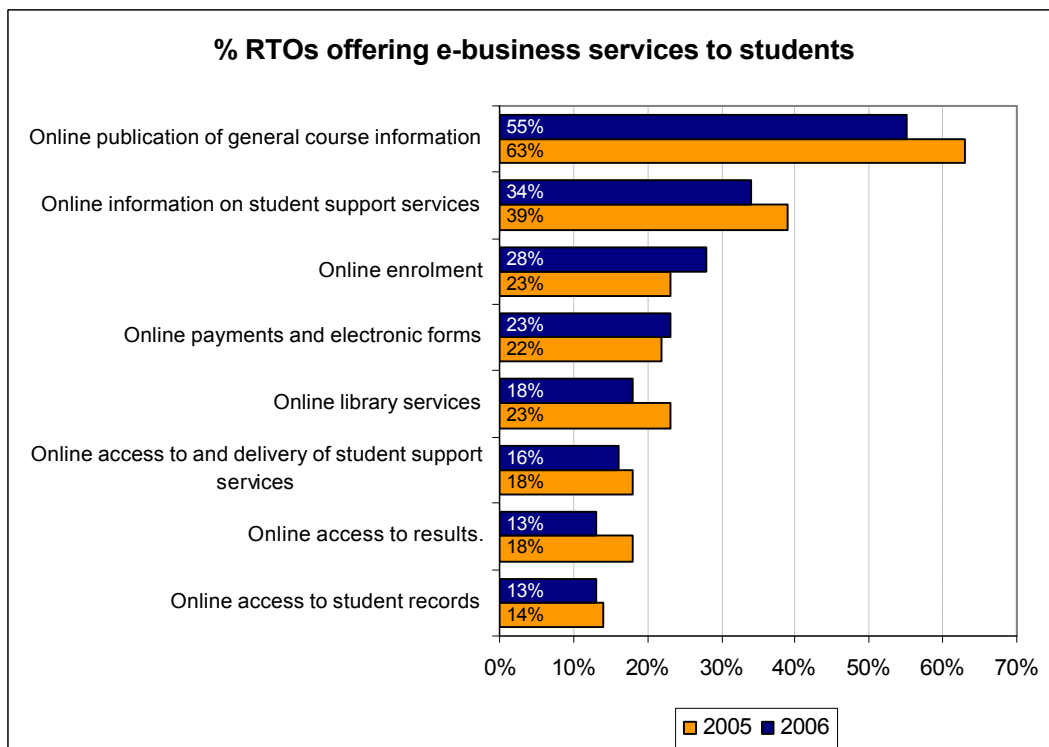
## Uptake of e-business

There are three indicators of the uptake and impact of e-business in the VTE system. The 2005 baseline surveys of RTOs and VTE clients (ie VTE students and employers with employees undertaking accredited training) indicated that there was a solid level of uptake of some forms of e-business and online provision of information, and that even though VTE clients may not have used e-business services they were supportive of e-business as a means of efficiently delivering VTE information and support services. The results of the 2006 survey of VTE students are broadly consistent with these findings.

### **Indicator 7 - % of VTE providers offering e-business client, support and administrative services**

Sixty-two percent of all RTOs report that they deliver some e-business services to VTE students. This is somewhat lower than the 68% response in 2005, and (as noted earlier with respect to indicators that present an outcome as a % of RTOs) is likely to be more a reflection of the expanded reach of the 2006 RTO survey which has a greater representation of 'smaller' RTOs who are less advanced in the uptake of e-learning and e-business.

Taking this factor into account the reported provision of e-business services to VTE students is broadly consistent with the findings from 2005, with the proportion of RTOs offering e-business services in 2006 around two to six percent lower than in 2005. The most common form of e-business service was online publication of general course information and relevant policies, regulations and strategies, with 55% of RTOs making this information available to their students. Online information on student support services is made available to students by 34% of RTOs. Other forms of e-business are less frequently offered by RTOs, as shown in the following chart.



However, given the profile of the 2006 responses, the increase in the proportion of RTOs reporting that they provide online student enrolment (up from 23% to 28%) suggests that there has been a real increase in the provision of this service to students.

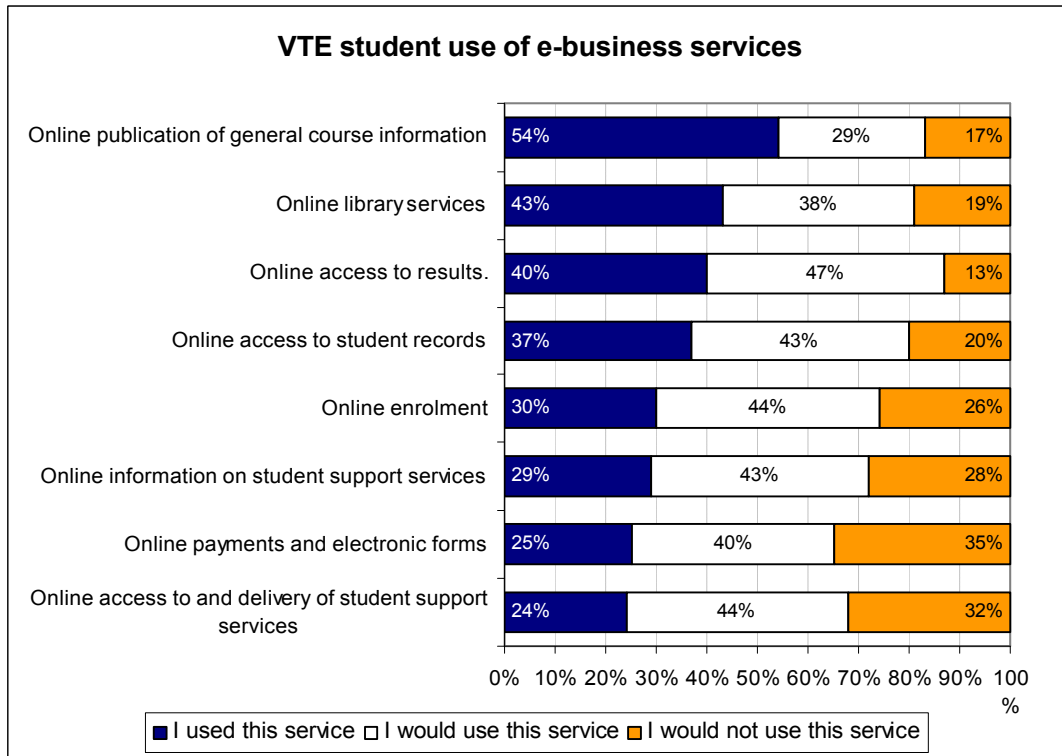
Responses vary by provider type as shown in the following table.

