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Differentiating needs

Customer demand for online training

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Australian *Flexible* **Learning** **Framework**
Supporting Flexible Learning Opportunities

flexiblelearning.net.au

Background

In August 1999, the Australian National Training Authority chief executive officers endorsed the *Australian Flexible Learning Framework for the National Vocational Education and Training System 2000–2004.* The Australian Flexible Learning Framework has been developed by the Flexible Learning Advisory Group and represents a strategic plan for the five-year national project allocation for flexible learning. It is designed to support both accelerated take-up of flexible learning modes and to position Australian vocational education and training as a world leader in applying new technologies to vocational education products and services.

An initiative of the Australian Flexible Learning Framework for the National Vocational Education and Training System 2000–2004

Managed by the Flexible Learning Advisory Group on behalf of the Commonwealth, all states and territories in conjunction with ANTA.

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AUTHORITY

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Key messages

The *Differentiating needs: Customer demand for online training* project identified the following key messages:

◇ Purely online training is unlikely to be the main driver of demand. Good blended delivery, using a mix of face-to-face, online and paper-based distance approaches will be more successful in the marketplace. Blended delivery will mean a paradigm shift from 'teaching' to 'managing individual learning'.

◇ The development of good client relationships and the ability to understand customer needs are crucial for suppliers of online training (only 3% of employers surveyed, who currently do not use online learning technology, would phone a provider to seek information about online training). The main needs of online training customers identified in this study are flexibility, easy-to-use software, hard-copy materials, and a range of modular pricing and service options.

◇ The profile and behaviour of individual purchasers of vocational education and training (VET) are changing. Students are older; increasing numbers are completing modules rather than full courses; learning tends to be purchased 'just in time' for work or career needs; and learners are behaving like consumers—choosing only the elements of the training service they want.

◇ Individual online learners are 'time-poor' and are likely to be studying for work-related reasons. They choose the training they want first and the mode of delivery second. Online training is chosen because it allows them to determine when to study. Online training should be available 'after hours' and during holidays. While this type of delivery can be expensive, costs may be recouped through modular price structures that range from basic prices for mainstream services, to premium prices for high levels of availability and support.

◇ Employers and individual learner groups—identified as career changers, skill improvers and self-employed—want online training in short, simple, immediately available and easy-to-manage chunks. These chunks (or micro-segments) may be as short as one hour in duration, adapted to individual needs and should articulate into accredited modules and courses.

◇ All customer groups felt that training providers should provide after-sales support that includes help with software installation and ongoing advice.

◇ One of the largest potential market segments is separate packaging of the theory elements of New Apprenticeships for presentation online. Fully online delivery is not suited to most vocational courses (or younger students); however, online delivery of learning materials could expand the online training market with a minimal change in delivery paradigms.

◇ The provision of online recognition of current competencies (RCC) attracted a high level of interest with focus groups. Online recognition of current competencies would fast-track the completion of qualifications and provide an introduction to online training that results in good immediate outcomes, thus establishing a large customer base with a positive online experience.

◇ One of the most commonly mentioned opportunities for online training is compliance training. A third of employers in this research identified changing regulations as a useful area for online training.

◇ Group learning is a largely untapped method of online learning. Study groups (which can be individuals or employees) increase the number of online training courses sold and provide the social interaction often lacking in the online environment.

✧ Online learners showed a high level of dissatisfaction with their online training, with younger students expressing the most dissatisfaction. Perceptions of quality of the online training product need to be urgently addressed so that the early adopters provide a positive message to the next generation of online customers. Customers are assessing the quality of the entire training service, not simply the quality of the training materials.

Executive summary

Introduction

Much research into issues relating to online training has been undertaken from a supply perspective (the developer and delivery perspective), but little formal work has been done on the demand perspective (the customer perspective). The Australian Flexible Learning Framework Research Program commissioned this research into 'factors influencing demand for online delivery' to address this gap.

The research team took a market research approach to the task of defining demand. Key trends were identified in the existing literature and these were tested using customer surveys of individuals and employers. The survey findings were further refined with focus groups. The result is a 'big picture' view of online vocational education and training (VET) in Australia from the customer perspective. This report identifies demand features that apply to the mass online VET market as well as features that apply to specific market segments.

Markets

In strict marketing terms, a market is simply a group of potential customers with similar needs. The process of selling to a market is called 'marketing'. A typical approach to establishing a marketing strategy that addresses a large, poorly defined market (such as that for online training) is to identify sub-segments and to develop products and services specifically for those segments. This process can be highly cost-effective, because only those products and services that are 'saleable' are produced. Similarly, strategies for marketing products and services can focus on the specific benefits identified by customers, which produces better sales and allows a more effective assessment of marketing costs.

The 'market' is not concerned about the policies, resourcing issues and constraints of the supply side. This means that the findings from this research do not necessarily accord with the current provision of online training. The challenges of adapting delivery to meet market needs are recognised in this report, but strategies to address these challenges need to be the subject of other research.

The online VET marketplace

The market for online training is potentially huge. However, because online training is dependent on rapidly developing technologies, and is most often blended with other delivery modes, it can be difficult to get a firm fix on its market demand. This research has looked at demand factors from the viewpoint of two main customer groups—employers and individual learners—in order to differentiate the needs of the potential market for online training.

Employers

Within the employer group, large organisations appear to be the best potential market segments. These organisations may be training providers in their own right and generally have a computer-literate workforce that needs to maintain up-to-date training in a rapidly changing environment.

Organisations that buy or develop online training for their staff have their own set of motivations. Because organisational efficiency or profitability are key drivers, organisations tend to take notice of the needs of learners and adapt their products accordingly. In addition, their 'customers' are a captive market, since training, whether traditional or online, is a requirement of employment and learners have little choice if they are to remain with the organisation.

The study also found that medium-sized businesses that valued staff development, small employers in their own businesses, and group training companies are potential market segments. Employers of New Apprentices thought that it would be useful to have the theory aspects of New Apprenticeships available online.

In general, employers want online training in short, simple, immediately available and easy-to-manage chunks, as do career changers, skill improvers and the self-employed. These chunks may be as short as one hour in duration. Online training should be easy to customise and available throughout the year, both during and outside standard business hours.

Individual learners

Across the VET sector, the profile and behaviour of individual purchasers of training is changing. Students are older, increasing numbers are completing modules rather than full courses, learning tends to be purchased 'just in time' for work or career needs. Learners are behaving like consumers—choosing only the elements of the training service that they want.

Individual learners who are current online users are 'time-poor', and are more likely to be studying for work-related reasons. They also choose the training they want first and the mode of delivery second. They like the flexibility that online training provides as they can choose when they want to study. Compared with non-users of online training, they tend to be older and to have done other studies since leaving school. Forty per cent of online students surveyed were studying for a career change. In the National Centre for Vocational Education Research's (NCVER) 2002 VET Student Outcomes Survey, career changers make up 17% of the learners who are module completers, and 20% of graduates of full courses (NCVER 2002a).

Online learners want training that is just enough and just for them. This suggests that the best potential markets for online training are people who are studying to change careers and others with similar characteristics to this group. Student segmentation, based on reasons for study, indicates that people who are studying to improve their skills, becoming or remaining self-employed and self-developers who have a passion for learning, share characteristics with the career changers. Collectively, these groups make up 61% of graduates and 78% of module completers in the NCVER 2002 Student Outcomes Survey, with the self-developer segment alone making up 15% of graduates and 29% of module completers (NCVER 2002a).

The product

The development of good client relationships and the ability to understand customer needs is crucial for suppliers of online training. Being flexible, having appropriate and current materials in hard copy as well as online, easy-to-use software and providing customers with options in terms of pricing structures and service levels were found to be important factors from the customers' perspective.

As other studies have found, one of the important reasons why some people do not want to use online training is that it lacks the social interaction that so many learners enjoy. Interaction with teachers and other learners remains the key requirement for many learners.

Specific product features that could improve the take-up of demand across the market segments identified in this research were:

◇ simplification of the online product so that it is no more difficult or time-consuming than traditional delivery

✧ more blended delivery options, with a high level of transferability between modes of delivery

✧ provision of hard-copy materials and learning texts

✧ establishment of micro-segments of training, costed accordingly, that articulate into accredited modules and courses

✧ facility for offering optional pricing for immediate commencement, learner and information technology support, training in online learning systems, group induction and practical sessions

✧ creation of optional 'text only' type offerings to cater for consumers who are unable to access online training because of download and firewall barriers

✧ elimination of delays in the commencement of training.

Customer responses throughout this research indicated that many providers of online training are developing and managing their products based on traditional delivery paradigms. In order to be successful in the online environment, providers need to develop systems that allow them to be learning managers—facilitating and supporting a blend of delivery modes that suit the needs of employers and individual learners.

Introduction

Purpose of the research

The purpose of the research was to investigate specific market groups for online delivery within Australia, in order to:

✧ identify factors that influence demand from these groups

✧ test the findings against the current supply-side approach to identify where the online training product, its delivery and marketing, needs to change in order to meet identified customer needs

✧ provide a resource that may assist the vocational education and training (VET) sector in developing marketing and delivery strategies in response to the identified market needs.

The research built on previous work and analysed demand factors based on the underpinning concepts of lifelong learning, the knowledge society, globalisation and the 'digital divide'.

The aim of this research project was to consider online training from the perspective of the customer (person or organisation which buys the training) and consumer (person who does the training) and to identify elements of demand. This market research approach provided valuable insights into the benefits of the online training product from the demand perspective. Clearly identifying benefits of online training means that providers are better placed to respond with product and marketing features that meet the direct needs of their customers.

Readers should note that specific opportunities identified in this report have not been market-tested and it is therefore recommended that professional market research is undertaken in relation to these suggestions before they are adopted.

Rationale

The approach used in this research project was to compare the experience of customers (employers) and consumers (students) of online training with customers and consumers who had not yet bought online training, in order to identify the similarities and differences between the two groups. The rationale for this approach is to provide a comparison of demand features and indicate the product development that will be needed in the online VET sector to capture a greater share of the VET market.

The research was constructed in four stages:

✧ a literature search to establish existing research relevant to the topic

✧ interviews with peak industry and training bodies to verify the validity and currency of the literature findings and identify issues not represented in the literature

✧ surveys to examine key elements of the findings from the literature search and peak body interviews

✧ focus groups to test the key findings from the surveys.

Figure 1 illustrates the rationale for identification of survey samples based on two groups: users and non-users of online training. Each of these groups was further broken down into employers and

students (individual learners). Ideally, the research should have included employers and individuals who did not buy VET at all, but this would have required significant resourcing and was not considered a high priority for this project.

Figure 1:   Rationale for survey samples
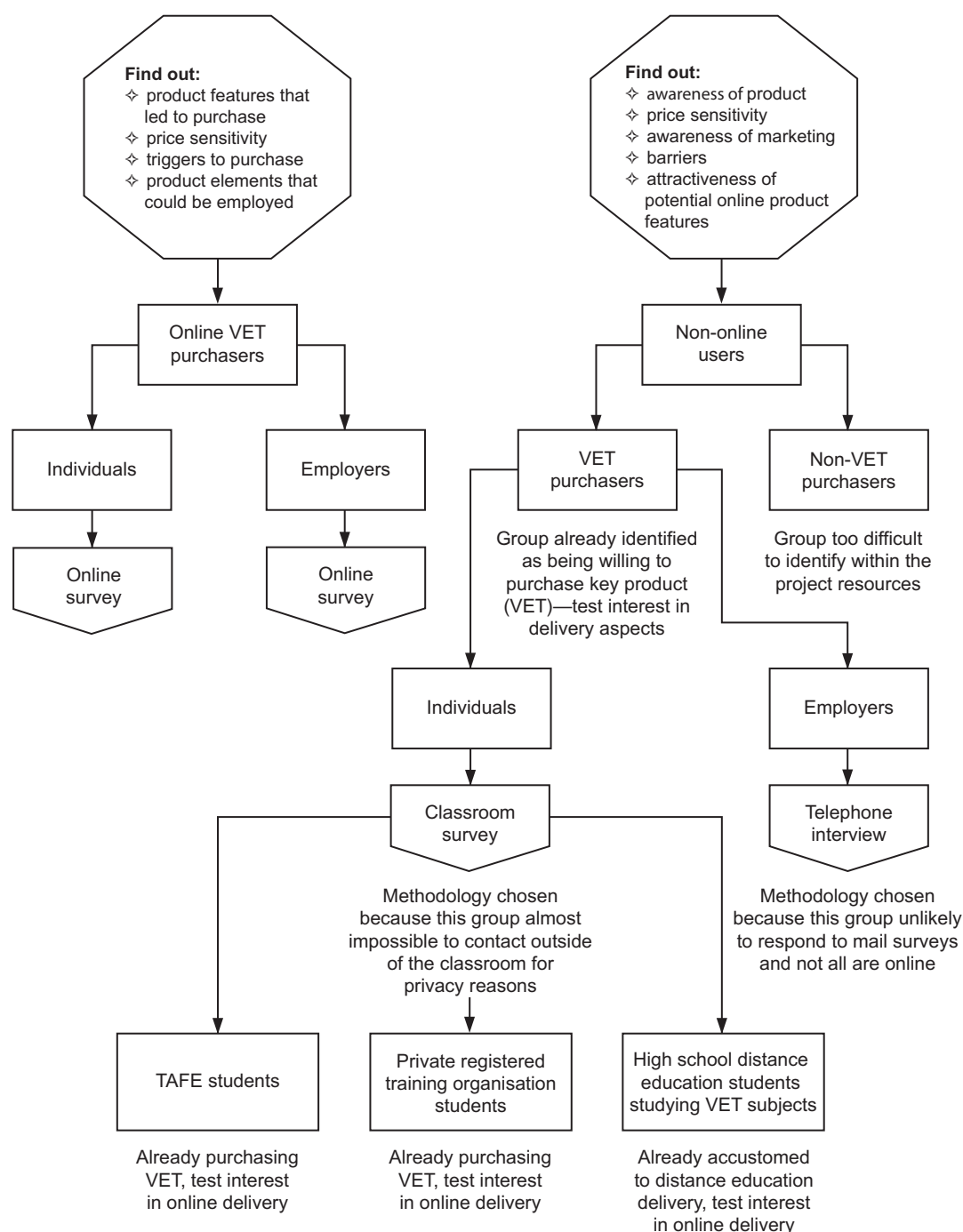
Data from the two online customer groups (online employers and students) were gathered via self-administered online surveys (responding to their familiarity with this medium). Data from the non-online employers were gathered via telephone interviews that allowed a higher level of investigation; and data from students who were not online were gathered via self-administered paper-based surveys. A more detailed discussion of the methodology is included in the next section of the report.

Research questions

The following research questions underpinned the project. Detailed responses to each of the research questions are included in the conclusion of this report.

✧ What specific markets already exist within Australia for online delivery? What is the demand profile for these market groups and how is demand currently met?

✧ What is the potential market in Australia and overseas for online delivery? Is there a greater potential demand for exploiting existing markets more fully or in the creation of new online learning markets?

✧ Which business models in Australia and overseas have been most successful in generating or meeting demand for online learning? Can their success be transferred across the identified market segments? What impact does the perceived registered training organisation (RTO) expertise in online delivery have on demand?

✧ What effect do geographical/cultural allegiances, the quality of the product, and the level of learner engagement have on demand?

✧ How is demand affected by the nature of the vocational education and training being delivered? Do some industry areas 'more naturally' lend themselves to online delivery than others? How important is the teacher–student relationship?

✧ What effect do restrictions on access and delivery have on demand? Consideration will be given to a range of issues including, but not restricted to, the following:
   ♦ availability and access of suitable technology for users and potential users
   ♦ institutional policies and processes regarding online delivery; for example, class size, third-party provision of materials
   ♦ demand for individual versus group learning
   ♦ real consumer cost and its effect on the incentive to enrol
   ♦ effect of extended waiting times for suitable courses or course materials.

✧ What can be learned from the experience of providing distance learning to specific groups within metropolitan and regional communities about the factors that influence demand from these groups?

✧ What effect would providing a range of optional cost structures and/or mixed-mode courses have on existing or potential demand? Consideration will be given to a range of issues including, but not restricted to, the following:
   ♦ successful models for melding online learning with existing modes of delivery
   ♦ whether consumers differentiate between online 'courses' or 'resources'
   ♦ the potential impact on demand of integrating communication tools and strategies
   ♦ the potential role and value of online learning management systems, for example, WebCT, Blackboard, Janison Toolbox etc.
   ♦ demand sensitivity of various mixes of online delivery, human interaction (teachers, peers), information technology support, and practical activities.

Defining online training

For the purpose of this research project, online training (also e-learning, online learning and online delivery) is defined as training that has some element of instruction delivered via a website. The term 'online training product' refers to the content, delivery and marketing of online training, including all service-based elements of this product.

Online training is different from flexible delivery. Flexible delivery is a much broader concept that refers to a range of approaches to training that employers and learners want (ANTA 2000). McKavanagh et al. (2002) expand on this definition: 'An ideal learning context provides learning

opportunities when required, at a convenient location, and using a variety of approaches and resources'. Online training has the potential to be an important element in the suite of flexible delivery options.

Vocational education and training

This research project has embraced the broader definition of vocational education and training, that is, training relevant to the workplace. This definition includes accredited training provided under the Australian Quality Training Framework, informal training for the provision of workplace skills, and it applies to all ages—from VET in Schools to older workers seeking to upgrade skills to ensure their continuing effectiveness in the workplace.

Higher education (primarily sourced through universities) is excluded from this definition, although we recognise the valuable workplace skills and knowledge provided through higher education.

What is a 'market'?

In strict marketing terms, a market is simply a group of potential customers with similar needs. The trick of course, is to identify those needs, and this is where market segmentation is used. Market segmentation is the process of identifying and understanding the needs of particular groups of customers (McCarthy & Perreault 1994). An example of a market segment is the VET sector within the total education and training market. People who require vocational education are a different market group from those who require higher (university) education or school-based education.

Specifying the purchasing behaviour of a market segment is a good first step in identifying the core features of the products and services needed by that segment. However, purchase behaviours can be too broad to allow for targeted product development and marketing—a 'scattergun' approach will usually work, but it can be very expensive.