<b>E-business service (2005 figure in brackets)</b>	<b>TAFE</b>	<b>ACE</b>	<b>School</b>	<b>Other*</b>
Online publication of general course information and relevant policies, regulations and strategies	97% (96%)	62% (48%)	59% (65%)	49% (58%)
Online information on student support services	91% (91%)	30% (24%)	55% (41%)	28% (32%)
Online enrolment	57% (33%)	24% (28%)	18% (6%)	26% (24%)
Online payments and electronic forms	51% (39%)	15% (16%)	4% (14%)	23% (21%)
Online library services	94% (93%)	6% (4%)	48% (41%)	10% (10%)
Online access to and delivery of student support services	51% (43%)	15% (12%)	7% (12%)	13% (15%)
Online access to results.	66% (48%)	3% (12%)	4% (20%)	10% (13%)
Online access to student records	66% (41%)	5% (8%)	7% (18%)	9% (9%)

\* 'Other' includes private, commercial, enterprise, industry and all other provider types.

### **Indicator 8 - % of VTE clients using e-business client, support and administrative services offered by providers**

Fifty-four percent of VTE students access general course information online and other online information about their training provider. Forty-three percent use online library services, 40% access results online, and 37% access online student records. The vast majority of these are TAFE students. Other e-business services offered by RTOs, where they are offered, are used by a smaller proportion of VTE students.



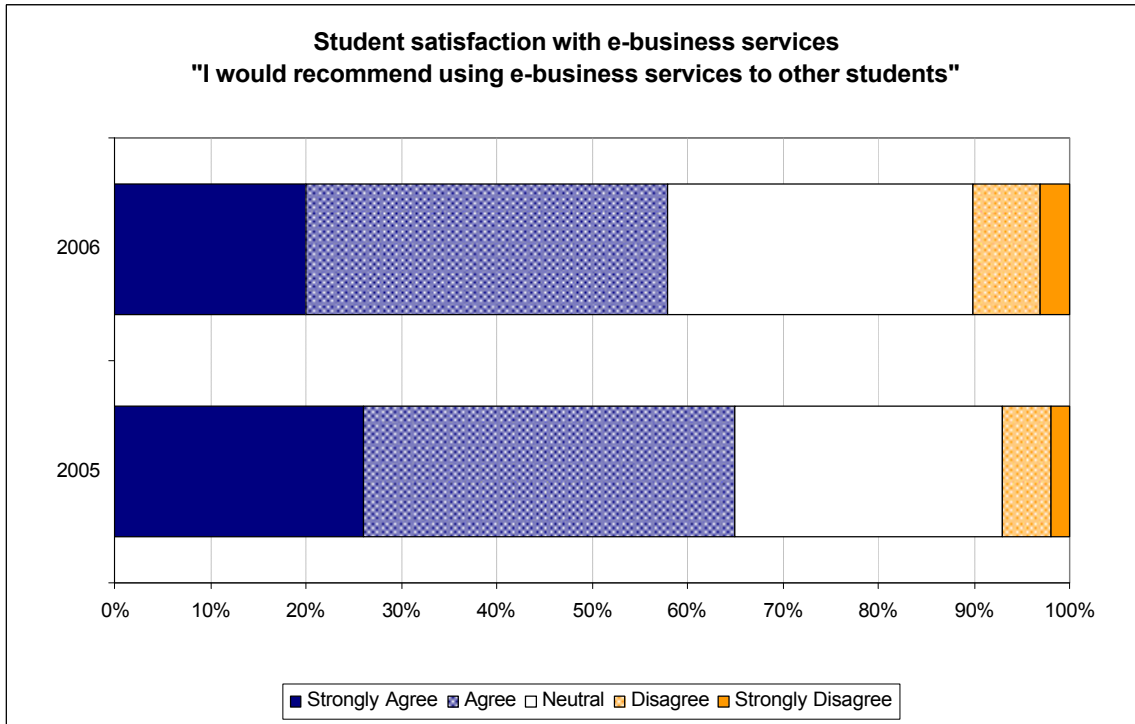
However, around 40% of VTE students said that they were not currently using a range of e-business services that they would use if these were available from the training provider. This indicates an unmet client demand for use of e-business services, although in some cases it is known that the e-business services students wanted and would use, are provided by their training organisation, the student is just not aware of them.

Overall 62% of VTE students reported that they used at least one of the listed e-business services (compared with 81% in 2005).

**Indicator 9 - Client satisfaction with e-business experiences in VTE**

Client satisfaction can be measured in a number of ways, and the E-learning Benchmarking surveys asked several questions related to client satisfaction with e-business services, the results of which are included in Appendix 2.

Fifty-eight percent of VTE students said that they would recommend e-business to other students (compared with 65% in 2005). Around 50% of students said that they found it easy to access e-business services and that these were a more efficient means of communicating with their training provider than alternative methods (eg telephone, personal attendance or written communication).

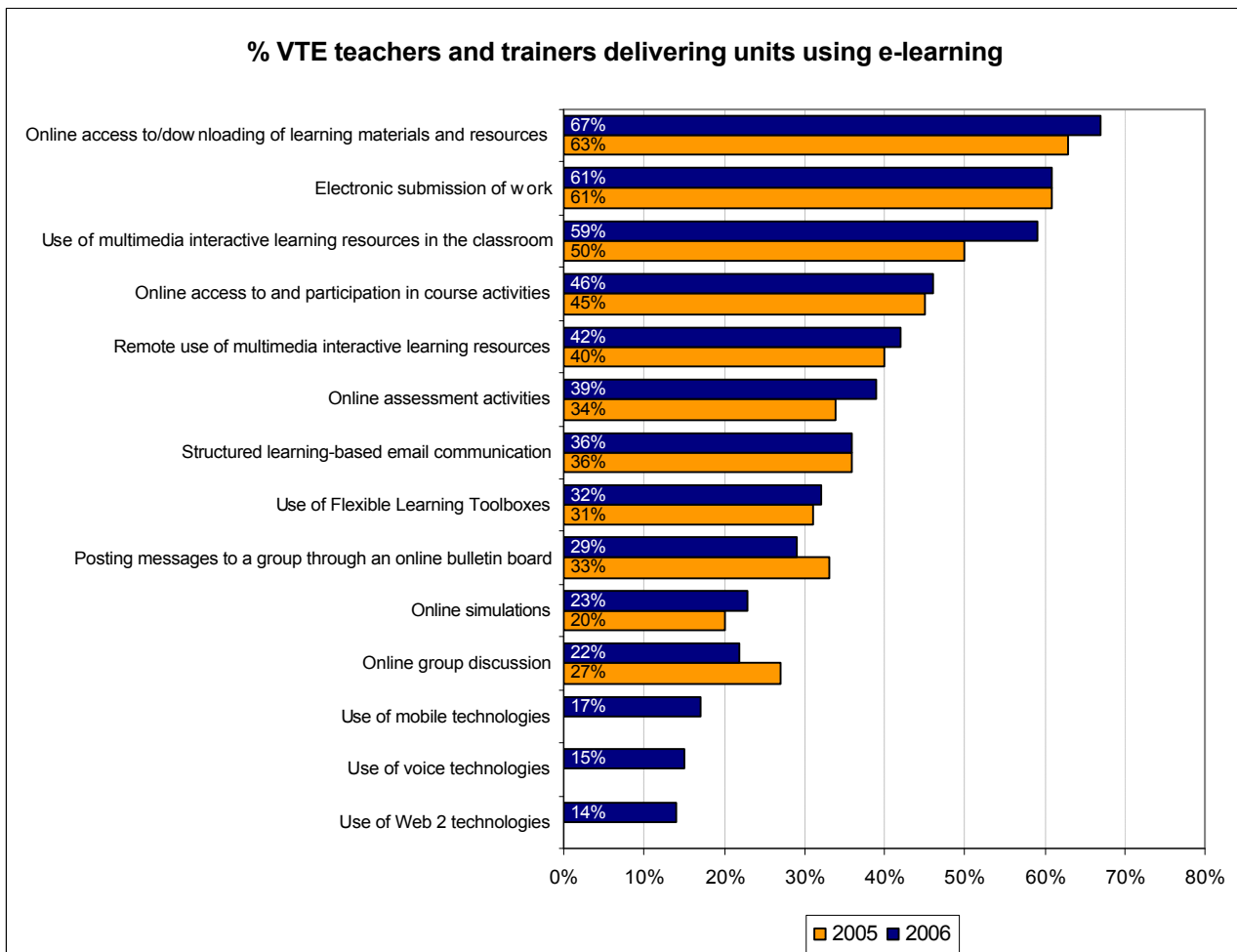


## Teaching and training practices

The 2006 E-learning Benchmarking surveys of VTE teachers and trainers indicate that VTE teachers and trainers are using e-learning in more and different ways than in the past, and that they are generally positive about the impact of e-learning and their ability to access quality e-learning resources. There are three indicators related to the uptake, use and outcomes of e-learning on VTE teachers and trainers.

### **Indicator 10 - % of teachers/trainers delivering units that use e-learning**

Although only 68% of VTE teachers and trainers initially indicated that they delivered VTE units that used e-learning, when asked about the way in which they used ICT in their teaching and learning activities, 85% said they used at least one of the activities covered by the survey’s definition of e-learning. The discrepancy between the two responses, as was the case in 2005 when the responses were 60% and 86% respectively, reflects a misunderstanding about what e-learning is, which is not clarified until the teacher is asked to provide more information about what they do, some of which does involve e-learning.



Using the broader definition from the survey, 85% of respondents deliver VTE units that use e-learning. And although this figure is as it was in 2005, the growth in the uptake of e-learning is being primarily driven by those teachers that were undertaking e-learning in 2005 now doing more e-learning with more of their students using more and new e-learning applications.

Some of the apparent increases in the use of e-learning methods are not statistically significant. However, one point of note is the jump in the proportion of teachers using

multimedia interactive resources in the classroom from 50% to 59%. This reflects a greater use of blended learning techniques that use technology as part of an overall learning program. The other notable change from 2005 is the use of online assessment activities, up from 34% to 39% in 2006.

Analysis of the response to the three new questions in the 2006 survey about the use of mobile, voice and Web 2 technologies for learning shows that the teachers using these technologies as part of their teaching and learning program are generally teachers that are also using at least three or four other e-learning applications.

### **Indicator 11 - % of VTE teachers/trainers who through e-learning have changed teaching practices in the design, development and delivery of units**

VTE teachers and trainers have clearly changed their teaching practices over recent years through the use of technology. Consistent with the findings

- 82% of VTE teachers/trainers said they ‘now use technology to draw on a wider pool of teaching resources’
- 84% of VTE teachers/trainers said they ‘now encourage students to draw on more web- and computer-based resources’
- 59% of VTE teachers/trainers said that ‘through technology I am able to create more individualised learning for my students’.

### **Indicator 12 - % of VTE teachers/trainers who believe increased access to e-learning resources has improved teaching and learning outcomes**

VTE teachers and trainers believe that increased access to e-learning resources has improved teaching and learning outcomes.

- 80% of VTE teachers/trainers said they ‘now have access to more learning resources than I did two years ago’
- 70% of VTE teachers/trainers said they ‘now use more e-learning resources than I did two years ago’
- 59% of VTE teachers/trainers said that ‘the e-learning resources I can now access are of high quality’
- 59% of VTE teachers/trainers said that ‘the e-learning resources I can now access have improved learning outcomes for my students’
- 59% of VTE teachers/trainers said that ‘the e-learning resources I can now access have improved my teaching practices’.

The qualitative feedback from teachers indicates (not surprisingly) that many of those who use e-learning think it is fantastic and a significant enhancement to their teaching practices and an aid to improved student learning outcomes. Teachers say that they think e-learning is more engaging of the learner, that it encourages learners to ‘go beyond’ the core learning tasks that they are presented with, and that it promotes research skills that are valuable for learners. Teachers also report that e-learning is seen as flexible and fun for both student and teacher alike.