A typical approach to the resource problems of marketing to a large, poorly defined market segment is to identify sub-segments and to target product development and marketing directly at these sub-segments. This process allows better control of production and marketing resources, and because it is based on specific product or marketing features, it allows providers to assess the effectiveness of their strategy.

Small sub-segments with particular needs are called 'niches'. However, just because niches are small, does not mean that they are not profitable, providing the cost–price equation is favourable (the cost in this case is the cost to produce and market a product; the price is the amount the customer is willing to pay for the product).

Structure of report

In the next chapter of this report the methodology used for the project is briefly described, while the following chapter outlines the findings from the literature review and the peak body interviews. The next chapter provides a compilation of the results from the surveys and groups. The concluding chapter summarises the findings in relation to the research questions underpinning the project.

The full literature review is given in appendix 1, while appendices 2 and 3 respectively contain the survey findings and the focus group questions.

Methodology

The project was managed by a consortium consisting of project manager and principal researcher (Kristine Peters Project Management Pty Ltd), TAFEBIZ SA and TAFE SA Online Education Services (for the online TAFE perspective), Open Access College (South Australia's premier provider of school-based distance education, for the distance education perspective), and the Senior Secondary Assessment Board of South Australia (for the VET in Schools perspective).

Building on existing knowledge and research

The first part of the project identified existing knowledge about demand factors for online training.

Consortium knowledge and experience

The proposal for this research project was developed by the project consortium. Consortium members have extensive experience in distance-based VET and online delivery and were keen to see the results of research that focused on the demand perspective. The research questions reflected their experience and need for market-based responses to key questions about demand. The consortium members provided a valuable internal reference group for the project.

Literature search

Based on the key issues identified by the consortium members, a broad-ranging literature search was undertaken. The aim of the literature search was to identify existing research into online training in key areas identified by the research brief—lifelong learning, the knowledge society, globalisation and the 'digital divide'. The findings from the literature search provided the content framework for the project.

Peak body interviews

It was important to establish the validity of the literature against current experience of online training in Australia. A series of guided interviews were conducted with peak industry training organisations (primarily industry training advisory boards). These organisations were selected because they had an industry-wide understanding of VET issues in their sector, as well as knowledge of the current level of use of online VET and the opportunities and barriers facing employers wishing to purchase online VET. A small number of interviewees were also employers.

The topics covered in the peak body interviews were:

✧ definition of online training

✧ experience of online training in the VET sector

✧ the appealing features of online training

✧ identified problems with online training

✧ differing cost expectations between online and classroom learning

✧ factors influencing demand for online training

✧ suitability of online VET in respondent industries.

Primary research

The findings identified in the first part of the project were tested via surveys, and the trends from the surveys were further refined in focus groups.

Surveys

Four surveys of customers and consumers were conducted with a total of 683 responses:

✧ students who are studying VET online (self-administered, web-based survey with 137 responses)

✧ students who are studying VET by traditional or distance delivery modes (self-administered, hard-copy survey with 284 responses)

✧ employers who buy VET for their staff through traditional delivery modes (telephone interviews, 200 responses)

✧ employers who buy online VET for their staff (self-administered, web-based survey with 62 responses).

A full analysis of the findings from the four surveys is given in appendix 2.

Focus groups

Four focus groups with a total of 22 participants were conducted. The sectors represented were:

✧ business sector (industry association representatives, reflecting the employer perspective)

✧ farm managers who are currently studying rural business management through a mix of face-to-face and distance learning (reflecting both employer and individual learner perspectives)

✧ fast-growing small businesses—business incubator tenants (reflecting both employer and individual perspectives)

✧ group training companies that were not registered training organisations (reflecting the employer perspective).

Several approaches were made to networks and peak organisations in the community services and health sector, but it was not possible to convene a focus group. In order to represent the views of this sector, the national industry training board (Community Services Health Training Australia) canvassed the opinion of employers and provided a written response.

Focus group questions are shown in appendix 3.

Evaluation of approach

The rationale, research questions and methodology proved to be a successful basis for this research project. There were, however, some lessons learned from the project.

Because our approach was based on a comparison of findings from different groups, a number of comparative questions were included in each of the surveys, thus adding significantly to the length of the survey instruments. More responses could have been obtained had the survey instruments been shorter, but then the research would have lost some of the value of comparison.

The consortium underestimated the length of time for the process of refinement and approval of the surveys. This meant that leads for surveys went 'cold' and the number of online surveys (both

student and employer) was fewer than intended. The 137 online student surveys are sufficient for some statistical analysis, but the online employer surveys—62 in all—are too few for the findings to be used with any degree of confidence.

Despite rigorous targeting of student surveys via training providers and student groups, the online student survey received a small number of responses from university students. University responses have been identified where relevant to the analysis.

Feedback from the interviewers undertaking the telephone survey of employers indicated that few respondents understood what was meant by industry clusters; consequently, responses to this question have been omitted from the analysis.

Findings: Literature and peak bodies

Literature search

The full literature search is provided in appendix 1.

Background

Global trade, the communications revolution and macroeconomic and social factors have resulted in massive increases in non-standard forms of work and comprehensive workplace change within organisations. The 'macro' environment is shaping learners in the current VET market and this, together with labour market changes, has resulted in an increased demand for higher level skills from both employers and employees.

Vocational learning has become a lifelong process rather than a distinct event at the beginning of a career, and there is greater workplace and training flexibility. Work-based training is changing to reflect the following drivers: external factors (legislation and regulation); competition (supply chains and market positioning); and firm-specific factors, such as policy (quality standards and human resource development) and practice (innovation and the introduction of new equipment).

Today's training environment reflects an increased focus on costs, a breakdown of traditional market boundaries, an extension of learning across all age groups, learner expectations of training as a consumer purchase, and communication and information opportunities unknown a generation ago.

The market for VET in Australia is huge. The VET sector accounts for 0.8% of gross domestic product, and over 10% of the adult working-age population is enrolled in formal VET. Non-accredited vocational training is largely unquantified but is a substantial market in itself, and demand for non-accredited training by employers is increasing (a quarter of Australian businesses that offered their employees structured training used equipment manufacturers as providers). Yet the new world of work, with its casualisation, multiple career changes and emphasis on the individual gaining their own workplace skills, makes a generalised, mass market approach impractical.

Despite the large volumes of VET, the ubiquity of the internet, and the usefulness of online training for specific, tailored courses, surprisingly little online training is sold in Australia. Research in 2000 showed that only 15% of employers were using the internet to deliver training, and more recent studies have identified a drop in the number of technical and further education (TAFE) graduates who had used online training in their courses. Despite the relatively low level of online training in today's marketplace, there are indications that this sector is about to grow rapidly, with recent research forecasting a doubling of online training in Australia over the next three years.

Only recently has the literature reported awareness by the VET sector of the need to shift from a supply to a demand-driven system. One of the key changes in the demand for training is in the emergence of demand for 'just enough' training. Traditional school-based education was based on 'just-in-case' principles. Today's flexible learning is often considered to be 'just-in-time' learning. There are indications that the future student will be focused on 'just-for-me' learning, which will force a significant change in the current VET paradigm—from delivery to learning management.

Online training in an immature market

The online training market is immature, with low sales and poor customer awareness. Learners can select online vocational training products from various sources, including global consulting firms, hosted content-management providers, universities, game developers, and software and publishing firms. This situation is further complicated by the large number of online training and content providers, resulting in a fragmented market and making it difficult for any one provider to make any real difference to the level of customer awareness of the online training product. The wide range of suppliers also makes it difficult for buyers to locate the 'point of sale' (the 'place' at which the product can be bought) for online courses. This situation is not made any better by the tendency of many Australian providers to focus on exploration and experimentation rather than on a systematic market approach.

Market segments that emerge early in the lifecycle of a product are not necessarily a good indicator of the segmentation in a mature market. The presentation and content of online training in the early stages has, to some extent, been hijacked by the 'early adopters' who tended to be technology advocates who demanded a high degree of interactivity, communication features and multi-media elements. The emerging mass market appears to be calling for different features with a higher focus on cost, quality content, quick downloads and easy-to-use software.

Lack of appreciation of the role of market demand in the development and marketing of online training may be contributing to poor uptake. Incorrect assumptions (such as demand for online training being similar to demand for classroom training) have meant that providers are not identifying the real target audience with precision. Australia's relatively low population and vast distances make it a challenging marketplace. 'Obvious' markets segments—such as people living in rural and remote areas—face multiple barriers to online training. These include the cost and speed of internet access and a lack of the higher levels of support needed by online students who do not live in the locality of the training provider.

In order to maximise returns on the investment in online training, the market needs to mature. Mature markets have established products and customers and are therefore more predictable and are more likely to generate secure returns. Being at the leading edge of an immature market can be exciting, but it is risky. A high risk vocational education and training sector will not be well positioned to support Australia's capacity to compete in the global marketplace.

Online training and the individual learner

Only 0.5% of TAFE graduates used online training in 2001, while 1.7% of module completers used online training in the same period. Both male and female students in the age group of 20–24 used a higher percentage of online training (21.6%), by comparison with students in all other age groups (of which the highest use was 15.3%). Students studying online tended to undertake some elements offline. The highest proportion of online training was done by graduates in capital city areas, with 60% of the course done online. Module completers who used online training tended to do half (51%) of their training online.

Published research on market segmentation of learners (NCVER 2002a) identifies student groupings based on motivation. Using the same groupings, the survey responses for this research showed that the 'self-employed', 'career changers', 'skill improvers' and 'self-developers' match the profile of learners most likely to undertake training online. These segments are also more likely to complete modules than they are to complete courses.

Segments within the individual learner market

More older adult students are engaging in training, and the older age groups are an important market segment. Today's older adult students are bringing consumer attitudes to education, seeking convenience, service, high quality and low cost. They will not pay for activities, services and

buildings they will not use. Their behaviour is similar to that of online shoppers who appreciate the convenience, ease and time-independent nature of purchasing online, but they also seek the service of the physical store for returning merchandise, getting expert advice, trying and viewing products and interacting with salespeople and fellow customers.

Older people are also taking short, non-award vocational courses in greater numbers than young people and they are targeting specific fields of study. They are motivated by professional advancement, external expectations, the need to better serve others, social relationships, escape, stimulation, or an active interest in the subject.

Other important segments are the 'just enough' groups: career changers, skill improvers, self-developers and self-employed who are more likely to complete modules than they are to complete courses. The features of each of these groups as identified by the NCVER 2002 Student Outcomes Survey (NCVER 2002a) are:

Career changers

✧ Their median age is 37 years.

✧ They have some work experience.

✧ They undertake training to gain skills in getting a job of their choice.

✧ Two-thirds have post-school qualifications.

✧ Two-thirds of module completers are female (half of graduates are female).

✧ They are most likely to be studying at certificate II or III level at a TAFE institute.

Skill-improvers

✧ The median age of graduates is 36 years, and of module completers 38 years.

✧ This group undertakes training to maintain or increase skill levels in their existing job.

✧ Over two-thirds have post-school qualifications.

✧ They are male/female in equal numbers.

✧ They are most likely to be studying at certificate II–IV levels at a TAFE institute.

Self-employed

✧ They display a similar profile to skill improvers (high median age and high proportion of students with post-school qualifications).

✧ They undertake training to start their own business or develop their existing business, in particular to maintain or increase skill levels for their business activity.

✧ They are most likely to be studying at certificate III or IV level.

Self-developers

✧ The median age is 30 years for graduates and 38 years for module completers.

✧ They undertake their TAFE for interest, personal or other reasons, rather than for further study or job-related reasons.

✧ There is a higher proportion of females.

✧ They are most likely to be studying at certificate II or III level.

Learning support

Current online learners expect and need high levels of institutional support, which is not readily available in many areas, particularly in rural and remote areas.

Flexibility was identified as an important quality factor in the online training product (the freedom and convenience of the online environment). Induction, orientation, student support and communication with lecturers are emerging as important product elements. The need for learner support means that many online students prefer to study in their locality (only 6% of all TAFE students relocate to pursue their studies). This creates opportunities for learning management services, with content sourced elsewhere, and support provided in the local area.

Micro-segment training

Individual learner demand for just-in-time learning has reduced the length of time that students are prepared to spend on any one topic. Full courses are less relevant than modules, and modules are too broad for the specific needs of many learners.

Employers and online training

Industry readiness for online training

The literature identified that, currently, the most popular industry groupings for online modules were property and business, communications, and agriculture forestry and fishing. The planned rise in online training is steepest in the health and community services, construction and wholesale trade sectors. Government, at all levels, is emerging as a big user of online training and the Commonwealth Government aims to have all departments using the internet to deliver training.

Some industry sectors (metals, engineering and information technology) are failing to make an adequate commitment to skills development and these industries are less likely to be adopting online training.

Customised and micro-segment training

A changing approach to training within organisations presents opportunities. Traditionally, organisation-wide training programs have been offered, but these did not necessarily address the skill needs of individual employees. This unmet need creates demand for customised training for individual employees that can be met through the purchase of online training from a range of providers.

The purchase of smaller and smaller units of training is an increasing trend. Both the literature and peak body interviews identified strong demand for micro-segments of training, although there was acknowledgement that this approach needs to be carefully managed to maintain context and to avoid fragmentation of the knowledge base.

Non-accredited training

The industry sectors with low take-up of online training tended to value only a narrow range of benefits (mainly productivity and cost) from training. Because of its capacity to address only the needed skills, informal or non-accredited training was a significant part of the training purchased by these industry sectors.

Studies of small business operators showed that an important element in their training purchase was its capacity to increase productivity and reduce costs. Research also showed that farm managers (who could be regarded as a sub-set of the small business market) value informal education and training as much, if not more, than formal award courses.

Peak body interviews

Background

A common perspective from those who participated in the peak body interviews was the requirement to divorce demand issues from the supply-based focus that dominates the VET sector. Supplier concerns about effective use of capital and infrastructure are not important to customers. Increasingly, customers are assessing the quality of the entire training service, not simply the quality of the learning material. The challenge for the education and training sector is to respond to the changing demands of a marketplace dominated by the purchase imperatives of informed, experienced adult learners.

Interview participants repeatedly mentioned five elements essential to the development of the online training market:

✧ access to experiences, activities and content that are not easily provided in traditional classroom training

✧ overcoming distance and geographical constraints

✧ time flexibility—being able to do training when learners want, for the period of time they have available, in 'non-traditional' training periods (after hours and holidays) and with learner-determined start and finish arrangements

✧ being able to repeat the 'lesson' whenever and as often as needed, and having it available when that particular issue arises in the work situation

✧ interactivity with teachers and other students.

The online learner

The main two groups of purchasers of online training in Australia are individual learners and organisations that purchase training for their staff. Whether purchased by an individual or their employer, the actual learning is always done by an individual, and a successful online learner has certain attributes that need to be recognised in the development and marketing of the online training product. These attributes are computer and web literacy, the ability to self-manage study, self-motivation, and previous successful post-school studies.

In marketing terms, this group of learners could be called the 'online ready'. While they may not yet have tried online training, superficial analysis indicates that they have the skills and abilities to succeed in the online training environment.

Because the online training market is still in its developmental phase, targeting the 'online ready' group of learners—whether individual purchasers or employees—will be a more effective marketing strategy than trying to develop online training that meets the needs of the 'unready'.

Individual learners as a key market segment

This research defines 'individual learners' as people who purchase training directly from a provider. Within the 'online ready' group of individual learners, peak body respondents identified the following sub-segments:

✧ people who need to continually upgrade their skills, with the proviso that this sub-segment is not useful by itself, but helps define the pool of likely customers. Further research on this group will be needed to identify viable market segments

✧ members of the 'new economy' who mix contract, casual work and self-employment on a semi-permanent basis

◇ workers in the information technology/media/communications/e-commerce industries, who are characterised by a need for information about rapidly changing hardware, software and communication developments. This group tends to be working in a global environment, are skilled at sourcing web-based information and may present opportunities to integrate online training with emerging technologies, such as online mobile phones and palm pilots.

◇ rural businesses (particularly, but not necessarily, agribusinesses) in regions that enjoy good bandwidth. This group is accustomed to self-managed distance education and tends to be web-capable. Their online training needs are likely to be in the areas of agriculture and natural resource management, business and tourism.

Marketing to individual learners

Although there are a number of common themes in relation to marketing of online training, individual learners who choose (and mostly pay for) training to suit their own needs require messages that appeal directly to their situation.

◇ People who are upgrading their skills are less price-sensitive, and this group is cheaper to service because they require less support.

◇ For most people, formal qualifications are not as important as learning, so the marketing needs to focus on the learning rather than the course.

◇ Individuals have difficulty identifying quality in the range of online learning training products available. Accurate and appropriate information is needed.

◇ There is very little try-before-you-buy marketing and it is therefore difficult to make a decision about the quality of courses before purchasing.

◇ The greatest growth area in Australian business is home business. These people are masters of time management and many of them already have the information technology skills and discipline to take up online training, but it is a difficult market to tap.

◇ Niche markets can be created by aggregating demand (getting individuals or companies together to purchase as a group), particularly in sectors and regions where there is limited access to face-to-face training.

◇ Developers and providers of online training need to align their product with the information technology capability of their intended audience and market accordingly.

Online training at the workplace

The second major segment in the online training market were employers—organisations that purchased or provided online training for their staff. A small number of industries were seen to be strongly involved in online training, mainly through employers who are registered training organisations in their own right (aviation, banking, communications and education were mentioned). Peak body representatives reinforced the importance of employer encouragement and learning support to the success of work-based online training (which includes online training purchased by the employer but completed in the employee's own time). It was felt that employers who provide good learner support gained more from online training.

Benefits of online training to employers

One of the most important features of marketing is the focus on the benefits to the customer. Products are seen to have two elements—features (what the product *is*) and benefits (what the product *does)*. Purchasers do not care much about the features, but they are vitally concerned with what the product does, most importantly that it meets their needs and expectations.

Almost all peak body respondents stated that, in their experience, the existing provision of online training did not deliver the benefits that were expected or promoted.

Employer market segments

Peak body respondents noted the importance of government buyers of online training in the current marketplace. This segment was seen to have natural affinities with the online product. Learners tend to be well educated; organisations are large (and often similar) enough to provide economies of scale; training is valued at the workplace and most workers have access to online computers. Some respondents were keen to point out that providers of online training should not assume that the values and pricing of online products for the government market are applicable to other market segments.