*“I use e-learning to create more interesting lessons and vary my lesson presentation to students. I do this so they don't get bored using handouts all the time. This year I am using it more extensively as I have been to some PD days and been introduced to lots of new ideas. Otherwise I don't think I would be using it as much. My students are benefiting ... being more creative, being more stimulated and learning new things about technology.”*

*“My students benefit from e-learning by accessing quality learning materials, via which they can see images, videoettes, etc. E-learning also encourages interaction between students via a range of communication devices.”*

*“I have only used e-learning in an experimental way – podcasting with two acquired brain injury students, use of Internet during classes, setting up a community of practice using bulletin board. My students enjoyed it and found podcasting suited them because they could replay it over and over again.”*

For those teachers that are not using e-learning, or are using it but are less enthusiastic about it, there are a number of key challenges. The first relates to technology – access to information technology (IT) infrastructure, access to the Internet and broadband services, access to computer labs and provision of a reliable IT network. The second major issue is time – in that there is ‘not enough’ time to develop programs that include e-learning or develop the skills needed to implement e-learning. This point was made strongly by trainers from small RTOs and sessional teachers from larger RTOs.

*“I am very careful in using e-learning tools as this can impede flexibility, especially when students don’t have access to a powerful computer. I am cautious in using these tools because we tend to overuse them and become reliant on them. I don’t think they are the most productive tools to use.”*

*“We would use e-learning extensively and our students would benefit enormously... but none of us have time.”*

Teachers using e-learning also indicated that they thought students who engaged with e-learning had greater success with their studies, and that e-learning was often a means of motivating students to learn. It was also noted that in turn successful e-learning needs students to be motivated.

## **Additional analysis**

### **E-learning in traditional trades (preliminary)**

The Framework's 2006 Research and Policy Advice Project is examining the use of e-learning in 'traditional trades' (eg building and construction, metals, manufacturing, automotive). A qualitative research project is being undertaken to document case studies that illustrate the different uses of e-learning among different providers, curriculum areas and aspects of the teaching and learning process (eg skills development, knowledge transfer, assessment).

The 2006 E-learning Benchmarking Project also captured some quantitative information on the uptake of e-learning in traditional trades by asking supplementary questions of RTOs and asking that 10% of all students and teachers sampled come from the traditional trades.

Thirty-one percent of RTOs indicated that they delivered accredited training in these traditional areas. This included TAFE institutes, group training schemes and a number of other small to mid-sized industry-based training providers. Of these, 43% (or 12% of all RTOs) report that they use e-learning in their delivery of training to students in the traditional trades.

The way in which e-learning is used at an organisational level is not known, but 14% of teachers participating in the national benchmarking surveys reported their main field of teaching as in Building and Construction, Engineering and Technical and Metals. Of these 97 teachers, 71% indicated that they used at least one e-learning application in their training delivery (compared with 85% for all teachers), with some using a large number of applications. The range of methods used varied with 55% using multimedia interactive resources in the classroom, 48% accessing and downloading learning materials and resources, and 30% online assessment activities. Around 9% said that they were using mobile, voice and Web 2 technologies.

*"Using project planning of 'virtual projects'. Planning to use digital film-making."*

Fifty-three percent of these teachers indicate that they now access and use more e-learning resources than they did two years ago, and 68% encourage their students to draw on more web- and computer-based resources. However, many of the qualitative comments from these teachers express a high degree of caution about the applicability of e-learning to their students.

A more detailed analysis of teacher and student use of e-learning in traditional trades will be produced.

### **E-learning in delivery of non-accredited training (preliminary)**

In 2005, the Framework's E-learning Benchmarking Project conducted a separate survey of e-learning in government-funded non-accredited training. The findings of this small survey suggested that while the use of e-learning was not widespread, although e-learning was being used in association with some computer and ICT training, the responses from students were very positive. Increased skills and confidence in using computers and the transfer of these skills to increased everyday use of computers was noted.

The 2006 E-learning Benchmarking Project has incorporated the capture of information on delivery of government-funded non-accredited training into the core survey. Preliminary results indicate that 15% of RTOs also deliver non-accredited training, and 20% of responding teachers deliver some non-accredited vocational and technical education (often in addition to delivery of accredited training).

Of these teachers, 83% indicated that they used e-learning in some way, which is consistent with the overall teacher findings. The main uses of e-learning are in the

classroom, through encouraging students to access learning materials and resources online, via electronic submission of work and online assessment activities.

*“I use structured learning based email communication, directed Internet research and online group discussions and forums to improve reading, writing and comprehension skills with NESB and native speaker learners. I use it as the basis of most of my teaching. My students have greatly benefited, both in terms of the skill areas mentioned and improvement in computer use skills.”*

A more detailed analysis of teacher and student use of e-learning in non-accredited training will be produced.

### **Further analysis**

This report presents the national responses to the 2006 E-learning Benchmarking surveys. Given the volume and type of data captured, the scope exists for a substantial amount of more detailed analysis to be undertaken to more fully explore the trends in the uptake use and impact of e-learning.

During October and November 2006 the Research and Policy Advice Project will progressively release a series of short reports that present further analysis of the benchmarking data from a range of different perspectives. These will include:

- analysis by State and Territory
- analysis by different provider types (eg TAFE, community, school, other)
- analysis of student and teacher responses by a range of demographic characteristics (eg age, gender, metropolitan vs regional/rural, study area).

Additional analysis may be undertaken as areas for more detailed examination arise. This could include analysis of the types of e-learning undertaken by VTE teachers and trainers, to identify if there are common sets of e-learning methods being used by different groups of teachers.

At an appropriate time there will also be additional reporting of benchmarking activity undertaken through other 2006 Framework projects (eg the Industry Engagement Project, the Indigenous Engagement Project).

## Conclusions

The 2006 E-learning Benchmarking Project shows increasing use of e-learning in VTE activity. From levels estimated to be around three to four percent in 2003-04 and six to eight percent in the 2005 national surveys, the 2006 surveys indicate that 17% of VTE activity now involves e-learning. The doubling of the uptake of e-learning in the space of 12 months is indicative of e-learning becoming more embedded in the range of training delivery options offered by training providers and the approaches taken by VTE teachers and trainers.