Organisations that participated in the peak body interviews for this research identified the media and training sector (particularly for training staff development) as industries that were enthusiastically taking up online training.

Group training, because of the size of the industry, was seen as a huge and as yet untapped opportunity.

Supply chain integration was another area of opportunity, due to the economies of scale that can be achieved along the chain, as well as the size of this potential segment.

Marketing to employers

The peak bodies provided information about marketing strategies with the potential to engage employers in the purchase of online training. Issues to be considered include:

✧ There needs to be a general raising of awareness in the marketplace.

✧ The market would be opened up if there were a consistent message to employees about the use and benefits of online training. Industry benchmarks and comparisons were seen to be useful marketing tools.

✧ Companies can use online training to develop and retain good people because employees can get additional training and move more quickly through their career path.

✧ Many big organisations have trouble organising training for all employees, and online can be a very cost-effective alternative to big teams of trainers. Many large companies are looking for a blend of delivery.

✧ Employers are interested in efficiency. Keeping employees on the job, or integrating training with free time at work rather than leaving the job to undertake training contributes to efficiency in an organisation.

Problems with online training

Customers want products that meet their expectations of quality and service. The immaturity of the online training market means that many of the available products are still in the development stage. Both the literature search and the peak body interviews identified a range of product and service deficiencies. Unfortunately, some marketing of online training as 'a complete solution' tended to overlook these problems, thus creating mistrust of the online training product when it failed to perform as promised. Some frequently mentioned problems were:

✧ boring materials with too much focus on click-and-turn presentations

✧ information technology costs and problems, technical failure, poor bandwidth, the need for high-volume modems, lack of compatibility with firewalls

✧ cost to students, primarily related to technology problems and telecommunication costs, but also in additional time involved in studying online (a common response)

✧ culturally inappropriate material, especially with bulk licences purchased from global providers

◇ complex and expensive learning management systems, characterised by architecture that has poor compatibility with existing systems, cannot be adapted at the enterprise level and is therefore difficult and expensive to upgrade

◇ insufficient attention to the selection of students who have the information technology and learning management skills; poor preparation, resourcing and support of learners.

Some peak body respondents were critical of providers who focus on content at the expense of the total delivery package.

> They think they are providing a better product at a cheaper rate because it looks flashy, but their teachers are given less time with students and this diminishes the product quality. Online delivery is more resource-intensive and requires more skills, so they are spending too little time in student support.

Findings: Research

Introduction to the research findings

This chapter of the report provides a compilation of the results from the surveys and focus groups. The surveys effectively 'drilled down' into the findings from the literature search and peak body interviews, and examined a smaller range of specific demand elements in much more detail. Some elements of the research that did not need verification via surveys or focus groups are therefore not covered in this chapter. The complete research findings are synthesised in the concluding chapter. A full analysis of the survey and focus group findings is given in appendix 2.

The information in this chapter is provided in four sections:

✧ *Common demand elements* describes the findings common to all five groups (the two employer groups—online and not online; the two student groups—online and not online; and the focus groups).

✧ *New market segments* describes the market segments identified in the surveys and focus groups that were common to both employers and individual learners.

✧ *Individual learners* describes the findings relating to people who purchase online training for themselves.

✧ *Employers* describes the findings relevant to employers who purchase or provide online training for their staff.

Common demand elements

The common demand elements are the product elements that all of the survey and focus groups wanted. In summary, these elements were:

✧ price structures that reflected the level of complexity in the online training product, the immediacy of availability and the amount of learner and information technology support provided by the training provider

✧ micro-segments of training which encompassed the ability to purchase training in lesson-sized pieces that articulate into accredited modules and courses

✧ the inclusion of current examples and content only as indicated by regulation, changing industry needs or current events

✧ the provision of basic information technology support by the training provider, particularly in relation to core functions of online training like downloading and printing

✧ the provision of learning support via a modular price structure as negotiated between the learner and the provider

✧ availability of online training, covering waiting times before commencing online training, delays caused by the screening of trainees, and access to training and support after hours or during school holidays

✧ the provision of supplementary hard-copy material and texts

✧ marketing at times when target audiences are most receptive.

Pricing

Groups that were not currently purchasing online training tended to be more concerned about price than those who were currently buying or undertaking online training. Focus group participants in particular felt that the price of online training did not support widespread adoption of the medium. A number of employers in the surveys and focus groups claimed that cheaper online training would expand the market and drive demand: 'Make it useable, accessible, cheap—just get it out there!' (Group training company).

One of the unexpected findings from this research was the level of interest in modular pricing. Respondents identified three areas of pricing that could be structured according to the level of service:

✧ *Convenience:* Consumers will pay for convenience, so benefits like immediate start, fast support, micro-segments that articulate into modules/courses, and block 'residential' tutorial sessions should be marketed and priced as premium products.

✧ *Support:* Learner and information technology support can also be priced in modules, on a scale of highest prices for 24/7 support to low prices for no support. Support could be purchased with the product, or on an as-needs basis during the training. Consumers are accustomed to as-needs support systems through software and internet service providers and are comfortable with this approach, provided it is clearly stated in the terms of purchase.

✧ *Value-added elements:* A similar price-based approach should be considered for other add-on elements of online training, such as file and information management, using learning management systems, web and email protocols, and searching for and assessing the quality of web-based material.

Modular pricing allows providers to offer a basic online training product at a lower price.

Micro-segment training

Approximately half of all survey respondents preferred topics that could be completed in an hour or less, and this finding was strongly supported by focus group participants.

> Small employers can't afford to have people out of the office for training for two days. My staff all have different skills and training needs, and if I could buy the bit of the training they needed to round out their skills, they could do it at home or at work in small bits of time. I would have them onto new jobs as soon as our demand changed, rather than missing opportunities or creating extra work for me while they're away training.
>
> (Business incubator tenant)

Focus group participants strongly supported the micro-segment approach to training. One group commented that the current approach to the delivery of accredited training appears to be 'top down', with the framework based on the training package, then the course, then the module—with very little focus on selling individual learning segments. Students who buy their training in micro-segments often find it difficult to get appropriate accreditation, and can even complete all parts of a course, but are not eligible to gain formal recognition for their studies because they did not meet the entry requirements.

Currency of materials and content

Use of web-based technologies is often seen as synonymous with the latest, up-to-the-minute learning materials. The issue of currency of content was also mentioned voluntarily by some survey respondents and was therefore raised at the focus groups with the conclusion that:

✧ In some compliance areas (food hygiene, regulation etc.) current content is implied, and the capacity to update material quickly is one of the main selling features of online training for the 'regulation' market segment. The cost of updating content should be built into the price.

✧ Providers in some sectors (such as tourism) who are significantly affected by a specific event, will need to update their content or lose sales to competitors. Some costs can be factored into the development of online products, but sales opportunities can be gained from marketing new courses based on recent events.

✧ Many sectors can use a mix of historic and current information. Management training, for instance, is likely to use both the invention of the assembly line by Henry Ford and the HIH insurance collapse as case studies. While consumers expect some recent examples, valuable lessons can be gained from historical material and the cost of upgrades is less of an issue.

Information technology support

Ninety-five per cent of traditional employers felt that the provider of online courses should also provide after-sales support that included help with software installation and ongoing advice. The results from the surveys and focus groups demonstrate that both customers and consumers feel that the training provider has some responsibility for supporting information technology enquiries. This is particularly the case when the online product is faulty, and one would expect providers to provide exemplary after-sales service when learners are having problems with downloading and printing, which are basic features of the online product.

Some of the problems that lead to a need for information technology support stem from the 'flashiness' of the content. The issue of screen presentation was hotly debated throughout the research. It was recognised that existing consumers of online training are likely to be experienced web users and therefore have high expectations of layout and useability, but in order to capture new market segments, less complex layouts may be necessary. The surveys found that classroom students were more likely to consider flashy graphics to be important than online students, and less than half of the online employers felt flashy graphics were important. Focus group participants felt that online training products should focus on the quality of the content rather than the look of the screen. Many felt that, because of bandwidth problems, telephone call costs in rural areas, corporate firewalls and the use of older computers by many students and small businesses, download capacity should be standardised for pre-Windows XP operating systems and 56k modems.

Perhaps the solution is to be found on websites, many of which offer the choice of text or graphic presentations. On the other hand, the solution may relate to costing, with basic layouts being offered at lower cost than multi-media experiences.

Learning support

Attention to the quality and content of the online training product can help to reduce the need for learner support. Focus group participants recommended that online material be easy to understand at the first reading—more information is not necessarily better.

Different market segments require different levels of learning support, although induction packages that include instruction in self-managed learning, online communication techniques, and the specifics of the learning management software were considered to be core requirements for all online training products.

Classroom students valued learning support more highly than online students (which may relate to the comparatively younger age of classroom students or their level of comfort with their existing training mode). Less than a tenth (9%) of the employers surveyed in this research provided learning support, which was a surprising outcome given the importance placed on workplace learning support by the peak body interviewees and focus group participants. This finding may simply be a result of the low number of responses to the online employer survey, but it could also be explained by the reason that online students respondents gave for their current studies—40% intend to change careers.

The focus groups identified that young people need additional learning support, with blended delivery seen as the best option as it could provide context, socialisation and face-to-face monitoring of student progress. Young people were also seen to be an under-developed market segment in that they tend to be experienced and sophisticated web users and often prefer to study using computers than pen and paper. Assumptions made by training providers about the needs and interests of young people are often incorrect and market research with young people is necessary in the development of online training and associated learning support for this segment.

Availability

Waiting times for online training

> I would have done 10 more courses if I could have started them when I wanted to.
> (Business incubator tenant)

The peak body respondents and focus groups participants showed a high level of interest in the ability to start online training immediately. The experience of the online students and employers responding to the surveys reflected a tolerance of longer waiting times. Fifty-nine per cent of online students who responded to the survey had waited for more than a month to enrol in their online studies. Perhaps supply is lagging behind demand, with traditional employers (who stated what they would like rather than what is available) being far more likely to want online training for urgent skills than existing online employers who were already aware of the low level of availability of urgent online training.

> We need to address current inequity in training opportunities for staff in regional locations
> and access to training support when needed rather than when scheduled.
> (Online employer, business services sector)

Focus group participants felt that the maximum waiting time to start an online course should be one week at all times of the year.

> There is a huge growth potential if technology, delivery modes, educators and resources can
> be developed for the immediacy of demand. (Online organisation, retail sector)

Delays caused by screening of trainees

In discussions of waiting times, the issue of paying online to facilitate an immediate start was raised by some focus group participants, particularly in relation to the need to counsel students prior to commencing an online course. Responses fell into three groups:

✧ Experienced learners tend to consider counselling or pre-screening unnecessary, particularly when buying micro-segments of training. Typically, experienced learners identified an urgent training need, wanted to buy and complete training quickly so it could be applied at the workplace as soon as possible.

✧ Employers buying larger blocks of training felt that it was important to respond to the interests of their staff and therefore to facilitate a quick start. This group recognised that not all employees have the attitudes and skills to complete online training, and felt that transfers into blended or traditional training modes should be included as a no- or low-cost option.

◇ All participants considered flexible entry and exit points to be an important feature of the online product, even those who were purchasing New Apprenticeship training for their staff as it would allow them to fit training with fluctuating demands in the workplace.

Access to training and support after hours and during school holidays

Seventy-three per cent of online employers wanted online training after normal business hours, compared with 54% of traditional employers. This same percentage of online employers also wanted training during school holidays compared with 33% of traditional employers. Access to online training, including support after hours and during school holidays, was considered important by all survey and focus groups. Two-thirds of online students said that they had chosen the online feature because it could be done after hours. Almost as many mentioned the capacity to juggle commitments and nearly half mentioned adaptability, or that the course could be done during the holidays. (70% of online students participating in the survey were in paid employment as well as studying.)

If online training is to be a flexible, 'just-for-me' option, it needs to be available when learners have the time to access it. The cost implications of 24/7 delivery and support are recognised, but the indications are that some market segments are prepared to pay for high-level support.

Hard-copy texts and material

A surprising finding from the surveys was the level of demand for hard-copy texts, materials and course guides. This finding was tested with focus group participants who supported the need for hard-copy material. Two groups in particular were keen to have hard-copy material: employers of students doing New Apprenticeships online where the material could be used as a long-term reference for their work; and rural learners whose internet access was unreliable. In relation to the latter group, they noted that there were many occasions when they felt like studying, or had the time to study, but could not get onto the internet. Other online learners and potential online learners in the focus groups felt that the provision of hard-copy materials and texts would enhance their learning experience.

Timing of marketing

One focus group also suggested that the timing of the marketing of online training should fit with the time of the year when people are most interested in, or have the available time to study. For example, farmers in southern Australia tend to have more free time in winter and are likely to look for training at that time. It is therefore a waste of time marketing to this group during the busy seasons. Similarly, retailers are more likely to be interested in risk and fraud training in the period before Christmas when they are preparing to hire casuals and considering security strategies to manage large numbers of customers.

New market segments

The surveys and focus groups identified or confirmed a number of new areas suitable for online provision. These are:

◇ *Online recognition of current competencies* enable fast-tracking of qualifications and provide new learners with a positive experience of online training.

◇ *Online study groups* bring together learners who are studying different online courses, generating an increase in the number of online learners.

◇ *Changing government regulations* drive significant volumes of training in some sectors and can create economies of scale for development of online training across entire industries.

◇ *Online management training* has common elements across most industry sectors and is typically pursued by motivated adult learners who form the target market for online training.

◇ *Theory (or resource) elements of New Apprenticeships* online would create an alternative learning environment that stimulates the interest of substantial numbers of younger VET learners who tend to be extremely web-competent.

◇ *Training across supply chains* is well established and the shared content and economies of scale provided by supply chains may support cost-effective opportunities for online training.

Recognition of current competencies

The farming focus group noted that most experienced farmers would already possess the competencies to achieve qualifications to advanced diploma level if they were to go through the recognition of current competencies process. Unfortunately, the difficulties associated with gaining recognition deterred most people. The increasing focus on formal land management qualifications provides an opportunity for online recognition of current competencies and would serve as an introduction to training online as well as fast-tracking qualifications.

This concept was further tested with other focus groups and consortium members who saw much wider opportunities for recognition of current competencies than the farming sector.

Online study groups/training in groups

There appears to be very little take-up of online group learning. Only 8% of the respondents to the online employer survey used online training in groups, yet classroom students in particular felt it was important to have the choice of studying with others. Despite the current situation, online group learning has potential, and may overcome some of the barriers to online training.

A number of industry sectors were interested in online training but lacked the numbers to provide economies of scale for the cost-effective development of online training material. The rural focus group suggested the use of regional tele-centres (government-funded computer suites with internet connection, located in small regional centres) for study groups where individuals could access different online courses. The study group approach would address the problem of social isolation, which is a deterrent for online training for many rural people, as well as providing a mechanism to aggregate demand for online training.

This strategy was also seen to have potential for small retailers who tend to have poor internet access. This group could use community or training provider facilities outside normal operational hours. Other groups that could benefit from online study groups include large employers who may find it more cost-effective to establish a central training suite rather than providing computers at work sites and schools that could supplement their core subjects with online VET.

Compliance

One of most common opportunities for online training identified across all elements of this research project was compliance training. Approximately a third of both online and traditional employers who responded to the surveys identified changing regulations as a useful area of online training. Government regulations, which are constantly changing, are strong drivers of demand and provide economies of scale across whole industries. Some sectors that feature strongly in our economy, such as food and the building industry, are regularly affected by compliance changes. These sectors tend to be made up of small businesses which are a difficult market to tap. However, the size of these industry sectors means that even limited take-up by small business operators can provide economies of scale for online training providers. If online compliance training can offer the benefit of convenience, it may overcome the small business sector's reluctance to invest time in formal training.

Management training

Individuals who are pursuing management careers typically fit the profile for successful online learners. This was borne out by the findings from the surveys, where 12% of online students were studying to improve their chances of promotion compared with 3.5% of classroom students. Importantly, students of management are considered to be less concerned about price than many other market groups and are likely to pay a premium for convenience. The employer surveys identified opportunities in the education sector for online management training for their own staff.

> Managers are slowly coming to see the possibilities of online learning which means the uptake should increase over the next five years.   (Online employer, health sector)

Theory elements of New Apprenticeships

One of the largest potential market segments is the online delivery of theory elements of New Apprenticeships. Fully online delivery is not suited to most vocational courses, and the separation of course elements that are highly suited to the online medium will expand the market significantly without creating enormous upheaval in traditional delivery systems. Employers are unlikely to want to pay significantly more for this option, so the cost of development and management of these online elements needs to be factored against the cost of inefficiencies in the current system.

Supply chains

Industry supply chains have been shown to increase efficiencies and to manage quality control across a number of companies in the production and distribution chain. The training needs of individual businesses in the supply chain are often very similar and the aggregated demand provided by these systems creates economies of scale for the production and management of online training.

Individual learners

This section describes the findings from the two surveys aimed at individual learners (student online survey with 137 responses and student classroom survey with 284 responses) and the results from some focus group participants who had undertaken online training themselves. A description of the learners represented by the surveys introduces this section. An examination of elements of online demand from the individual learner perspective follows, and the final part of this section discusses the barriers to online training from the student (online learner) perspective.

Comparison of learner types

The age range of both traditional and online students followed a similar general pattern, with the majority of students falling into the mature age groups. The specific differences in the age ranges between the two surveys were: a large group of traditional students under the age of 20; and proportionally more older online students (the largest online age grouping was 40–49 years).

The most common level of study for both groups was certificate III and the largest single grouping of students (aged compared with study level) was online students aged 35–39, of whom nearly half were studying at certificate III level.

Forty-five per cent of online students were studying fully online and the remainder were doing blended studies. Eighty-four per cent of online students had undertaken other studies since leaving school, and nearly half of the students who had done university studies are now studying online VET.

Online students (66%) are slightly more likely than classroom students (61%) to be studying for work-related reasons.