However, the 2006 E-learning Benchmarking surveys show that this level of uptake is not consistent across the VTE system. Although around 50% of RTOs are delivering some form of e-learning, 50% are not. And 70% of small training providers report that they do not deliver any e-learning.

The growth in the uptake of e-learning in the last year has primarily come from those RTOs that were previously delivering e-learning now doing more. Within those RTOs, teachers that were previously 'dabbling' in e-learning now have more confidence and a greater comfort level with new technologies and are using more e-learning applications with more of their students. Where in the past a teacher may have tried the use of interactive multimedia resources in the classroom, for many this has now extended to included use of online discussion forums, online assessment activities and other e-learning methods.

The findings suggest a polarisation among RTOs in the use of e-learning. TAFE institutes are now reporting greater use of e-learning, with many now reporting that between 20% and 30% of activity now uses e-learning. Sixteen percent of small providers are using e-learning extensively, with more than 50% of their training activity involving e-learning. But 70% of small providers, mainly private and industry-based training organisations, have not yet adopted e-learning. For some, e-learning is not seen as relevant to their training or their clients, and the motivation to explore new training options is not strong. What is unknown is how they will respond if their client base starts to demand the flexibility offered through technology.

The positive response of students to e-learning found in the results of the 2005 surveys has been reinforced through the 2006 E-learning Benchmarking surveys. Sixty percent of students said that the use of e-learning in their course had increased their confidence and skills in using computers and technology, even though many also said that they were skilled and confident before they started their VTE course.

Students' increased confidence and skills in using technology has again flowed through to positive sentiments about the impact of e-learning on their current and future job prospects. Nearly two-thirds of students, for whom employment was a factor in their education and training, reported that they felt they now had increased prospects of getting more responsibility in their current job, a promotion or getting a better job.

The flexibility and convenience offered by e-learning continues to be a strong feeling among students, especially with their ability to study at a time and place that can be integrated into their home and work life. Regional and remote students, students working full-time, home-based parents and people with disabilities all say that e-learning is giving them flexibility to access training that in some cases they would not otherwise have been able to do.

As in 2005, 85% of teachers and trainers indicated that they used some form of e-learning in their training delivery, most commonly through encouraging students to access and download learning materials and resources from the Internet or local learning management systems or electronic submission of work. However, the 2006 surveys have shown that teachers are extending their application of e-learning into more aspects of their teaching, and believe that e-learning improves both their teaching practices and learning outcomes for their students.

Those teachers and trainers that are engaged with e-learning are convinced of its value to them and their students. For some that have not taken up e-learning or have only done a little e-learning, access to reliable technology and time to gain the skills and develop an e-learning program are still a challenge.

Whilst the provision of e-business services by RTOs has not changed significantly, there do appear to be more providers offering online enrolment. The range of services offered by RTOs does vary substantially though between provider types, with TAFE institutes having more e-business services available to their student and employer clients than most community, private and industry providers.

Student access of e-business services remains modest (62% of VTE students reported that they used at least one of the listed e-business services), but around 40% of students said that they would use more e-business services if they knew these were available from their training provider.

The three E-learning Benchmarking surveys undertaken in 2006 provide a more solid base of information to support decisions about the current uptake and impact of e-learning, and future opportunities to support and enhance flexibility in the VTE system. Additional analysis of the benchmarking will now be undertaken to provide further insights into the patterns of use across different States and Territories and across the VTE system.

## Appendix 1: Registered training organisations

The RTO survey aimed to capture information from organisations delivering accredited VTE on the uptake of e-learning and the provision of e-business services. Questions were also asked about the delivery of non-accredited training.

### Sampling frame and methodology

The one-page survey could be completed online, as an electronic form, or as a print survey to be returned via mail or fax. All four response options were used by respondents.

The invitation to participate in the survey was made through an email to the Chief Executive Officer (or equivalent) of each RTO. Prizes of a Flexible Learning Toolbox or book vouchers were offered to encourage RTOs to complete the survey. CEOs and Directors of TAFE institutes received personalised emails as the sampling requirements for completion of the accompanying student and teacher surveys were unique to each TAFE.

The population for the survey included all current RTOs. A full list of 4,236 RTOs was obtained from the National Training Information Service (NTIS). In providing this list the Department of Education, Science and Training (DEST) advised that there may be some inaccuracies in the data contained, in particular the data related to provider classification and contact details.

The following table shows the number of responses from RTOs by provider type in each State and Territory (11% overall). It should be noted that the NTIS classification of provider type is not consistently interpreted or recorded in NTIS by different states and territories

State/Territory	TAFE	ACE	School	Other*	Total
NSW	9	22	3	70	104
VIC	13	29	5	119	166
QLD <sup>3</sup>	4	3	9	37	53
WA	6	-	2	58	66
SA	2	6	2	39	49
TAS	1	4	6	12	23
NT	-	-	-	7	7
ACT	1	1	3	13	18
<b>Total</b>	<b>36</b>	<b>65</b>	<b>30</b>	<b>355</b>	<b>487<sup>4</sup></b>

\* 'Other' includes private, commercial, enterprise, industry and all other provider types.

### Survey questions

The survey contained four questions related to the number of accredited and non-accredited VTE unit enrolments and the proportion of these that are estimated to involve e-learning. RTOs were also asked 'Yes/No' questions related to the type of e-learning involved and the provision of e-business services to VTE students.

An additional question in 2006 asked about the use of e-learning in organisations that delivered training in the areas of 'traditional trades' (eg building and construction, metals, manufacturing, automotive)

<sup>3</sup> A 2006 initiative in Queensland to encourage greater participation in e-learning benchmarking is not yet complete. Additional information from Queensland RTOs is expected and will be published in the E-learning Benchmarking Projects' analysis by state.

<sup>4</sup> One completed survey was provided anonymously.

Demographic information was captured to enable later more detailed analysis of responses.

### **Summary results**

Four hundred and eight-seven responses were received from RTOs. To address the inconsistencies in the NTIS recording of 'provider type', all responses were reclassified to the appropriate provider group. The results of these surveys are shown below, inserted in a copy of the survey form.