Elements of online demand

In making the decision about their current studies, 61% of online students had decided between undertaking their current course in online or traditional (face-to-face/distance) mode. This indicates that the driver is the course itself, rather than online delivery. Only 12% considered different courses online. The most frequently mentioned reason (45%) for enrolling in the current course was the online delivery. So, once the course was identified, approximately half of the students chose to take it online.

Flexibility

The most important feature of online training from the online student perspective was the ability to juggle work, study and other activities. Classroom students felt that the most important feature was that online training can be adapted to individual needs. This finding substantiates Cashion and Palmieri's 2002 findings that the most frequently mentioned quality factor identified was flexibility—the freedom and convenience of the online environment.

Access to online computers

Very few online respondents (8%) have a computer at home provided by their employer, or have uninterrupted time at work to study (7%). These features were identified in the peak body interviews as being important elements in the take-up of online training. The provision of computers or time at work to study would be an important element for take-up of online training by many of the classroom students in this research.

Familiarity with web, email and online training tools

Sixty per cent of respondents to the classroom survey had access to an online computer and regularly used the web (important precursors to successful online study). Only 10% of classroom students regularly use online bulletin boards, indicating a need for induction and learning/information technology support to be comprehensive and effective in this area. (A number of online students complained about the problems created by low student response to the compulsory chat or bulletin board elements of their courses.)

The question of replacing face-to-face contact with lecturers with email contact provided an interesting response from the classroom respondents. Eighty-six per cent felt it was 'important' or 'very important' to have regular one-to-one contact with their lecturers, yet half of this group said they would be 'happy', 'very happy' or 'didn't mind' if that contact could only be made through email. Further analysis was undertaken in relation to those who were 'happy' or 'very happy' with this suggestion, and the highest levels of support were from students aged 25–39 and 50–59.

Barriers to online training for learners

Loss of face-to-face contact

Thirty per cent of classroom students claimed they would not enrol in an online course because they didn't like elements of online training—mainly the loss of classroom contact (40% of those who wouldn't enrol) and loss of social interaction (15%).

Student satisfaction

One in four online students was not satisfied with their online course (compared to one in ten for the classroom student respondents) and younger students had the highest dissatisfaction ratings. The causes of dissatisfaction were:

✧ online presentation and software problems

✧ problems communicating with lecturers and students (particularly compulsory communications)

✧ lack of flexibility about assignment tasks and dates

✧ quality aspects such as course changes, poor content and tardy lecturer responses:

> Too difficult, not enough support. You feel like you have to guess that you are doing it right. You only find out if you are on track if the facilitator has the TIME to make comments or give feedback, which doesn't occur very often—even if asked. (Online student)

Twenty-three per cent of online students said they would not recommend online study to a friend:

> It's not suitable for everyone or all topics. A lot harder than face-to-face. The student needs to be well organised and motivated but also quite a lot of computer skill/experience is needed to get what you need. (Online student)

Nearly half of the online students made suggestions about how they would improve their online studies. Their comments fell into the following categories:

✧ better access to lecturers and lecturer support

✧ adapting the course to meet individual needs

✧ changing the structure of the course

✧ improving quality

✧ providing hard-copy material.

The level of dissatisfaction shown by students responding to this survey should be a cause for concern to the online VET industry. Today's online students are early adopters, and their experience provides an important message to their peers and the next generation of online customers.

Rural and remote learners

Rural and remote customers complained about the high cost of internet access. Most rural areas have old analogue phone lines that are extremely slow (it can take 40 minutes to log onto an internet banking site) and internet calls are charged at STD rates. To have a second telephone line installed for internet use can involve a wait of over a year, or incur high costs for quicker service (one participant paid $9000 for four kilometres of cable). Unless a region has invested in broadband technologies, most new phone lines are analogue, which does not address the problems of speed of download. Many farm families have installed satellite (at a cost of at least $2000) for download purposes, but still need to use their telephone lines to send material out. Send-and-receive satellites are available but are prohibitively expensive. Online training aimed at the rural market needs the capacity for rapid downloading to avoid the necessity for a send-and-receive satellite.

> You ask about internet access, well let me tell you about my situation. We kept having our internet connection drop out and thought it was just timing out because the old line was taking so long. But we checked and this wasn't the problem. It turned out that every time there was a short in our neighbour's electric fence, our internet dropped out. We would be in the middle of study and have to go around and ask him to fix his fence. (Mallee farmer)

In addition to telephone costs, rural consumers incur high travel costs. Participants in the rural focus group were keen for their children to have the opportunity to continue living at home, and recognised that face-to-face training is an ideal way of addressing rural isolation. The ideal training solution for many rural families (whether at farm management or traineeship level) is to have a blend of block classroom sessions backed up by distance or online delivery. The cost of travel (which may take many hours) and accommodation for participating in face-to-face training also needs to be considered when establishing the price of online courses for rural customers.

Employers

Employers who purchased VET but not online, were surveyed via telephone interviews, while 62 employers who purchased online VET completed a web-based survey. This section provides a comparison of employer types (which shows some surprising similarities between the online and not-online groups) and then describes the features of online training from the perspective of the two employer groups. Because the surveys and focus groups identified a high level of agreement on the required features of online training between the employer and individual learner perspectives, only a small number of new features are included in this section. These are:

✧ Online employers valued content, compatible software, fast-tracking, cost, availability and training provider understanding, as the most important features.

✧ Non-online ('traditional') employers valued cost, the ability of the training provider to understand their training needs and material that included Australian examples as the most important features of online training.

✧ Different industry sectors valued different elements of the online training product.

✧ A significant number of online employers were not satisfied with their experience of online training, which indicates that a focus on customer needs will be an essential element in the process of expanding the online training market.

✧ From the employer surveys a number of employer-based market segments were identified. These were:
   ♦ group training for the economies of scale
   ♦ communications sector by targeting marketing to individual employees
   ♦ hospitality, accommodation and tourism for currency of information and training to respond to high staff turnover
   ♦ agriculture for farm management and compliance (agrichemicals, water management etc.)
   ♦ staff training and development in the education and training sector
   ♦ expansion of the existing government market segment.

A number of strategies to market online training to employers were also identified.

Comparison of employer types

There was surprisingly little difference between the two employer groups (online and traditional). Both operated in a similar number of states; the patterns for the length of time in operation were similar; both were mainly Australian owned; and both had the same percentage of organisations with formal staff training plans.

The important differences between the two groups of employers were that: online organisations tended to be larger; traditional employers tended to have a higher proportion of internet connection; online organisations had more in-house training staff; and proportionally more traditional employers gave their staff uninterrupted time at work to study.

The average amount of online training done by online employers was 16%, with small employers doing proportionally more online training than larger employers.

> This is the direction we wish to head for learning, and we are presently installing a new server to help with our infrastructure. The online training industry is a bottomless ocean waiting for providers to tap into. They need to get it right by addressing low-end infrastructure needs, easy-to-use products that do not necessary require a lot of technical skills or knowledge, and developing products that provide immediate feedback and interaction throughout the online experience. These tools take longer to develop and are sometimes considered too hard;

however, there are more authoring products entering the market that will enable trainers to be instructional designers and developers. I believe this is the future as the trainers are at the grass roots of learning. (Online employer, health sector)

Fifty per cent of online employers either fully customised their online training in house or bought standard courses that they then customised for their needs. About the same number of traditional employers (54%) developed their training in house. Most traditional employers (70%) provided training at the workplace as well as sending staff out for external training.

Just making it available in conjunction with face-to-face learning would benefit many thousands of students. (Online employer, communication sector)

Employers who are also registered training organisations are more likely to have purchased online training in the past, and are more likely to be considering purchasing it in the future.

Features of online demand

Important elements—online employers

The two employer groups had quite different views about the most important elements of the online training product. Online employers felt that the important elements were (in order of priority):

✧ appropriate content

✧ compatible software

✧ cost-effectiveness

✧ capacity to fast-track training

✧ training provider understands needs

✧ available immediately

✧ easily updated

✧ Australian standards and examples.

The least important elements of online training were accredited training, word-of-mouth recommendations and brand name.

Important elements—traditional employers

Traditional employers felt that the most important elements of the online training product were:

✧ costs

✧ finding a trainer that understands needs

✧ that learning materials include current Australian examples, particularly in sectors affected by regulation.

The least important elements were brand name, and lack of computers at employees' homes.

Demand features by sector

An analysis of the importance of the elements of online training by industry sector indicated that:

✧ Only the communications sector valued brand names of online training products.

✧ The agriculture, communications, utilities, finance, manufacturing and retail sectors believed that difficulties undertaking online study at the workplace was an important consideration.

✧ The accommodation, utilities and personal services industries noted that it was important for employees to have computers at home.

✧ The accommodation, utilities and health sectors felt that the level of staff computer literacy was an important issue.

✧ The availability of Australian examples was felt to be important by the cultural and recreation, agriculture, utilities, government, health and retail sectors.

A full analysis by sector is contained in appendix 2.

Satisfaction with the online training product and service

Employer satisfaction and lessons for online delivery

One in ten employers who currently use online training was dissatisfied with their experience of online training. Sixteen per cent said it did not live up to their expectations, and 27% were not sure whether it had lived up to their expectations. The reasons for a low level of satisfaction varied from problems at the workplace to cost and problems with the online product.

Problems with training providers

One in seven traditional employers said it was not easy negotiating with training providers (only 3% believed that telephoning providers to find out about online training was the best way of getting information about online training), which limited their ability to develop or purchase training to meet their particular needs.

> The biggest problem we have with online training is getting the RTOs on board. We want it, but getting them to help is another thing. Even a big sector like ours has almost no influence on public providers, we have as much influence as a gnat! This is unfortunately the way it is, it's too big a ship to turn.   (Group training company)

Focus group participants reflected that, for many providers, the focus is on training (from the provider perspective), rather than on learning (from the consumer perspective). The providers feel they are the experts, with the customers having little choice. Many people described situations where approaches to training providers with ideas and market opportunities for online training were met with little interest, or were lost in the inertia of the organisation.

Market segments

Group training

Group training provides employment for a significant proportion of New Apprentices and trainees. Some group training companies are registered training organisations in their own right, but much of the training in this sector is purchased from external training providers. Peak group training bodies at state and national level identified an interest in developing online training for this sector. The combined purchasing power of group training is likely to produce the economies of scale needed to produce quality, low-cost online training.

Communications

The information technology and communications industry would seem an obvious market for online training. Its members tend to be well adapted to the internet, and training content is often highly suited to web-based presentation. The major barrier to online training for this industry is its fragmentation (the majority of employers are small business) and the job mobility of employees. Opportunities to market online training to this sector may lie with employees and their individual career-focused training, rather than at organisational level.

Hospitality, accommodation and tourism

The hospitality, accommodation and tourism sectors are 'here and now' businesses, highly influenced by world events and changing consumer trends. Employees tend to be mobile and there are large numbers of employees coming into and leaving the industry at any given time. The industry maintains currency through a high level of staff training. The size of the sector would indicate that economies of scale in the development of online training products are possible.

Agriculture

The agricultural sector is undergoing significant change. The lack of local training facilities combined with the expansion of agribusiness, and the resulting competitive pressure on traditional farm managers to increase cost efficiencies, implement sustainable land management practices and comply with increasing regulation, makes this sector a likely market for online training. To service this market, online training needs to take into account the highly restricted download capacity of most rural internet connections, as well as the need to build social interactivity into the learning environment in a cost-effective manner.

Education

Staff training in the education and training sector is a market segment with strong potential. Employees within this sector tend to have the personal attributes necessary to be successful online learners, and the size of the sector provides economies of scale for the development of online training.

Government

The government sector is one of the few success stories in online training. Rather than view this sector as 'the market', the online VET industry needs to recognise that the current price–service equation for much of the online training in Australia is based on government purchasers. Product benefits and price structures for other market segments should reflect their particular needs, not those of the government sector.

Marketing to employers

The surveys showed that the most effective ways by which traditional employers received information about online training were by browsing websites (43%); followed by seeking opinions of others in the industry (16%); and having a sales person visit and work through needs (12%).

The least useful ways of getting information were telephoning providers and getting an overview of available courses (3% thought this was the most useful way), reading ads in newspapers or trade journals (3.5%), and electronic material via CD-ROM (5%).

Conclusion

This section of the report summarises the findings for the research questions that underpinned the research project.

Specific markets

What specific markets already exist in Australia for online delivery?

The online training market is underpinned by two main segments—individual learners and employers who purchase or provide online training for their employees. Within these segments, the strongest markets are governments and large organisations (many of which are registered training organisations that develop their own online training in house). A secondary market exists in career-motivated adult learners with successful post-school experience of education and training.

The online training market is immature and has not yet developed a 'mass' market base, although a number of smaller market segments appear to be emerging. These segments are grouped around specific market opportunities, including compliance and management training, career-minded adults and leading industries such as aviation and finance.

What is the demand profile for these market groups and how is demand currently being met?

Employers who are currently using online training value content, compatible software, cost-effectiveness, ease of customisation and immediacy. These demand elements are most easily met by larger organisations that have the capacity to customise online training in house or negotiate favourable terms with training providers. Organisations with a high proportion of motivated adult learners with experience of post-school training, a high level of computer literacy, and competency in and access to computers with web connections, are best situated to take advantage of online training.

Smaller employers and individual learners are product 'takers' rather than product 'makers' and there is strong evidence that demand is being depressed by the lack of appropriate online training products and prices.

One of the most significant findings in this research is the level of demand for micro-segments of training that articulate into accredited modules and courses. Very little online micro-segment training is currently available on the open training market, and this demand element is largely untapped.

Both individual learners and employers are demanding 24/7 availability of online training and support with appropriately structured pricing. It appears that the majority of providers in the Australian online training market have not yet identified the opportunities generated by a pricing scale that offers basic online training products at low prices and highly responsive products at premium prices.

Potential markets

What is the potential market in Australia and overseas for online delivery?

A significant proportion of the current VET market (recently estimated at 10% of the adult working-aged population) could be provided with elements of the content—particularly theory elements—online. There are indications of a similar level of uptake in other countries with comparable information communication technologies and VET infrastructure.

Is there a greater potential demand for exploiting existing markets more fully or in the creation of new online learning markets?

Greater demand lies in the development of a new mass market for online training, for which the main demand features are micro-segments of training, and pricing based on the complexity of content, immediacy of availability and level of learner and information technology support.

None of the existing online training segments is anywhere near market maturity. Significant growth is forecast within existing segments, such as government (all Commonwealth Government departments intend to use online training, and use within the local government sector is growing rapidly), large organisations, and career-minded individual learners, who may eventually become the largest single market segment for online training.

Business models

Which business models in Australia and overseas have been most successful in generating or meeting demand for online learning?

Business models based on learning management principles that respond to 'just for me' requirements (for both employers and individual learners) appear to be achieving the best match with customer needs.

The lack of awareness or interest in brand names as part of the purchase decision is a good indicator of the immaturity of the online market in Australia. The business models that appear to be successful in the current market are those which respond flexibly to individual needs. More mature 'mass' markets may, in the future, require quite different business models. There are indications that the emerging business environment may include models that separate content delivery and learning support.

Can their success be transferred across the identified market segments?

In order for online training to become a mass market, it is essential that providers are able to establish systems that effectively support management of individual learning. Schofield et al.'s observation (2001) that 'leading edge online practitioners are exploring and experimenting rather than systematically constructing their experiences and knowledge' does not provide a good basis to compete commercially in a mass market. The relegation of online training to an ancillary role, as happens in many large training organisations, does not provide the resourcing or systems support to enable an approach that responds to individuals.

It appears that large training providers have the physical and intellectual infrastructure to allow separation of the online delivery role from the learner support role. However, implementation for some providers will require a significant cultural shift. Other possibilities for the separation of delivery and learner support include private–public provider partnerships or content developer–learning support partnerships.

What impact does the perceived registered training organisation experience in online delivery have on demand?

To capitalise on branding based on experience, online products need to satisfy customer expectations, organisational systems need to support individual learning, and the marketing needs to help customers make informed purchase decisions.

In the current environment, there is no 'mass' perception (or even awareness) of the value of online training. Good online training providers can rely on word-of-mouth recommendations and are steadily and successfully increasing their customer base through personal endorsements. Marketing theory would indicate that the speed of growth of the online training market will be inhibited until there is widespread understanding of the benefits of online training, easier access via pricing and support options, and clearly defined points of sale.

Customers in the current market find it difficult to evaluate registered training organisation experience in online training. There is no clear point of sale for many online products; the market is still so small that it lacks a critical mass of individuals who can provide word-of-mouth recommendations, and there is limited opportunity to 'try before you buy'. In addition, customer perception of the online training product has been damaged by some overly enthusiastic marketing of online training as a complete training solution that subsequently failed to live up to expectations.

Effect of specific demand elements

What effect do: geographical/cultural allegiances; the quality of the product; and the level of learner engagement have on demand?

Geographical allegiances were not identified as a significant demand element. However, geography is an important consideration in that one of the strongest demand elements was blended delivery, including face-to-face interaction, which is most conveniently delivered when training is available in the local area.

The research identified no significant demand elements based on culture. While Australian examples were considered essential in compliance training, both employers and individuals tended to place a lower value on local content and examples.

Learner engagement is a key demand element and was closely tied to perceptions of product quality. Many online training products currently on the market rely heavily on high learner motivation levels for successful completion of the module or course. This approach is restricting the growth of the product. Providers need to look critically at the style and content of their online training products to ensure that the level of difficulty does not exceed that of other modes of delivery for the same course, or the capacity of the target audience to achieve successful course completion.

How is demand affected by the nature of the vocational education and training being delivered—do some industry areas more naturally lend themselves to online delivery than others?

Industries with a high proportion of motivated, computer-literate, career-minded adults with successful experience of post-school training are best placed to explore online training.

Practical, hands-on training and training that is highly dependent on learner–teacher debate and discussion are less viable online. However, the research identified significant opportunities for the online delivery of theory elements of New Apprenticeships in a wide range of vocational areas.

While the content of VET in some industries would appear to lend itself most naturally to online training (the information technology industry is a good example), the nature of these industries did

not necessarily provide cost-efficiencies for online training. Other likely sectors (such as agriculture) experience significant cost barriers, and some members of the strongest segment (large organisations) are prevented from participating in online training in its current format because of the download restrictions of corporate firewalls.

These examples reinforce the importance of undertaking careful market research to establish the financial viability of potential markets before developing or marketing online training products.

How important is the teacher–student relationship?

The importance of the relationship between the student and teacher did not decrease in online training. In fact, some respondents indicated that the availability of rapid-response and after-hours contact made online training a better option for teacher support. The level and quality of teacher support was found to be highly inconsistent across the current online training market, yet the research identified that it one of the most important elements. Clearly stated modular pricing and consistency in delivering the level of advertised support may resolve the existing teacher support problems.

Restrictions on access

What effect do restrictions on access and delivery have on demand?

Technological barriers

Technological barriers were identified as one of the main restrictions on demand. The most commonly reported problems related to the lack of online training products suited to older operating systems, low bandwidth and firewalls. Many respondents were also critical of faults in the online training software, particularly problems with downloading and printing. The specific market segments affected by technology barriers were rural, small business and some large employers (with firewall restrictions).

Access to online computers was a barrier for both employers and individual learners. This was not simply a lack of availability of an up-to-date online computer, but also included limited experience with web, email, chat, and bulletin boards—only 4% of classroom students surveyed were familiar with all of the typical online training tools.

A range of respondents mentioned the need for hard-copy material and texts to support online training. Rural learners in particular felt that hard-copy material would overcome two technological barriers—inconsistent connections (they would then be able to study when their connection dropped out) and download costs (reducing the need to download core material). Employers of New Apprentices felt that hard-copy texts were an important workplace reference that should be included as a normal part of the online training product.

Geographical barriers

The need for face-to-face support, or attendance at the training provider premises as part of blended training (which was a core part of the online training product in this research) means that learners tend to take part in training in their own locality. This raises obvious problems for rural and remote learners, but also means that online training is not as geographically liberated as one would expect. Non-traditional approaches based on central content delivery and regional learner support may expand geographical catchments for online training.

Costs

Customers reported that there are a range of costs to be factored into the purchase of online training. In purely financial terms, rural customers are the most disadvantaged because of slow internet connection and high, timed telephone charges. Customers from all backgrounds

mentioned the personal costs in terms of the additional time required to study online. While existing online customers tend to be the technologically capable 'early adopters', new mass markets may be aimed at employers and organisations with older equipment, and thus the cost of purchasing up-to-date computers and printers need to be factored into the product pricing.

A strong recommendation from focus group members concerned pricing that is structured according to the level of service, starting with a basic, low-cost product and offering modularised prices for additional complexity, graphic presentation, immediacy of availability and the level and timing of information technology and learner support.

Waiting times

The long waiting times before being able to commence training were considered incompatible with the online training product. Many respondents recognised that immediate availability is more costly and suggested regular (weekly) start times, or modular price structures that help to recoup the training provider investment in premium products and services.

Micro-segments of training

Increasing numbers of learners want training delivered in micro-segments. The current online training market has a very limited supply of lesson-sized learning segments and little articulation of micro-segments into accredited courses. This is an important opportunity for the online VET sector.

Accreditation of informal learning

A huge and growing segment of the VET market is informal or non-accredited training. Limited access to recognition of current competencies processes means that most of this training does not articulate into formal qualifications. The existing system creates artificial barriers within the VET sector that work against the involvement of people who could complete formal studies in a reduced timeframe. Online recognition of current competencies provides an excellent opportunity to engage a large market segment in formal online VET.

Group learning

Group learning is an undervalued opportunity in the online training market. This research identified specific opportunities for group learning: rural study groups; school-based access to a wider range of VET subjects; large employers using in-house computer suites; as well as group study of online theory elements of New Apprenticeships. While the establishment and management of learning groups could be seen as the role of the customer, it may be valuable for providers to pursue a strategy that focuses on aggregating (or grouping) demand. This could assist in establishing economies of scale for development and delivery of online training products.

What can be learned from specific groups?

What can be learned from the experience of providing distance learning to specific groups within metropolitan and regional communities about the factors that influence demand from these groups?

Metropolitan distance education students tended to value the convenience of being able to choose to do some elements of their studies independently and some face-to-face. This typically fell into the pattern of theory/information being accessed at home, and interactive or 'socially situated' learning at the training institution or workplace. This echoes the desire and experience of online students who tended to mix and match their studies to suit their learning requirements and lifestyles.

Rural learners also expressed a strong need for face-to-face training, both for the reasons identified by the metropolitan learners, but also to address the social isolation experienced in small and remote communities.

Optional cost structures and modes of delivery

A core finding of this research was the need to develop optional cost structures based on complexity of content, level of learner and information technology support, and immediacy of availability.

There appeared to be strong demand for online resources to supplement the practical and experiential elements of New Apprenticeships, and it is expected that, because of the limited need for support, this product could be delivered at a low cost.

Many online respondents were critical of the operation of learning management systems and there was a high level of experimentation with new and customised systems. There appears to be a need for simplified, reliable learning management software.

Concluding remarks

What did this research tell us about demand factors for online training? The most important message is that there is strong potential demand. While some demand elements will be challenging for the online training industry to develop and deliver, there are many other elements that only require 'tweaking' of current online training products to achieve much better sales.

Inevitably, the exponential growth of information and communication technologies, and the changing world of work will drive the growth of online training. A 'trial-and-error' approach to product development and marketing will not necessarily provide good financial returns and may be contributing to the immaturity of the online training market, thus depressing the profitability of the sector as a whole.

The key findings of this research are that:

◇ There is a specific demand for micro-segments of training.

◇ Modularised pricing is recommended for varying levels of service.

◇ Online training offers flexibility in the mode of delivery.

◇ Online learning should be characterised by learner management rather than 'teaching'.

◇ Successful online products will be those that have been designed to meet learner expectations.

Attention to these key findings will assist online training providers to target their markets more strategically and result in the more effective use of human and financial resources.

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Appendix 1: Literature review

The competitive market for online materials is, at this stage, a very underdeveloped area, underdeveloped in the sense that everyone is trying to become involved but most people are having difficulty working out how to do it.   (Hill et al. 2003)

Introduction

The knowledge economy

Described by such terms as 'knowledge explosion,' 'information era' and 'information hype,' we are living in an era where knowledge is evolving at a rapid speed, where students and teachers alike are called upon to quickly assume new skills, competencies, and knowledge. However, in spite of its positive economic impact on society a whole, skills and knowledge development are increasingly seen as a responsibility of individuals. Clearly the acquisition of new skills, competencies, and knowledge are essential for individuals to gain better and more lucrative employment opportunities in the new world economy.   (de Moraes et al. 2003)

The knowledge economy is a fundamentally new way of working that is knowledge-based, as opposed to information-based. There are three important distinctions between knowledge and information:

1   Information can sit in a drawer, but knowledge has to reside in a human head.

2   Knowledge is more difficult to pick up and transfer than information.

3   Knowledge requires assimilation, understanding, and commitment (Hobbs 2000).

Learning for the knowledge economy will not only be situated in schools but will take place in communities, workplaces and families (Ministerial Council on Education, Employment, Training and Youth Affairs 2001). This concept underpins the development of the online training sector as Australia follows (and in some cases leads) the global movement into the knowledge economy.

Global development of information technologies impacts on training in a variety of ways: increased focus on costs—including the costs of traditional training delivery; more companies operating across extended geographical areas that are difficult to service through traditional delivery methods; increased numbers of busy career-minded adults over the age of 25 who are continuing to study; knowledge workers demanding greater workplace and training flexibility; learning now a lifelong process rather than a distinct event at the beginning of the career; and the fast growth of the internet an ideal vehicle for training in a geographically dispersed global market (Mitchell 2001).

Mitchell also cites McCrea et al. (2000):

Corporate customers are being driven to e-learning by the transition to a knowledge-based economy and: increasingly competitive global business environments; rapid technological change; the migration towards value chain integration; lack of skilled personnel; and rapid increase in information technology vendor certification programs.   (Mitchell 2001)

The provision of appropriate training is a key to success in the new economy. Pye, in a paper presented to the European Conference on Educational Research (2000), identified the drivers to

train as: external factors, such as legislative and regulatory requirements; the competitive environment, including supply chains and market positioning; and firm-specific factors, such as policy (in quality standards or human resource development) or practice (innovative work practices or introduction of new equipment).

Perceived benefits to employers in the new economy can hide social costs. The Organisation for Economic Co-operation and Development (OECD) publication *E-learning: The partnership challenge* (2001) observed:

> The cost savings to organisations through online training are often transferred to the individual learners in their own time and the spin-off social and loyalty benefits of company training away days are lost. The economics of education and training for the employer improve at the expense of social and domestic costs, as family Sundays and evenings become invaded by near-mandatory 'just-for-you' work-related updating in 'free time'.

The macro environment

> As recently as 40 years ago, cross-border distance education and training were almost unheard of except within large organisations scattered across the globe, such as the US armed services, within which personnel could study at a distance, wherever they were stationed. Today, it is fostered by a growing demand for standardised products, services and technical infrastructure; the need to obtain, maintain and upgrade skills for employment; and the reluctance of governments to pay for rapid expansion of campus-based provision.
>
> (Cunningham et al. 2000 cited in Hawkridge 2003)

OECD (2001) identifies six megatrends driving the education market forward and reshaping its contours: technology (internet), globalisation, consolidation, changing demographic trends, branding and outsourcing. More specifically, the literature search identified the following large-scale environmental directions and issues facing online VET:

✧ Globalisation is creating a more international economy and universal culture.

✧ Increased international competition is accelerating technological change.

✧ Rapid technological change leads to declines in blue-collar work and increases in skilled white-collar work.

✧ There are immense but uneven changes in workplaces.

✧ There is a massive increase in non-standard forms of work.

✧ There is a growing polarisation in incomes and access to secure jobs and technology (Robinson 2001).

Other sources noted additional environmental directions:

✧ Changes in technical and vocational education will demand learner-centred, innovative and flexible approaches (United Nations Educational, Scientific and Cultural Organisation 2002).

✧ Online delivery will allow private providers who do not need to support the infrastructure of major public providers to compete online based on their quality of service to learners (Education Network Australia 1998).

✧ Integration of supply chains and the capacity of online training. The Australian Bureau of Statistics reported that in 2001–2002, 24% of Australian businesses that offered structured training used equipment manufacturers as providers (Australian Bureau of Statistics 2002; NCVER 2003b).

✧ Increasing competitive pressure in the metals, engineering and information technology industries is exacerbating employers' traditional failure to make an adequate commitment to training investment and skills development (Hall et al. 2000).

◇ Lifelong learning has become increasingly important and credentials no longer maintain currency for a lifetime of work (James 1999).

◇ There is a dilemma reconciling economies of scale with the need for and fact of diversity, when up-front investment cost can be very high and technological change implies fast obsolescence of infrastructure and learning materials (OECD 2001).

◇ The business community is increasingly seeing higher education as an investment opportunity, particularly as it is seen as poorly run, low in productivity, high in cost and still not effectively using technology. The 'for-profit' sector sees higher education as another business ripe for takeover, remaking and profits (Levine & Sun 2002).

◇ Alliances between vendors of complementary technologies or services will extend product reach in fragmented markets and provide leverage of resources and risk-sharing (Barron 2002).

The table below shows the three main waves of industries embracing the net economy (not necessarily online training—although a propensity to do business on the net is likely to increase acceptance of online delivery of staff training and information). Most OECD countries are now in the middle of the second wave.

Table 1:   Industries embracing the net economy

First wave	Second wave	Third wave
Books	Automotive	Insurance
Music	Apparel	Law
Travel	Banking	Real estate
Software	Telecommunications	Group purchasing
Hardware	Entertainment	Market research
Discount brokerage	Recruitment	Education
News	Health care	Food and cosmetics
	Software subscriptions	

Source: OECD (2001)

Barron (2002) cites research from the information research firm IDC that forecasts the global corporate online training market will grow to US$23 billion by 2004 from an estimated US$3.4 billion in 2000.

Competitor analysis

Online training exists in a global marketplace and online VET providers face competition from global consulting firms, telecommunications providers, hosted content-management providers, universities, game developers, vertical market specialists, software firms, developers of human resource systems (Barron 2002), television broadcasting and datacasting agencies (Agnew 2002) and indeed, strategic alliances between these various sectors and targeting of specific customer segments (such as information technology training or business management) (Mitchell 2000).

> The encroachment of this broad array of outside competitors represents both a threat and an opportunity for existing eLearning providers. These new players are helping to expand the overall market, adding new technologies, services and customers to the arena, but they also threaten to steal market share and momentum from existing 'pure-play' eLearning providers.
>
> (Barron 2002)

At a national level, Mitchell (2000) has undertaken a feasibility study for a national VET consortium to market VET overseas and identified the following competitive elements:

◇ With the proliferation of new providers in the online training market, many consumers will select the known, brand-name provider, to ensure quality.

◇ Traditional training companies are adding the 'e' to learning, such as Global Knowledge Network, which previously used classroom-based delivery strategies.

◇ Customers will look beyond single courses to providers who can deliver a comprehensive training solution.

◇ Online training companies will buy smaller companies, to enable them to provide a comprehensive training solution.

◇ Strategic alliances between online training providers will increase. For example content publishers will combine with educational technology vendors and training services suppliers.

◇ The tendency to outsource training activities is expected to grow by more than 10% each year.

◇ Competition between online training providers will increase.

◇ E-learning and c-learning (classroom learning) are blending rather than one ruling out the other: the strongest use of online training is as an extension rather than a replacement for classroom learning.

◇ Development times for content preparation will decrease, with increased use of templates and fewer custom graphics and the use of learning objects.

◇ The adoption of standards for online learning systems will enable content and courseware to be reusable across the whole organisation.

Schofield et al. (2001) observed that leading-edge online practitioners are exploring and experimenting rather than systematically constructing their experiences and knowledge and that their employing organisations are not systemically encouraging or harvesting value from these innovators.

VET training in Australia

The formal, publicly funded VET system amounts to some $A4 billion or 0.8% of gross domestic product in Australia. In addition, employers invest a further $4.7 billion in structured and unstructured training (Robinson 2000). In 2002, the Commonwealth Government estimated that there are now around 4000 registered training organisations in Australia and many employers are becoming registered training organisations in their own right. In 1998, 10.7% of the adult working-age population was enrolled in formal VET, with the largest numbers in certificate II and certificate III courses (Cowan 2002).

A TAFE Frontiers study, *The current status of online learning in Australia* surveyed 1200 of Australia's largest employing businesses in both public and private sectors and found that in 2000, only 30% of organisations were using intranet and 14.6% using internet to deliver learning.

Data from the NCVER's 2002 Student Outcomes Survey (NCVER 2002a) reflected responses from 41 807 graduates (30.6% of the graduate population) and 8257 'module completers' who left TAFE without finishing a course (4.1% of the module completer population) with a median age (in May 2002) of 28 years (graduates) and 34 years (module completers).

Findings relevant to this research project are:

◇ Only 6% of TAFE students relocated for training, indicating that, for substantial numbers of students, locality prescribes the choice of course.

◇ A third (34%) thought their instructor's knowledge of subject content was the most important aspect of their training. This is an important finding for online training, as it implies that, for two-thirds of the respondents, instructor knowledge can be replaced with knowledge from other sources.

The 2002 NCVER Student Outcomes Survey (NCVER 2002a) also used a new method of grouping students based on their motivation for undertaking their training:

✧ *apprentices/trainees:* students who undertook TAFE training as part of an apprenticeship or traineeship

✧ *self-employed:* students who undertook their training to develop their existing business or to start their own business

✧ *labour market entrants:* anyone under the age of 25 who undertook their training at TAFE to get a job or someone under the age of 19 who undertook TAFE training to try for a different career

✧ *career changers:* respondents aged 19 or over who trained to try for a different career or anybody aged 25 or over who undertook training to get a job

✧ *skill improvers:* students who undertook their training to get a better job or promotion, because it was a requirement of their job, or because they wanted extra skills for their job

✧ *bridgers:* students who undertook their TAFE training to get into another course of study

✧ *self-developers:* students who undertook their TAFE training for interest, personal or other reasons.

Career changers, skill improvers, self-developers and self-employed are more likely to complete modules than they are to complete courses. These segments are therefore more likely to purchase 'just enough' training. Descriptions of the groups most relevant to this research are shown below, extracted from the 2002 Student Outcomes Survey (NCVER 2002a, pp.7–8).

Career changers

Students in this group already have some work experience and undertake training to gain skills that will aid them in obtaining a job of choice. They tend to be older than labour market entrants and apprentices/trainees, with a median age of 37 years for both graduates and module completers. In contrast to younger students, such as apprentices/trainees, about two-thirds of graduates seeking a career change have post-school qualifications before undertaking their TAFE training (module completers 64%). Among graduates, two-thirds of career changers are female. For module completers this proportion is closer to half. Career-change graduates are most likely to have undertaken training towards a certificate II or III qualification at TAFE.

Skill improvers

These students undertake training to maintain or increase skill levels in their existing job. For this group, the median age of graduates (36 years) and module completers (38 years) are comparable to those of career changers. Skill improvers also have similar levels of education, with about half having completed Year 12, and over two-thirds having post-school qualifications. Skill improvers comprise approximately equal numbers of male and female students and are most likely to have undertaken training towards a certificate II, III or IV qualification at TAFE.

Self-developers

Unlike the other student groups, self-developer graduates (median age 30 years) and module completers (median age 38 years) undertake their TAFE training for interest, personal or other reasons rather than for further study or job-related reasons. In this group, more graduates and module completers are female when compared to the average for these groups. The proportions of self-developers with Year 12 and post-school qualifications differ little from the averages for all graduates. Graduates are most likely to have received a certificate II or III from their TAFE training.

Self-employed

This group comprises students who undertook training to start their own business or to develop their existing business. The majority of these students are undertaking training to maintain or

increase skill levels for their business activity. Given this aim, it is not surprising that self-employed students have a similar profile to skill improvers, with a similarly high median age and a high proportion of students with post-school qualifications. Self-employed graduates are most likely to have received a certificate III or certificate IV from their TAFE training.

Organisational responses to different motivations

Organisations should aim to provide training that meets the needs and supports the strategy of the business. Traditionally, organisation-wide training programs have been offered, although these do not necessarily address all the skill needs of individual employees. To do this requires increased customisation of training for individual employees (NCVER 2003a).