		2006	2005 <sup>5</sup>
Q1	How many VTE unit enrolments were there at your organisation in the past 12 months?		
	What proportion of these unit enrolments do you estimate were enrolments in units that involved e-learning?	17%	6-8%
	Has your organisation delivered government-funded non-accredited training in the past 12 months?	15%	-
Q2	Did any of these units use e-learning in the following ways?		
	a. Use of multimedia interactive learning resources in the classroom (eg web-based or CD-ROM learning resources, Flexible Learning Toolboxes).	37%	46%
	b. Remote use of multimedia interactive learning resources (eg web-based or CD-ROM learning resources, Flexible Learning Toolboxes).	32%	39%
	c. Use of Flexible Learning Toolboxes.	22%	31%
	d. Use of State/Territory-based e-learning resources.	15%	22%
	e. Electronic communication between students or between teachers and students (other than communication on a single learning issue).	36%	46%
Q3	Does your organisation offer the following e-business services to individual VTE students?		
	a. Online publication of general course information and relevant policies, regulations and strategies	55%	63%
	b. Online enrolment	28%	23%
	c. Online payments and electronic forms	23%	22%
	d. Online access to student records	13%	14%
	e. Online library services	18%	23%
	f. Online information on student support services	34%	39%
	g. Online access to and delivery of student support services	16%	18%
	h. Online access to results.	13%	18%
Q4	Does your organisation offer the following e-business services to employers? (if appropriate)		
	a. Online publication of general course information and relevant policies, regulations and strategies	64%	63%
	b. Online enrolment	27%	22%
	c. Online payments and electronic forms	26%	23%
Q5	Does your organisation deliver training using e-learning in the 'traditional trades'?		
	▪ Don't deliver training in 'traditional trades'	69%	-
	▪ Deliver training in 'traditional trades' but doesn't involve e-learning	18%	-
	▪ Deliver training in 'traditional trades' using e-learning	13%	-

<sup>5</sup> Comparison between the 2005 and 2006 figures should take into account two key issues. The first is statistical variation associated with any sampling process, which means that individual differences of +/- four to five percent in Questions 2, 3 and 4 are not statistically significant. The estimate of the overall uptake of e-learning in VTE activity is calculated using different methods.

## Appendix 2: VTE students

The survey of VTE students aimed to capture information on their e-learning experience and their training provider's e-business services.

### Sampling frame and methodology

The three-page VTE student survey could be completed online, as an electronic form, or as a print form to be mailed or faxed.

The population for the survey included all VTE students, including those in TAFE institutes, private, enterprise and community RTOs. Although the survey targeted issues of e-learning, all VTE students were in scope.

As there is no central list of VTE students, participants were recruited through RTOs. An email was sent to the Chief Executive Officer (or equivalent) of each RTO asking them to forward information on the survey and its various response options to a specified number of students. These were to be selected randomly, so as not to bias the sample toward those known to be undertaking units involving e-learning. To support the capture of information on the use of e-learning in traditional trades, RTOs were asked to send (if relevant) at least 10% of the requests for participation to students engaged in traditional trades. Prizes (AUD\$150 book vouchers) were offered to encourage students to complete the survey.

Requests were sent to RTOs seeking circulation of the survey to a total of up to 20,000 VTE students.

The sample requested from RTOs Australia-wide was roughly proportional to the Australian population (that is, New South Wales 34%, Victoria 25%, Queensland 19%, Western Australia, 10%, South Australia 8%, Tasmania 2.4%, Northern Territory 1.0%, Australian Capital Territory 1.6%). An average response rate of around 5% was assumed.

TAFE institutes were asked to forward the URL to between 75 and 200 students, depending on the total sample required in each State and Territory and the number of TAFE institutes in each jurisdiction. Non-TAFE RTOs were asked to forward the information on the survey to six students.

The approach of asking all non-TAFE RTOs to invite student participation in the survey, and to keep this at only six per RTO resulted in a higher level of response from non-TAFE RTOs in 2006 than in 2005. The overall average response rate is around three percent.

The response rates varied across jurisdictions and provider types, reflecting the methodological impact of relying on RTOs as the mechanism for distributing the survey to students. As in 2005, some smaller RTOs indicated that they were wither unwilling to forward the survey to their students or indicated that they would forward the survey but anticipated minimal response as they did not deliver VTE units involving e-learning. There were also some issues with regard to the timing of the circulation of the survey just prior to or after a term break. The actual number of responses from VTE students by State and Territory and provider type is shown in the following tables.

State/Territory	NSW	Vic	Qld	WA	SA	Tas	NT	ACT	Total
Responses (no.)	316	252	114	55	100	9	-	7	875*
Responses (%)	36%	29%	13	6%	11%	1%	-	1%	

\* 22 students did not identify in which state or territory they lived.

Provider type	TAFE	ACE	School	Other	Total
Responses (no.)	655	38	21	79	875*
Responses (%)	75%	4%	2%	9%	

\* 82 students did not identify which provider they studied with.

### Survey questions

The survey was targeted at the general VTE student population and RTOs were encouraged to seek responses from different curriculum areas and classes.

The survey contained one scaled introductory question on the level of e-learning involved, four questions with scaled responses and one question on awareness and use of e-business services requiring respondents to select one of three response options. There was one open-ended question on students' e-learning experiences.

The survey captured demographic information on each student related to the name of their training organisation, the unit they were enrolled in, where training was delivered, sex and age, State/Territory, location, employment status, Aboriginal and Torres Strait Island origin, and disability.

The total survey was timed for completion at between five and ten minutes, including demographic questions.

### Summary results

Eight hundred and seventy-five responses were received from students. The results of these surveys are shown below, inserted in a copy of the survey form, 2005 figures are shown in brackets after the 2006 responses.

Q1.	In your opinion, how much e-learning have you had in your course?	A lot 26% (38%)	Some 30% (37%)	A little 26% (19%)	None 17% (6%)	
<p>Please rate your response to each statement below using the following scale: SA – Strongly Agree A – Agree N – Neutral D – Disagree SD – Strongly Disagree NA – Not Applicable</p> <p style="text-align: right;">2006 response (2005 in brackets)</p>						
Q2.	How would you rate the impact of your e-learning experience on your skills and confidence in using information and communications technology?	SA	A	N	D	SD
a.	Before I started my course I was confident in using computers and technology.	37% (42%)	38% (38%)	14% (12%)	7% (4%)	4% (4%)
b.	The e-learning in my course has increased my confidence in using computers and technology.	22% (26%)	39% (41%)	27% (24%)	8% (6%)	4% (3%)
c.	Before I started my course I had good computer skills.	34% (38%)	36% (38%)	18% (13%)	8% (9%)	4% (2%)
d.	The e-learning in my course has increased my ability to use computers and technology.	23% (27%)	38% (44%)	27% (20%)	8% (5%)	4% (4%)
e.	The e-learning in my course has led me to use computers and technology more in other areas of my life.	22% (22%)	29% (32%)	33% (29%)	16% (12%)	0% (5%)
Q3.	How would you rate the impact of your e-learning experience on your employment opportunities and outcomes?	SA	A	N	D	SD
a.	The e-learning in my course helped me to get a better job, get a promotion, or get more responsibility in my job.	9% (12%)	19% (26%)	42% (44%)	22% (13%)	8% (5%)

b. I think the e-learning in my course will in the future help me to get a better job, get a promotion, or get more responsibility in my job.	19% (28%)	42% (45%)	26% (19%)	9% (5%)	4% (3%)
c. The e-learning in my course helps me to do my job better.	17% (21%)	33% (37%)	33% (31%)	12% (7%)	5% (4%)
d. I enjoy my work more because of the e-learning in my course.	13% (16%)	25% (29%)	40% (43%)	16% (7%)	6% (5%)

Q4. How would you rate the following aspects of your e-learning experience?	SA	A	N	D	SD
a. The e-learning components of my course enabled me to choose when I started and finished my course (eg time of year)?	14% (27%)	25% (34%)	32% (20%)	22% (13%)	7% (6%)
b. The e-learning components of my course enabled me to choose when I did my study (eg time of day)?	18% (42%)	36% (38%)	26% (12%)	16% (6%)	4% (2%)
c. The e-learning components of my course enabled me to choose where I did my study (eg home, workplace, campus)?	20% (41%)	40% (40%)	24% (11%)	12% (6%)	4% (2%)
d. The e-learning components of my course enabled me to choose what I studied (eg a particular unit, elective, module or course)?	14% (26%)	28% (38%)	30% (19%)	22% (12%)	6% (5%)
e. The e-learning components of my course enabled me to choose how I undertook learning activities (eg face to face, using technology)?	14% (24%)	34% (38%)	30% (20%)	17% (12%)	5% (6%)
f. E-learning increased my capacity for learning.	17% (22%)	41% (43%)	29% (23%)	9% (8%)	4% (4%)
g. E-learning increased my enjoyment of learning.	17% (23%)	38% (39%)	29% (25%)	11% (7%)	5% (6%)
h. Access to e-learning was a factor in choosing my training organisation.	12% -	26% -	33% -	20% -	9% -
i. I would recommend e-learning to my friends or work colleagues.	25% (36%)	40% (38%)	27% (17%)	5% (5%)	3% (4%)

Q5. In the last 12 months have you used, or been aware of, any of the following e-business services offered by your training organisation?	Service availability			Service use		
	I know this service is available	I know this service is not available	I don't know if this service is available	I used this service	I would use this service if available	I would not use this service
a. Online publication of general course information and relevant policies, regulations and strategies	64%	5%	31%	54%	29%	17%
b. Online enrolment	51%	9%	40%	30%	44%	26%
c. Online payments and electronic forms	45%	10%	45%	25%	40%	35%
d. Online access to student records	44%	9%	47%	37%	43%	20%
e. Online library services	55%	7%	38%	43%	38%	19%
f. Online information on student support services	48%	9%	43%	29%	43%	28%
g. Online access to and delivery of student support services	35%	10%	55%	24%	45%	31%
h. Online access to results.	45%	12%	43%	40%	47%	13%

Q6. How would you rate the e-business services offered by your training organisation?	SA	A	N	D	SD
a. The e-business services enabled me to choose what time of year I enrolled in my course.	15% (21%)	24% (32%)	37% (30%)	18% (13%)	6% (4%)
b. I found it easy to access e-business services.	15% (17%)	32% (44%)	38% (29%)	11% (7%)	4% (3%)
c. Using e-business services was more efficient than	17%	29%	37%	11%	6%

	using the telephone, personal attendance or written communication.	(22%)	(34%)	(29%)	(12%)	(3%)
d.	I would recommend using e-business services to other students.	20%	38%	32%	7%	3%
		(26%)	(39%)	(28%)	(5%)	(2%)
Q7	Please tell us a little about your e-learning experience. How did it help you? Was it fun? Was it more convenient?					

## Appendix 3: VTE teachers and trainers

The survey of VTE teachers and trainers delivering VTE units aimed to capture information on their e-learning experience, access to e-learning resources and the impact of technology on teaching practices.

### Sampling frame and methodology

The three-page VTE teacher and trainer survey could be completed online, as an electronic form, or as a print form to be mailed or faxed.

The population for the survey included all VTE teachers and trainers, including teachers in TAFE institutes as well as trainers in private, enterprise and community RTOs. Although the survey targeted issues of e-learning, all VTE teachers and trainers were in scope.

As there is no central list of teachers and trainers, participants were recruited through RTOs. An email was sent to the Chief Executive Officer (or equivalent) of each RTO asking them to forward information on the survey and its various response options to a specified number of teachers or trainers. These were to be selected randomly, so as not to bias the sample toward those teachers and trainers known to be delivering units involving a high degree of

e-learning. To support the capture of information on the use of e-learning in traditional trades, RTOs were asked to send (if relevant) at least 10% of the requests for participation to teachers and trainers engaged in traditional trades. Prizes (AUD\$150 book vouchers) were offered to encourage teachers and trainers to complete the survey.

Requests were sent to RTOs seeking circulation of the survey to a total of up to 12,000 VTE teachers and trainers.

The sample requested from RTOs Australia-wide was roughly proportional to the Australian population (that is, New South Wales 34%, Victoria 25%, Queensland 19%, Western Australia, 10%, South Australia 8%, Tasmania 2.4%, Northern Territory 1.0%, Australian Capital Territory 1.6%). An average response rate of 10% was assumed.