Online learning

What is online learning?

'The environments in which learning takes place have traditionally been thought of as a set of options between the classroom, the library, the laboratory, the home and the workplace. The arrival of ICT [information and communication technology] is blurring these distinctions (OECD 2001).

Online learning can encompass a range of information technologies, although all research articles included some reference to web or intranet-based delivery. A range of terms is used to describe offerings in the online training sector and include: online learning, online delivery, web-based delivery, online education and training, computer-mediated communication learning, technology-based courses and electronic course delivery. Some imply a narrower aspect than others but it would appear from the literature that these terms tend to be used interchangeably and perhaps the term itself is not important (Booker 2000).

Online training allows communication to happen one-to-one, one-to-many, many-to-many and many-to-one (OECD 2001), and the literature reinforces the importance of a learner-centered approach, which integrates a number of technologies to enable opportunities for activities and interaction in both asynchronous and real-time modes (Bates 1997 cited in Booker 2000).

Although some learning is offered entirely online, this is rare. Schofield et al. (2001) found that there was little support among VET practitioners for a fully online approach. There was a common view that different learners, different competencies and different industries require different mixes of online and face-to-face delivery.

Kilpatrick and Bound (2003 in ed. Guthrie 2003) make the distinction between delivery and learning:

> Online delivery refers to a range of delivery modes where being online (e.g. email, using WebCT, Blackboard and so on) is a component of, or all of the processes designed for learning. Learning is a socially situated activity where the relationship between what the individual learns and the situation and context in which knowledge is acquired and used, shape individual and collective cognition and practice.

Booker (2000) puts it nicely: 'What you need to remember is that online delivery is not "technology in search of a solution". It is about using communications technology to enhance the delivery of courses, to improve students' access to learning opportunities and their success.'

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How information communication technologies can be used to deliver benefits

Things which cannot be done without the technology

✧ the dematerialisation of time and space—learning any time anywhere

✧ mass-education—access to leaning for everyone

✧ internet access to ever-growing collections of educational resources and services

✧ input for task-based learning using fast search and retrieval software, or for research work

✧ learning on demand

✧ peer-group teaching/learning through distance learning via information communication technologies

Things which can be done better with technology

✧ the choice of learning style

✧ customised and personalised learning materials and services

✧ individualised tracking and recording of learning processes

✧ self-assessment and monitoring of learner performance

✧ interactive communications between participants and influencers in the learning process

✧ interactive access to educational resources (OECD 2001)

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Who buys online training?

> Recent research on commercial non-education businesses shows that while consumers appreciate the convenience, ease, and time-independent nature of online shopping, they also seek the service of the physical store for returning merchandise, getting expert advice, trying and viewing products, and interacting with salespeople and fellow customers.
>
> (Cassar 2001; Daniels 2001 cited in Levine & Sun 2002)

The main two groups of purchasers of online training in Australia are organisations purchasing training for their staff, and individual learners. There is little research about the purchase decision and how it differs between these two groups although Aspin (2000) states that each company is searching for ways to create a shared learning culture that will enable staff to learn quickly from their environment, from others at work and from outside the organisation. Schofield (cited in NCVER 2003a) identifies the increasing importance of online learning as a way of integrating learning with the strategy of an organisation. Schofield sees possibilities in online training 'leveraging workforce development up the corporate agenda' (NCVER 2003a).

A recent comparative study by TNS Research (Foreshew 2003) showed that there was a significant trend towards online training, with 75% of Australian companies surveyed expecting to increase their use of online training (compared with 55% in Singapore and Hong Kong). The Asia-Pacific corporate online training market is expected to grow from $US100m to $US345m by 2006, largely driven by companies with more than 2500 employees.

The recent research by Hill et al. (2003) into the size and scope of online usage in the VET sector in Australia identified that the most popular industry groupings for online modules were property and business, communication, agriculture, forestry and fishing. The industry group of electricity, gas and water was the least covered, and both mining and wholesale trade also had very few modules on offer.

Hill et al. also found in relation to TAFE graduates:

✧ Only 0.5% of the total graduates used online training in 2001 as compared to 0.8% in 2000. There was no indication (from the NCVER Student Outcomes Survey) that the students engaged in online activity were markedly different from the standard student population.

✧ 1.7% of the module completers used online training in 2001, not significantly different from 1.6% in 2000, and may indicate that module completers are more likely to engage in online study.

✧ Both male and female students in the age group of 20–24 used a higher percentage of online training (21.6%) in their training by comparison with students in all other age groups (0.4% to 15.3%).

✧ The proportion of online training for graduates who undertook any part of their learning online in 2001 was around 60% for graduates in capital city areas and 40% for graduates in rural areas. For module completers, the proportion was around 51% for both capital city and rural dwellers.

✧ One characteristic of current online learners is that they expect and need high levels of institutional support and this is not as readily available in country areas. Learner support is needed to overcome deficiencies in training, technological understanding and quality of communication, which tends to favour the uptake of online training by students who live closer to their training providers.

Much has been written about student attributes that support online learning. Misko and Phan (2000) found that, although more students choose traditional delivery, those who choose flexible delivery do so because it fits their lifestyle and is seen to be more convenient than traditional classroom-based delivery. They add:

> Students choose delivery methods that harmonise with the way they believe they learn best and are generally prepared to accept the responsibility for their own shortcomings. However, unless students are strongly motivated to follow a disciplined study routine, the more flexible methods of instruction may not be the most efficient for them and may not automatically translate into better pass or completion rates.

Kilpatrick and Bound (2003 in ed. Guthrie 2003) have undertaken a study of online benefits and barriers in regional Australia:

> Online delivery attracts a wide cross-section of students in terms of gender, age and employment status. Student online enrolment patterns vary, but many enrol in only one or two units/modules with an online component. Online students are geographically scattered in relation to the location of the provider campus. Many online students reside in the locality of their provider's campus(es) and attend face to face for other units/modules. Online learning is a choice for most students in metropolitan locations who are not prevented by distance from attending face-to-face classes, while students in regional areas do not have the luxury of choice of delivery methods to best match their preferred learning style.

The use of online training to gather specific information, not necessarily linked to formal accreditation, was frequently mentioned by participants in the guided interviews conducted as part of this research project. Groves' report, *Online education and training for Australian farmers* (1999) reinforces that informal education and training is at least as important, if not more important, than formal award courses, to the successful operation of Australian farming enterprises.

The online market is fragmented, and in marketing terms the 'point of sale' for online courses is often difficult to identify. The OECD's *E-Learning: The partnership challenge* highlights the immaturity of the online market: 'a multitude of stakeholders need to move up the learning curve before the new education market will take off, and successful educational applications appear in the market place'.

The learner in the online market

The potential for customised learning through online technologies is described in the following quotation.

> Traditional school-based eduction was *just-in-case* education, providing information and knowledge that might prove useful one day. Modern flexible learning is seen as moving through *just-in-time* (a practice and a term borrowed from industrial production and closely

> fitted to specific as-needed skill training), to individualised and self-chosen learning,
> characterised as *just-for-me*. (Duke 2002)

Other sources, for example, the Australian National Training Authority (ANTA) add *just enough*, reinforcing the growing tendency for learners to purchase only the specific learning they need— rather than pursuing a full course of study.

Despite the potential of online training, current services do not necessarily provide a positive experience. Misko and Phan (2000) observed that 'online delivery is an effective method of delivery of introductory courses for students who have some basic familiarity with computer skills and who have the motivation and ability to work independently'. Brennan, McFadden and Law (2001) note inadequacies in screening and induction: 'it is wrong to assume that students come to online learning with adequate skills to start their computer', also 'the online environment has bigger language and numeracy demands which make vulnerable groups of students even more vulnerable'.

Cahion and Palmieri (2002) found that students believed induction to be important, but reported that no one had checked their skills before they started. 'They did not have ready access to online help and wanted a real person to help them, rather than a computer screen. An online help desk was one area that everyone agreed was needed, preferably with 24x7 support.'

VET practitioners interviewed in Schofield's 2000 study *Online learning and the new VET practitioner* believed that having computer skills and being comfortable with the technology are a necessary precondition for learning online. Learner motivation, commitment to learning, a willingness to try new methods, and an independent learning style were also considered important. Other necessary attributes included communication skills, a reasonable command of English and an ability to read. Bradbury and Farrell (2001) note however, that an online learner who is a technology advocate will very quickly become disenchanted with online material that does not integrate a high degree of interactivity, communication features and multimedia elements.

Training providers who are considering their capacity to deliver quality online training should take into account the following set of preconditions necessary to improve learning outcomes through online delivery:

✧ Acknowledge and take into account differences in student/user backgrounds in every phase of the design and delivery of online materials and support.

✧ Strenuously apply the lessons already learnt about good teaching and learning.

✧ Cater for the differences in learning styles and preferences of students/users.

✧ Accept that student technological skill and comfort is located along a continuum of proficiency and plan to design materials and environments accordingly.

✧ Recognise that there are huge differences in access to the new technologies and work towards reducing these.

✧ Evaluate the effectiveness of online programs using a variety of methodologies and time frames.

✧ Prepare teachers–trainers to use new technologies flexibly and beyond minimum levels of competence.

✧ Seek to explicitly enhance information literacy skills.

✧ Focus on the communicative and interactive dimensions of the new environments.

✧ Don't expect technology to solve all the hard problems. (Brennan et al. 2001)

The American Society for Training and Development and the Maisie Centre (2001) describe the need for learning support from the employee perspective:

> Organisations cannot rely on the technology itself to drive interest, acceptance, or satisfaction
> with e-learning. While companies can indeed view e-learning as an efficient new means for

educating employees, the context in which this learning is offered must be carefully considered and managed.

The American Society for Training and Development and the Maisie Centre support their comments with a set of recommendations that will help employers to increase staff satisfaction with and participation in online training:

✧ Use intentional, dynamic, and continuous marketing activities, including traditional marketing methods, such as face-to-face discussions and print advertising.

✧ Provide the time and space to learn on company time.

✧ Create a learning culture that encourages and appreciates online learning.

✧ Develop an environment where peer support is widespread.

✧ Ensure that frustration with online training technology is not a barrier to successful online learning.

✧ Develop incentives beyond candy bars and meaningless certificates that provide valuable benefits such as career advancement and peer recognition.

✧ Continue to implement and develop synchronous, collaborative courses that fuel the learner's fundamental desire for interaction while more closely simulating the classroom experience.

✧ Blend online training with other complementary forms of instruction to attract those who may be uncomfortable with learning via technology.

Quality versus demand

In interviews with training providers in the early part of this research project it became evident that many equated quality with demand—along the lines of 'If it's good, they'll buy it'. We therefore consider it necessary to state, quite clearly, quality is *not* demand, but providers are unlikely to enjoy strong consumer demand without a quality product. TAFE Frontiers (2001) identified quality as only one aspect of a range of components essential to a contemporary VET organisation.

The Office of Tertiary Education and Training report, *Outcomes from vocational education and training for employers and participants* (2001), concluded that providers within the Victorian State Training System still need to customise training to meet individual enterprise needs and to maintain high standards of quality and integrity. The most frequently mentioned quality factor identified by Cashion and Palmieri (2002) was flexibility—the freedom and convenience of the online environment.

Levine and Sun (2002) identify the need to discriminate between imposing standards ('obstacles' in their terms) that ensure high quality and create the standards against which new activities can be assessed, and establishing obstacles that are simply gatekeepers—political, personal, and institutional—to bar any type of change.

Good delivery is good delivery

The necessity for changing pedagogy to cater for online delivery has been well established (Brennan, McFadden & Law 2001) but the fundamental principles of good teaching largely apply. A review of online training projects identified a elements that contribute to the successful use of the new technologies for education (Education Network Australia 1998):

✧ organisational and financial support

✧ programs driven by educational and learning issues rather than the technical and computing concerns

✧ the need for active learning strategies and learner support

- ◇ good quality, engaging learning resources
- ◇ partnerships to enhance delivery
- ◇ sharing of successful models, and most importantly
- ◇ a focus on the needs and abilities of the learners, including their computer literacy, basic internet skills and responsive technical support.

Mayes (2002) observed that there are two pedagogies associated with information communication technologies, the delivery of information (the pedagogy of the lecture or the book—the information technology bit of information communication technologies) and the tutorial dialogue that involves conversations between tutors and students (and emphasises the communication bit). Mayes also emphasises the need to build in 'collaborative learning tasks to maximise peer dialogue' or many learners will simply choose not to engage in discussion.

Downes (2001–2002), among others, facilitates active debate about the quality of online training, noting that there is evolving concern amongst industry commentators about issues like: measurement of quality and outcomes, dominance of content publishers (rather than educators), the local appropriateness of global licensing of online libraries, and brand dominance at the expense of customisation.

McKavanagh et al. (2002) recommended that learners in a flexible learning environment should:

- ◇ make their own content choices
- ◇ construct their own topics
- ◇ apply knowledge to their own area of interest
- ◇ select entry and exit points and determine their own speed of progress
- ◇ negotiate attendance at scheduled events
- ◇ shorten the study
- ◇ have 24/7 access to resources
- ◇ negotiate how they will meet course requirements.

Learning and technical support that provides a range of options to access assistance, including phone, fax, email, frequently asked questions and helpdesk are also important. This may include providing hardware and software support for students, as well as ensuring that the systems function well, are easy to use, and are reliable (ed. Guthrie 2003).

Calder (2000) identifies the dominance of 'technological enthusiasts' at the forefront of the adoption of online training and the resulting battle for the widest possible dissemination of their favourite technological innovations. Calder notes that the early adoption of these innovations by what have been termed 'visionaries' is a high-risk activity.

Clearly, the online training product is evolving in many different directions, which creates difficulties for consumers when considering the many elements that contribute to the online purchase. Unfortunately, many of the products and services on offer will go the way of Beta video equipment, leaving purchasers with additional costs and much frustration to convert to the dominant technology.

The literature abounded with examples of barriers to learning online. In their 1999 study, Bastiaens, Streumer and Krul identified problems that were common in other research: fragmentation of the knowledge base through extraction of small units of information; novices requiring a high-level overview of the content to relate details of training; technical problems; content insufficiently structured or incomplete; an expectation that employees can use electronic sources automatically; insufficient attention paid to the implementation process; insufficient

induction; the expectation that the help system would answer every need; and the winding-down of regular training. These problems provide opportunities for providers who get it right and provide holistic, people-focused online training.

The Ericsson experience

'WebLearn' was a project that commenced three years ago in the head quarters of Ericsson in Sweden. Ericsson recognised that an estimated 40 000 of its employees worldwide had low information technology skills. This needed to be addressed quickly if the company were to maintain its competitive edge: 20 000 people need to convert from an old technology to a new one within weeks. In order to train quickly and lower the training budgets of individual company units, the WebLearn team pre-paid many suitable information technology courses from e-learning companies and put them onto the Ericsson's intranet for all staff worldwide to use free of charge. They also developed courses to suit staff which could not be sourced elsewhere. No assessment was built into the courseware, nor any collaborative group activities or group communications tools. The project team then considered its work finished.

The take-up of the online courses was negligible despite being free. This prompted a continuation of the project team, who then travelled the world marketing the courseware, and trying to ascertain why the take up was so low. The team learned that both training departments and staff were not ready for this new way of training.

Barriers were: a perception that training should only be done in training rooms, not at staff workstations, an established financial relationship with e-learning companies which included a range of incentives for training departments which would be lost if the pre-paid versions were used, a lack of mentors in this style of training at the site, and a lack of understanding that individual learners could be responsible for their own learning.

The project team found that 90% of their budget was going on internal marketing and only 10% on development. The marketing tour caused the project team to re-organise the learning experiences to enable staff to go through the mind shift necessary to improve uptake. They included 'hot topic' short courses in areas of the greatest interest (for instance 'What is WAP'), giving staff the interesting hot topics then encouraging them to venture deeper. The team has now planned web coaches who facilitate learners through a four-week period of chats, asynchronous group messaging and virtual tours. Staff will be able to select which group they want to learn with and go on to be web coaches themselves.

The team now believes that the best way to competence is to try and teach others This is the most effective model for transferring tacit knowledge to the explicit knowledge the company needs (Aspin 2000).

Demand drivers

Generic versus content-specific

Much of the educational market for online training (formal and informal) is highly context-specific so that generalised and stand-alone courseware packages may be of limited utility. The closer one moves to true end-user (student and learner) needs and satisfaction, the more uncertain are some of the mega-markets for online training, ambition for which fuels the current wealth of interest, investment and innovation (OECD 2001).

The recent work by Hill et al. (2003) on the size and scope of online training in Australia, expressed concern that the provision of online courses in any given area could rapidly saturate that area of the marketplace, thus reinforcing the importance of market research.

The new world of work

Smith and Hayton (cited in NCVER 2003a) and Ridoutt et al. (cited in NCVER 2003a) found workplace change to be a major driver of training in organisations. The demand for skills has grown in response to the growth in part-time and casual employment, where employees need to maintain current labour market skills in order to be competitive in a volatile job market. Labour market changes have been accompanied by increased demand for higher level skills (NCVER 2002b).

Within the Australian vocational educational system, research has been undertaken into the delivery of VET programs by community education providers (Volkoff, Golding & Jenkin 1999):

> ACE [adult community education] and VET learners choose to study for the same reasons, however suitability of class time was a key factor in providing access for ACE learners. Men

were more likely than women to be doing the course because of a job or work orientation or to get a qualification. Women were more likely to be studying because of a desire to learn and were more concerned with access issues: having a course that was at the right level and at a suitable time and women were particularly concerned about affordability, proximity of the course to their home, and the course being of short duration.

A market-driven approach to the provision of online training only represents the interests of equity groups where there is demand for particular products to meet the needs of equity groups. Gorard and Selwyn (1999) observed:

Problems of access for poor people are not overcome by public facilities because transport and other institutional barriers remain. However the greatest barriers are dispositional ones. The groups least likely to participate are: unemployed and others on low incomes, the unskilled and unqualified, ex-offenders, part-time or temporary workers, those with learning difficulties and some ethnic groups. Women and older people are also less likely to be adult participants in learning.