TAFE institutes were asked to forward the URL to between 50 and 200 teachers and trainers, depending on the total sample required in each State and Territory and the number of TAFE institutes in each jurisdiction. Non-TAFE RTOs were asked to forward the information on the survey to three teachers and trainers.

The approach of asking all non-TAFE RTOs to invite teacher participation in the survey, and to keep this at only three per RTO resulted in a higher level of response from non-TAFE RTOs in 2006 than in 2005. However, overall the average response rate was only six percent.

The response rates varied across jurisdictions and provider types, reflecting the methodological impact of relying on RTOs as the mechanism for distributing the survey to teachers. As in 2005, some smaller RTOs indicated that they were wither unwilling to forward the survey to their teachers or indicated that they would forward the survey but anticipated minimal response as they did not deliver VTE units involving e-learning. There were also some issues with regard to the timing of the circulation of the survey just prior to or after a term break. The actual number of responses from VTE teachers and trainers by State and Territory and provider type is shown in the following tables.

State/Territory	NSW	Vic	Qld	WA	SA	Tas	NT	ACT	Total
Responses (no.)	201	283	60	79	63	15	8	22	733*
Responses (%)	28%	39%	8%	11%	9%	2%	1%	3%	100%

\* two teachers did not identify in which state or territory they lived.

Provider type	TAFE	ACE	School	Other	Total
Responses (no.)	540	47	32	114	733
Responses (%)	74%	6%	4%	16%	100%

### Survey questions

As the survey was targeted at all VTE teachers and trainers, communication did not overly emphasise the e-learning nature of the survey. RTOs were encouraged to seek responses from different curriculum areas and classes.

The survey contained two introductory questions on the delivery of accredited and non-accredited e-learning, two questions with 'Yes/No' responses on e-learning and two scaled questions on access to e-learning resources and the impact of technology on teaching practices. The 2006 survey included two open-ended questions on teachers' use of e-learning in teaching and training and their access to professional development, resources and technology to support their e-learning.

The survey captured the following demographic information on the teacher/trainer: name of training organisation, main field of teaching, teaching status, State/Territory, sex and age.

The total survey was timed for completion at around ten minutes, including demographic questions.

### Summary results

Seven hundred and thirty-three responses were received from VTE teachers and trainers. The results of these surveys are shown below, inserted in a copy of the survey form.

	2006	2005
Q1 Do you teach accredited and/or non-accredited VTE units?		
▪ Accredited	86%	-
▪ Non-accredited	20%	-
Q2 Have you ever delivered VTE units that use e-learning?	68%	60%
Q3 In the last 12 months did you deliver any VTE units that used e-learning in the following ways?		
a. Online access to and downloading of learning materials and resources	67%	63%
b. Use of multimedia interactive learning resources (eg web-based or CD-ROM learning resources, Flexible Learning Toolboxes) in the classroom	59%	50%
c. Remote use of multimedia interactive learning resources (eg web-based or CD-ROM learning resources, Flexible Learning Toolboxes)	42%	40%
d. Use of Flexible Learning Toolboxes	32%	31%
e. Online access to and participation in course activities	46%	45%
f. Online simulations	23%	20%
g. Online group discussion (synchronous/asynchronous)	22%	27%
h. Posting messages to a group through an online bulletin board	29%	33%
i. Structured learning-based email communication between learners and other learners or between learners and teachers/trainers	36%	36%
j. Electronic submission of work	61%	61%
k. Online assessment activities	39%	34%
l. Use of Web 2 technologies (eg blogs, wikis) for learning	14%	-
m. Use of mobile technologies for learning, assessment or communication	17%	-
n. Use of voice technologies for learning.	15%	-
Q4 Have you accessed VTE units that use e-learning from any of the following sources?		
a. Your organisation's own learning management system	48%	50%

b. State/Territory-based e-learning resources	33%	30%
c. Flexible Learning Toolboxes	42%	43%
d. EdNA Online	18%	13%
e. Other sources external to your training organisation.	43%	46%

*Please rate your response to each statement below using the following scale: SA – Strongly Agree  
A – Agree N – Neutral D – Disagree SD – Strongly Disagree NA – Not Applicable*

		2006 response (2005 in brackets)				
		SA	A	N	D	SD
Q5	How would you rate the impact of increased access to e-learning resources on your teaching and learning outcomes?					
	a. I now have access to more learning resources than I did two years ago.	33% (34%)	47% (46%)	14% (13%)	4% (5%)	2% (2%)
	b. I now use more e-learning resources than I did two years ago.	27% (27%)	44% (42%)	16% (14%)	8% (10%)	5% (7%)
	c. The e-learning resources I can now access are of high quality.	14% (10%)	45% (52%)	31% (32%)	8% (4%)	2% (2%)
	d. The e-learning resources I can now access have improved my teaching practices.	16% (14%)	44% (41%)	31% (35%)	6% (6%)	3% (4%)
	e. The e-learning resources I can now access have improved learning outcomes for my students.	17% (15%)	42% (41%)	34% (35%)	4% (5%)	3% (4%)
Q6	Please tell us a little about your use of e-learning in teaching and training? What is the main way you use e-learning? Do you use e-learning extensively? Have your students benefited from e-learning?					
Q7	How would you rate the impact of technology on your teaching practices?					
	a. I now use technology to draw on a wider pool of teaching resources.	29% (41%)	53% (49%)	11% (6%)	5% (3%)	2% (1%)
	b. I now encourage students to draw on more web- and computer-based resources.	30% (36%)	54% (50%)	14% (9%)	0% (4%)	2% (1%)
	c. Through use of technology I am able to create more individualised learning for my students.	20% (22%)	39% (39%)	30% (28%)	8% (9%)	3% (2%)
	d. Through e-learning I have built more team learning into the unit.	7% (8%)	24% (18%)	48% (47%)	15% (22%)	6% (5%)
	e. I encourage greater interaction between students through the use of technology.	11% (15%)	37% (33%)	32% (30%)	14% (18%)	6% (4%)
Q8	Please tell us a little about your access to professional development, resources and technology to support your use of e-learning.					

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