Emerging patterns of demand

Levine and Sun (2002) identify changes in student demand patterns. They assert that today's older adult students are bringing their consumer attitudes to higher education, seeking four things: convenience, service, high quality, and low cost. Today's students will not pay for activities and services they do not use, or for buildings that they will not frequent. They are asking for a stripped-down version of higher education, without the extras.

There has been a gradual shift in the VET sector from being a supply- to a demand-driven system (NCVER 2003a). Monash University (1998) observed that the demand for training can change over time because of changes in the:

✧ nature of the training, its availability in particular locations and by types of providers

✧ purchasers of training—government, enterprises, individuals and overseas purchasers

✧ preferences or tastes of purchasers

✧ finance available to the purchasers

✧ information available on the product and alternatives

✧ price of training (which may change with new learning technologies).

Barron (2002) identifies emerging patterns of demand in various industry sectors, different-sized corporations, various line functions and horizontal job classifications. He advises caution:

It is particularly difficult to gauge demand in technology-driven markets that are the subject of continuous innovations. The race to develop new capabilities by competing vendors outpaces their use among customers, leaving to question whether demand exists or will develop for new product features—especially in young industries such as eLearning, where the 'installed base' of customers is relatively small.

Figure 2:   Key drivers of first generation online training demand

Certification
- information technology certification
- financial certification
- other professional certifications
- continuing education requirements

Demand for e-learning

Regulation
- health and safety
- food and drugs
- environment
- labour

Other demand drivers
- cost savings
- high training requirements
- high turnover
- multiple facilities
- electronic business initiatives
- e-government initiatives

Source: SRIC-BI

Cost

The guided interviews conducted as a part of this project identified that cost sensitivities tended to favour either high-volume low customisation of online training materials or highly customised low-volume approaches. Curtain (2002) found that, from a provider's perspective:

> Classroom based, mixed mode delivery where there is low interactivity and heavy reliance on content, tends to be high in cost compared to traditional classroom delivery and low on effectiveness in terms of student satisfaction, but when classroom/mixed mode courses have high levels of internet interactivity and use pre-existing web-based resources, the costs are not greater than traditional classroom instruction and students rate the course as more effective compared to conventionally taught courses. The use of highly interactive online delivery for distance education can cost twice that of low-interactive, print-based correspondence courses but are considered more effective by students.

Schofield has also reported that cost savings are frequently presented as a key driver of online training, yet none of the four companies involved in a recent study saw cost savings as the primary factor in their decisions about online training. Rather, the overarching drivers were speed, access for staff, consistency and customer service (Schofield in ed. Guthrie 2003).

Problems assessing demand

The University of Illinios has produced the following faculty guide to avoid common 'stumbling blocks' when assessing demand:

> One can have careful execution and development of courseware, pedagogy, faculty resources, student support and the like, but have disappointing enrolments. The disappointments may revolve around:
>
> - reliance on anecdotal information without specifics (research, requests/inquiries, quantitative data)
> - confusing 'demand/market assessment' with 'rationalisation for a program/course'
> - assumption that specific demand for a specific program exists based on broad trends or market generalizations (e.g. 'the aging of the baby boomer population' is a general trend, not a specific predictor)
> - confusing overall demand for professionals with the credential awarded by the program with demand by potential students for the particular program

♦ assumption that new (external) demand exists and is similar for the online format because some level of (internal) demand exists in the classroom format

♦ not identifying the real target audience with precision

♦ not developing a succinct execution plan with a timetable to 'get the word out' to the target audience who might otherwise not be aware of a program's existence.

(University of Illinois 2002)

Possible market segments

Age-related niches

Choy, McNickle and Clayton (2002) found that the majority of online learners were aged over 40 years and in full time employment. Smith (1999) observed:

> Maintaining skills and acquiring new skills is critical for employability as people get older, and success at finding employment at a mature age is linked directly to their ability to realise the value of these skills by applying them in a different work context, particularly to let go their previous organisational identity and create new career opportunities. Older people are taking short, non-award vocational courses in greater numbers than younger people and they are targeting specific fields of study.

Mitchell and Wood (2001) identified the growing numbers of busy, career-minded adults over 25 who are continuing to study as an ideal group for the delivery of education direct to their homes or office.

Howell, Williams and Lindsay (2003) provide more detail on the emerging adult learning market in the United States:

> Today's adult learners differ still from traditional college-age students. They tend to be practical problem solvers. Their life experiences make them autonomous, self-directed, and goal- and relevancy-oriented—they need to know the rationale for what they are learning. They are motivated by professional advancement, external expectations, the need to better serve others, social relationships, escape or stimulation, and pure interest in the subject. Their demands include time and scheduling, money, and long-term commitment constraints. They also tend to feel insecure about their ability to succeed in distance learning, find instruction that matches their learning style, and have sufficient instructor contact, support services, and technology training (Dortch 2003, Diaz 2002, Dubois 1996 cited in Howell et al. 2003).

Small-to-medium enterprises

Generic training products are of interest to small-to-medium enterprises (SMEs) *if* courses are designed, delivered and supported in ways that address their real and immediate needs, preferably close at hand and cost-effective (Goolnick 2002). In relation to these businesses, Pye notes:

> Problems with training amongst SMEs often relate to an inability for them to articulate and scope their learning needs. There are common difficulties in assessing the merit and value of offerings available, which are often perceived as failing to meet firm-specific needs. Finding appropriate training is also made more difficult by culture clashes with external training providers, especially in the public sector, who are seen as unable to understand business processes. Even when the case for training is made, there are continuing issues around the cost of training programmes (and associated travel and subsistence) and problems in releasing staff, particularly in micro-SMEs. (Pye 2000)

ANTA (2001) identified three groups of employers in their *National marketing strategy for VET.* 'High value employers', who value all forms of learning, and 'here and now' employers will be treated separately below. The remaining group was labelled the 'not interested employers' and are mostly

small businesses who believe in qualifications—especially for recruiting new employees—but that most other training is a waste of time and money, unless it increases productivity and reduces costs.

Some of the difficulties in producing and marketing training for the small business sector can be overcome by working with industry clusters. A number of government-sponsored cluster programs are operating in Australia, and many more informal clusters have been established by businesses with common needs and directions. The Victorian Government for instance, is investing $1.5 million in 2002–2004 to promote the delivery of manufacturing training in small-to-medium enterprises through the establishment of clusters of these enterprises to create the critical mass of participants required for the viable supply of training (Victorian Department of Education and Training 2002).

The rural sector

The challenges of providing training to learners across Australia's sparsely populated rural areas would seem to be easily solved through online training. However, online training in the regions is fraught with problems that need to be addressed if good online VET is to be made available to rural and remote learners. In many rural industries and non-metropolitan communities, there is a lack of a tradition of education and training (Kilpatrick & Bell 1998 cited in Kilpatrick & Bound 2003) and people and businesses with little experience of education and training lack confidence as consumers of education and training (Selby Smith & Ferrier 1996 cited in Kilpatrick & Bound 2003).

Kilpatrick and Johns (1999) undertook research into how farmers learn. Despite widespread use of training for ongoing learning to manage the farm business, only progressive farm businesses were proactive in identifying and meeting learning needs in management and marketing. They were also the group most likely to have used training in learning for change, and to plan to train for meeting learning needs in the future. In addition, Kilpatrick and Johns speculated that:

> The growing importance of women as farm decision-makers brings with it a growing interest among women in farm-relevant training and that female farmers may have a different attitude to marketing and management learning than that of male farmers.

Groves (1999) reaffirms the problems that rural residents experience in accessing the internet. Poor telecommunications infrastructure means that 27% of farmers can only access the web at 9600 bytes per second or less because of the quality of their phone lines. If there is no internet service provider (ISP) in their area, long-distance telephone charges are incurred, and as the rural market is less competitive than in the metropolitan areas, internet service provider costs tend to be significantly higher; and even though some training institutions provide a dial-in option for students without access to an internet service provider, this incurs long-distance call charges if the student is not in the same local call area as the institution.

Courses delivered 100% online had the least interaction designed into their course, and students from these courses experienced the greatest difficulties in gaining continued access to and support from teachers. The further away students are from their provider, the less likely their experience of online training is to be positive (Kilpatrick & Bound 2003 in ed. Guthrie 2003).

Traditional training practices are also being stretched as training providers struggle to attract teachers and lecturers in key subject areas. Peters (2001) found that, in the Murray Mallee, a quarter of the providers of agriculture and natural resource management training did not have enough teachers to meet the current demand, and a third of providers were concerned that they will not have enough teachers in three to five years time.

Employers

As previously mentioned, ANTA (2000) identified two viable market segments:

High valuer employers – value all forms of learning: on and off the job, work related or not. Learning is the way they deal with the challenges of globalisation, competition and new technology. But they also value the productivity and efficiency benefits of learning. They include an over-representation of established, medium-sized firms in the cities.

Here and now employers – are focused on keeping ahead of the competition. Dealing with new technologies and high turnover, they value on-the-job training. They do not have much interest in learning that is not directly productive in the workplace. They include an over-representation of large established businesses.

Group training companies were identified in the guided interviews as a significant potential market. Hall et al. (2000) reflect that employers in some industries are failing to make an adequate commitment to training investment and skills development, which is compounded by their lack of knowledge of how group training companies, networks and cooperative schemes can be used to support training.

Some particular events within companies present specific niche opportunities: company takeover, new technology rollout, induction programs, specific skills training, strategic management and development (THINQ Ltd 2000).

Industry sectors

TAFE Frontiers' (2001) found that the planned rise in online training is steepest in the health and community services, construction, and wholesale trade sectors, and that local government outstrips public and private sector counterparts in their intention to use the internet or intranet to deliver training. All federal government departments will use the internet to deliver training.

Appendix 2: Survey findings

Student surveys

Two student surveys were undertaken, a 'classroom' survey for students studying in a traditional delivery method (which also included distance paper-based students) with 284 responses, and an online survey for students studying via this medium with 137 responses. Some elements of the surveys were the same (primarily demographic information and satisfaction levels) but each survey also focused on the demand indicators for online delivery from a purchaser (online survey) or potential purchaser (classroom survey) perspective.

Features of students participating in the surveys

The online survey was conducted Australia-wide (and included one New Zealand resident who was studying an Australian course). Responses were received from every state and territory except the Northern Territory. Classroom responses were received from New South Wales, Northern Territory, Queensland, South Australia and Victoria.

Students studying by traditional means were approximately evenly male/female (46%/54%). More female students responded to the online survey (75%).

Respondents to the online survey were primarily studying education (26%) and information technology courses (22%), with health care (10%), finance (7%), business (6%) and automotive (4%) also being studied by small numbers of people. A total of 22 different course areas were identified. Respondents to the classroom survey were primarily studying information technology (22%), manufacturing technologies (16%), hospitality (13%) and health care (10%).

The age of students responding to the surveys is shown in figure 3. While both groups follow the same general pattern, the largest group of classroom students is aged under 20 years and the largest group of online students is 40–49 years. This finding is consistent with the literature, which indicates that older students have the attitudes, experience and learning skills to be successful in online studies.

Online students of all ages were studying certificate III, but the largest grouping of course level by age was from the 35–39-year-olds, of whom 48% were studying certificate III. Older online students (aged 40–59) were more likely to be studying university courses and the most frequently mentioned level of online study for all other ages was certificate III. Classroom students of all ages were also studying certificate III, but the largest groupings were 15–19-year-olds (40% of those studying certificate III) and 20–24-year-olds (23%). The next largest level grouping of classroom students was certificate II and 45% of these were 15–19-year-olds.

Both groups said that the person with the most influence on their decision to enrol in their current course was themselves (85% of classroom students and 80% of online students). The other main influence on classroom students was their parents (6%), probably reflecting the younger students in this sample. Online students were also influenced by their employer (8%).

The most common level of study for both surveys was certificate III, with 29% of the online students and 28% of the classroom students at this level. The next largest groupings of online

students were certificate IV (17%) and diploma (11%). (14% were doing university studies—see note under chapter on methodology.) The next largest groupings of classroom studies were certificate II (23%) and certificate IV (16%).

Figure 3: Comparison of age of student respondents
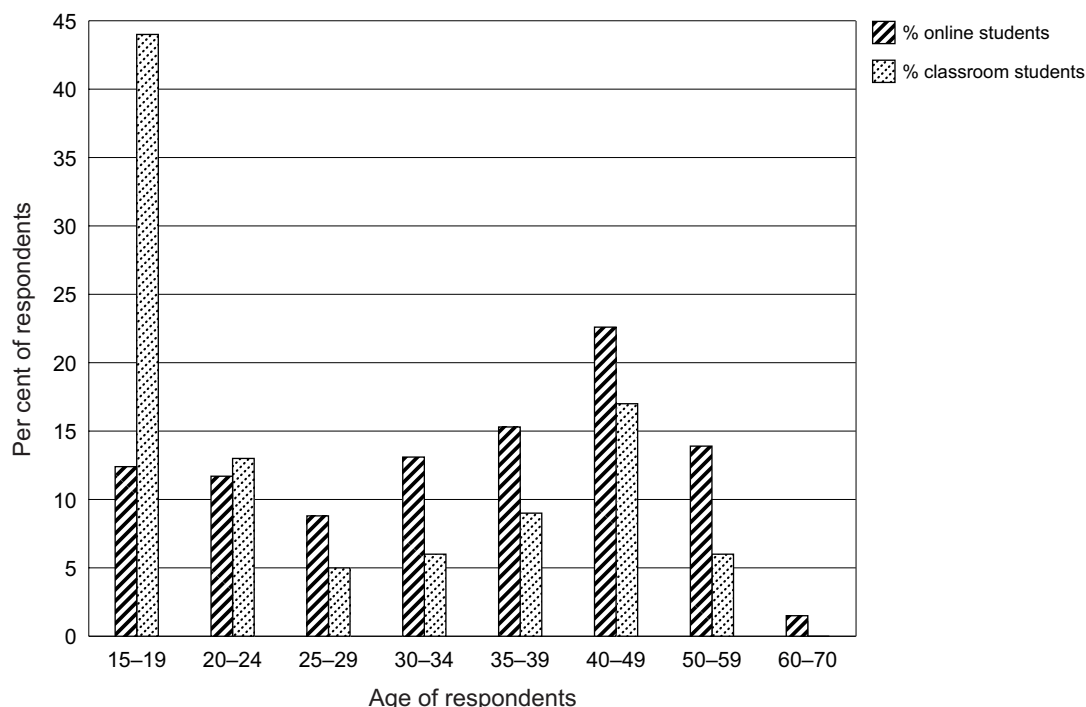
Online student findings

Context

Level of web dependence in online course

Forty-five per cent of online respondents were doing courses that were fully online, 31% were doing web-dependent courses (some face to face, but with compulsory web-based elements), and 23% were doing web-supplemented courses (mainly delivered face to face but there is the choice of additional information via the web). Some of the students in the latter group were doing all of their units online (51% of all online respondents), but 41% were doing 50% or less of their study online (22% were doing less than 25% online).

Length of time studying online

The majority of respondents (64%) had been studying online less than 12 months (40% had been studying online less than six months). Only 13% had been studying online more than two years.

Other study since left school

Online students were asked whether they had done any other study since they had left school (we were testing whether experience of studying was an indicator of online take-up). Eighty-four per cent of online students had done previous study, mainly university studies (30%). Fifty-eight per cent of respondents who have done a bachelors degree or higher since they left school are now studying online VET courses. Other significant groupings of previous study are certificates II–IV (58%) and diplomas (17%).

Findings relating to demand

How students found out about online study

The most frequently mentioned sources of information about online study were: information from the training provider (36%); surfing the net (24%); word of mouth (20%); and friends or family (13%). Less than 10% heard about online study from brochures or employers.

Alternatives considered

Table 2 shows the options considered by respondents. Nearly two-thirds (61% of online respondents) made the decision between taking the same course online or via other delivery modes.

Table 2:   Consideration of alternatives to studying online

Alternative option	Online student responses	
	Number	%
Same but classroom-based	43	31.4
Same but paper-based distance	40	29.2
Different online course	16	11.7
Different course classroom-based	10	7.3
Did not consider alternatives	9	6.6
No alternative offered	5	3.6
Distance CD-ROM-based	1	0.7
I don't like online courses	1	0.7
Only do courses with online components	1	0.7
University	1	0.7
Not stated	10	7.3
Total	**137**	**100.0**

Reason for enrolling in an online course

We were interested to find out whether the online element of the course was the most important reason for online students enrolling in their current course, and if not, what other elements were important. Table 3 shows the responses to each element of the question. By far the most frequently mentioned reason for enrolling was the online component (45%). We asked this question in a different way, this time asking what was the most important factor. The responses mirrored the findings in table 3, with the most important factor again being the online component (34%), followed by 'it was the only course available in my chosen area of study' (18%), and 'it fitted with the rest of my study timetable' (14%). Twenty-two per cent of respondents gave reasons not identified in the survey, with the most frequently mentioned being the ability to study the course externally (6%) and that it was required by the employer (3%).

Features that influenced the decision to study online

From a marketing perspective, it is important to identify the 'triggers' that can influence a purchase decision. We provided a list of features and asked respondents to identify which features influenced their decision to enrol in an online course. Table 4 shows the responses in order of importance.

The most frequently mentioned feature (by 68% of respondents) was that the course can be done after hours. Other important features were the capacity to juggle commitments (63%), adaptability of the course (49%) and that the course can be done during the holidays (45%). Less than a quarter of respondents mentioned the cost of the course or the need to pay for it online (which differs from the focus group findings) or that courses have Australian examples and provide social interaction with other students.

Table 3:   Reason for enrolling in online course

Reasons	Online student responses	
	Number	%
Online component	61	44.5
Only course available in my chosen area of study	26	19.0
Fitted with the rest of my study timetable	27	19.7
Course is provided locally	16	11.7
Other reasons (many respondents gave multiple reasons, the main responses are shown below)	30	21.9
Other: Fit with study and employment	34	24.8
Other: Ability to study externally (at a distance)	9	6.6
Other: Ability to study at home (cost and convenience)	5	3.6

Table 4:   Features influencing the decision to study online

Features	Online student responses	
	Number	%
The course can be done after hours	93	67.9
Can juggle work, study and other activities	86	62.8
Course can be adapted to suit my needs	67	48.9
Course can be done during holidays	62	45.3
Learning support is provided	52	38.0
Can live a long way from the training provider	51	37.2
Can fast track to finish the course quickly	49	35.8
Access to online library/database resources	48	35.0
There is the choice of studying alone or in groups	46	33.6
There is contact with lecturers out of teaching hours	37	27.0
IT (computer) support is provided	36	26.3
Cost of the course	28	20.4
Other reasons	12	8.8
Australian examples/case studies are provided	11	8.0
Course provides social interaction with other students	11	8.0
Course can be paid for online	8	5.8

During the early part of this project, TAFEBIZ SA—one member of the research consortium—developed a short complementary survey that was conducted during the January 2003 enrolment period. One hundred and thirty-four prospective students completed the survey, the results of which are shown in table 5.

The most frequently mentioned features by prospective students was that the course can be done after hours (84%) and that students can juggle commitments (72%). Other features mentioned by more than half of respondents were: that the course can be done during holiday periods (64%), it can be fast-tracked (63%), cost (63%), access to online resources (58%) and the capacity to adapt the course to individual needs (58%).

Three of the top four features of online training were the same for both online and prospective students (after hours, juggle commitments, holidays).

Table 5:   Features influencing the decision to study online: TAFEBIZ SA pre-enrolment survey

Features	Potential student responses	
	Number	%
Course can be done after hours	112	83.6
Can juggle work, study and other activities	96	71.6
Course can be done during holiday periods	86	64.2
Can 'fast-track' to finish the course quickly	84	62.7
Cost of the course	84	62.7
Access to online library/database resources	78	58.2
Course can be adapted to suit your needs	77	57.5
Can live a long way from the training provider	65	48.5
Learning support is provided	59	44.0
Option provided to study alone or in groups	57	42.5
Contact with lecturers out of teaching hours	47	35.1
IT (computer) support is provided	41	30.6
Course can be paid for online	29	21.6
Australian examples/case studies provided	27	20.1
Provides social interaction with other students	12	9.0

Length of wait to enrol in online study

Forty-one per cent of online respondents waited less than a month to enrol in their online studies; 86% waited less than three months; 10% waited longer than six months.

Studying while working

Seventy per cent of online students were in paid employment as well as studying. Fifty-eight per cent of these are working full time, 24% part time and 13% casual. The survey further explored aspects of employer support of study (the level and type of support is a key indicator of success in online study). The table below shows the responses.

Table 6:   Aspects of employer support of study

Element	Number	% of online students in paid employment responses
Study relevant to employment	64	67
Computer access at work	39	41
Time away from work to study	22	23
Required by employer	20	21
Employer paying	20	21
Employer provides learning support	9	9
Employer provides online computer at home	8	8
Employer provides uninterrupted time off at work to study	7	7

Very few respondents have a computer provided by their employer or have uninterrupted time at work to study. Both of these indicate that employers in this study expect staff to provide their own computing equipment and internet connection to complete their studies (those enjoying computer access at work, do not get uninterrupted time to study). Surprisingly, few employers provide learning support and it seems that this group of respondents is really 'on their own' from the employers' perspective. Respondent comments about the purpose of their study may shed light on this situation, with 40% of students who provided comment giving their reason for studying as changing jobs or careers.

Satisfaction with and improvements to online course

Seventy-four per cent of online students were 'very satisfied' (30%) or 'satisfied' (45%) with their online course, with respondents aged 30–39 being most satisfied. Four per cent of online students were 'very dissatisfied' and younger students (15–19 years and 25–29 years) had the highest dissatisfaction ratings. Students who said they were dissatisfied were asked to comment and issues that were raised by a number of students were:

✧ online presentation problems (too complex, bits missing, poor download and print capacity, difficult navigation of WebCT)

✧ communication problems (timely feedback required, more contact, more online group sessions)

✧ lack of flexibility (should be able to negotiate assignment and assessment tasks that relate to the workplace, flexibility in assignment dates)

✧ quality (course changes half way through an assignment, lecturers do not reply when they say they would, content quality poor).

Only 72% of online students said they would study online again. Some comments are interesting:

> I started my course as something to do when I was not busy at work. I am totally unable to access the internet at work which has dramatically decreased my study rate.

> I think I may prefer studying via correspondence … on paper!! I have done it before and it seemed so much clearer.

> Not unless I was convinced that it was driven by educational principles rather than flash technology. I like chat rooms, bulletin boards, resources to be online, but the study guide in print.

> My experience is that online learning is the least flexible distance learning model.

Seventy-seven per cent of online students would recommend online study to a friend.

Online students were asked whether they would change anything in their online study; 47% of students made suggestions that fell into the following categories:

✧ better access to lecturers and lecturer support

✧ adapting the course to meet individual needs

✧ changing the structure of the course

✧ improving quality

✧ providing hard-copy material.

Classroom student findings

Findings relating to demand

Importance of price in decision to study

We were interested to test the price sensitivity of classroom students to their current studies. Sixty-one per cent said price was important or very important in their decision to study. Only 12% said it was not important at all. Eighty per cent said that their course is good value for money. Of those who did not think their current course was value for money, the main reasons related to the cost and quality of materials and high fees.

Online access

Eighty-eight per cent of classroom respondents use a computer to do their assignments. Of those who use a computer for training assignments: 65% use a computer at home; 36% use a computer at the training institution; 4% use a computer at work and the same number at a public library, and 0.5% use a computer at an internet café.

An important element of demand for online training is the internet access and capability of the student. Eighty-four per cent of classroom respondents have regular access to a computer with internet or email connections. Of these:

✧ 78% regularly use email

✧ 74% use the web to research assignments

✧ 71% use the web for information or surfing

✧ 59% use computers for standard applications such as Word and Excel

✧ less than a quarter (23%) use chat, and only 10% use bulletin boards

✧ only 4% use all of these tools.

The uptake of online courses would therefore be appropriate for less than 60% of the classroom students who responded to this survey (the 170 web users). Only a third of the web users would be able to use the chat elements of the online training, and only 14% of web-enabled students could use bulletin boards without specific training or induction.

Use of email to communicate with lecturers

The capacity and propensity to use email to communicate with lecturers is an indicator of whether students are able to use online communication—an underpinning skill for online training. Forty-one per cent of the classroom respondents currently use email to communicate with lecturers and a third (33%) currently use email to communicate with other students in their course.

Eighty-six per cent felt that it was 'important' or 'very important' to have regular one-to-one contact with their lecturers. This group was asked how happy they would be if that contact was only made through email and a half (50%) were 'happy' or 'very happy' or 'didn't mind' this option—42% were either 'happy' or 'very happy'. Of these, the largest group (37%) was aged 15–19 years, although when adjusted for the number in each age group, respondents aged 25–39 and 50–59 were more likely to support the 'email only' option.

Knowledge and expectations of online courses

Seventy-two per cent of classroom students knew that courses were available online; 10% of these had enrolled in an online course at some stage.

Thirty per cent said they would not enrol in an online course. Their reasons have been grouped:

✧ Elements of online training 'turn them off' (40% of those who would not enrol). These elements were generally: lack of flexibility, easier to study from written documentation, and most frequently – prefer to learn with a teacher.

✧ 31% cited information technology barriers.

✧ 15% cited loss of social interaction.

Twenty-two per cent identified courses that they would consider doing online. The most frequently mentioned online course was computing/information technology studies (by a quarter of those who would consider online training), as well as accounting, business management, creative writing, electronics, nursing, psychology, fashion/arts, and web site design (5% each).

Comparative findings

Main purpose of study

Online students were more likely to study to get qualifications, with this finding possibly increased because of the inclusion of some university students in the sample. Classroom students were more likely to study to help them get a job, which may reflect the larger group of younger students in the classroom sample. It is interesting that both groups have a low response to the option 'it is a work requirement', although a number of elements in this question could relate to improving employment opportunities (get qualification, help get a job, improve chances of promotion and work requirement, legislation) and if these are totalled, online students (66%) are slightly more likely to be studying for work-related reasons than classroom students (61%). A significant group of classroom students (12%) are studying VET courses as a pathway to university.

Table 7:   Main purpose of study

Main purpose of study	% of student responses	
	Online students	Classroom students
Get qualification	31.4	23.2
Help get a job	20.4	31.3
Improve chances of promotion	11.7	3.5
Work requirement	2.2	2.8
Legislation	0.7	0.4
Learn as much	16.1	6.7
Enter university	5.1	12.0
Other	10.9	6.3
Not stated	1.5	13.4
Total	**100.0**	**99.6***

Note: * rounding

Importance of elements of online training

A strong focus in the surveys was the investigation of the importance of various elements of online training. Figure 4 shows student responses to the question 'what is the single most important factor that would influence your decision to enrol in online/further online studies?' (This question was asked after other questions about relative importance.) The most significant finding is the level of importance that online students place on the ability to juggle work, study and other activities. The most important aspects of online study for classroom students is the capacity to adapt the course to suit individual needs, and the cost of the course.

Figure 4: Comparison of important factors of online training
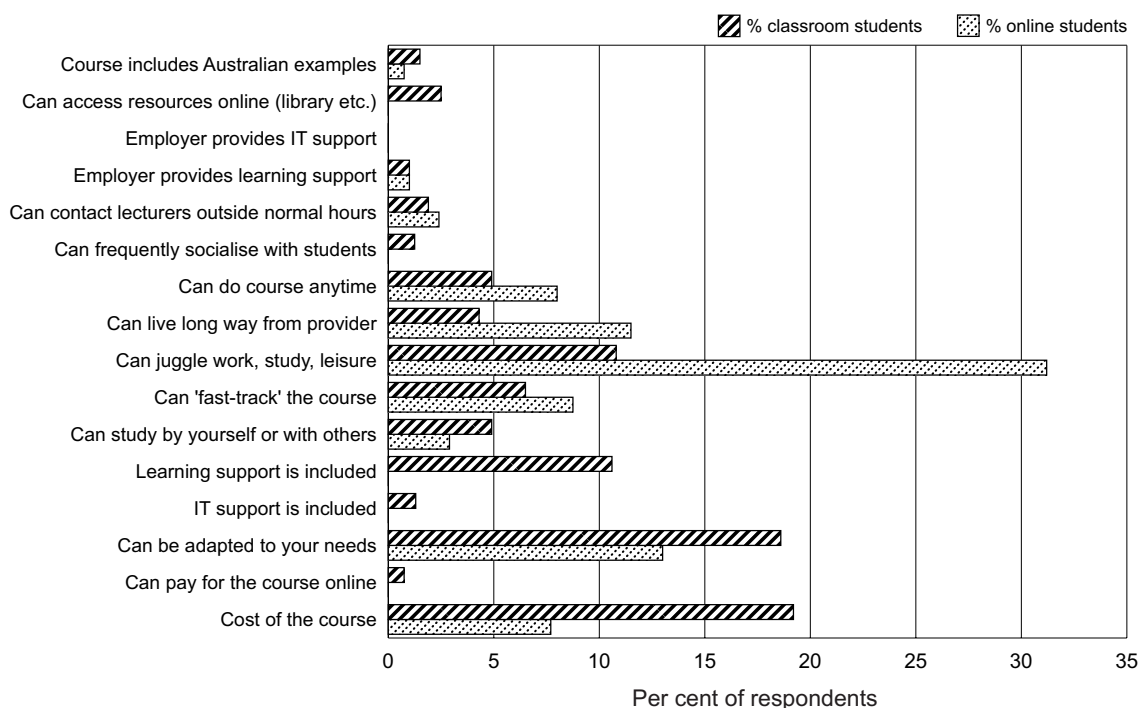
Relative importance of online training elements

Figures 5a and 5b show the relative importance of a range of online training features (the findings are split between the two graphs to make them easier to read). The most important feature identified by both online and classroom students is the ability to juggle study with other commitments. Other features that had a similar level of importance with both student groups were that learning support is provided with the online course, that online courses can be done anytime including holidays, and that students can live a long way from the training provider.

The only features that online students valued more highly than classroom students were that online courses can be done anytime including holidays, the ability to juggle commitments, and that courses could be done at any time, including holidays.

Features that were more highly regarded (more than 20 percentage points) by classroom students were paying online, information technology support by provider, employer learning support, employer information technology support, and the ability to socialise with other students. (These last two features showed the biggest difference in importance between online and classroom students.) When considering these findings, the relative age of the two groups should also be considered: the online group was significantly older than the classroom group and therefore likely to place less importance on the social aspect of their studies.

There was little similarity between the two groups on what were the unimportant features. Online students tended not to value employer information technology and learning support, the ability to socialise with other students, and the ability to pay online. Classroom students tended not to value cost and paying online.

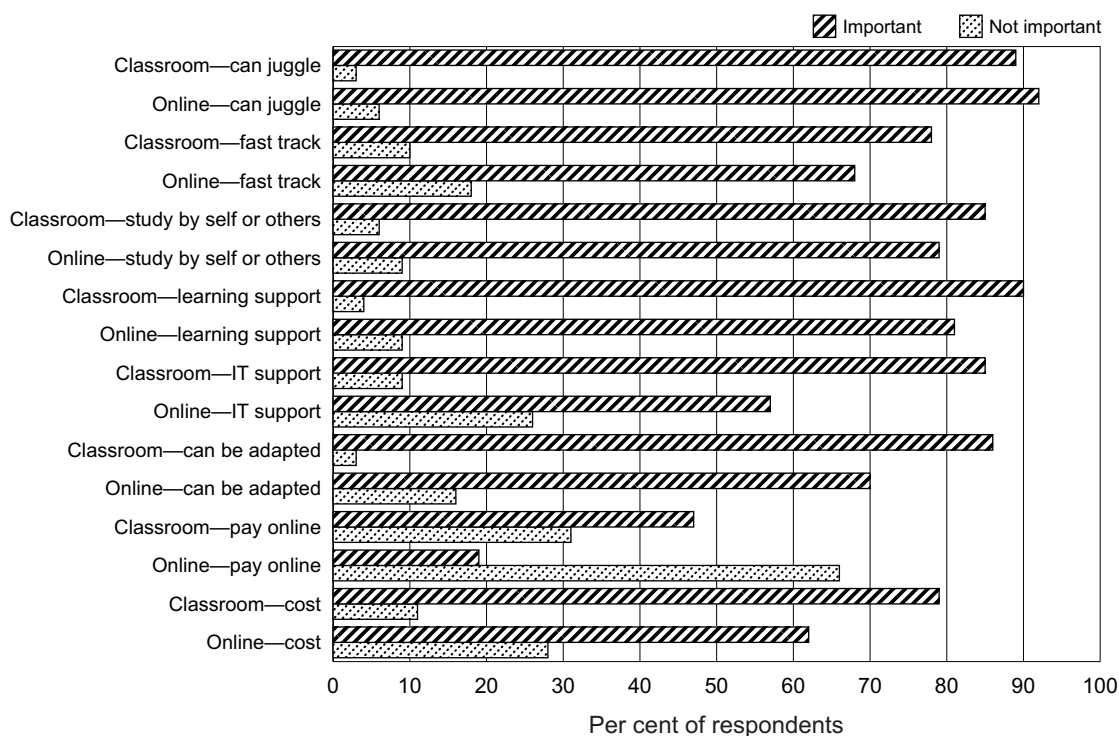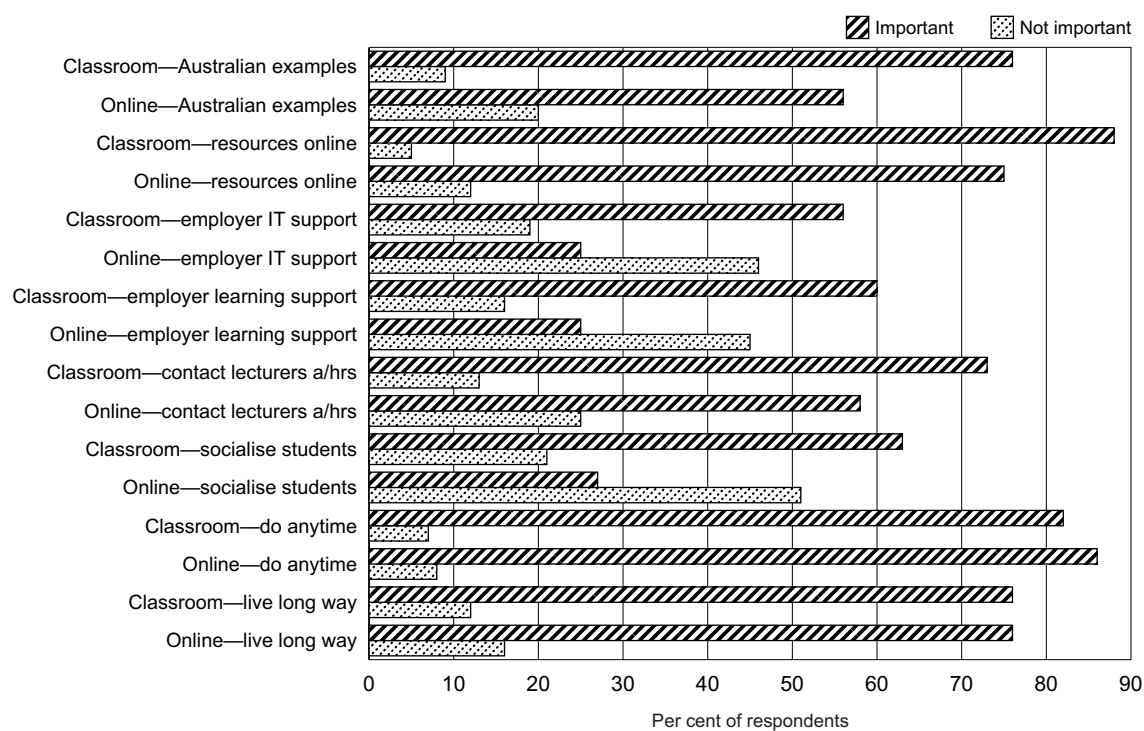**Figure 5a: Comparison of values for elements of online training**

Figure 5b: Comparison of values for elements of online training

Importance of flashy online presentation

Classroom students were much more likely to consider flashy graphics to be important than were online students (online employers were even less likely to want flashy graphics).

Length of learning segment

Both online (54%) and classroom (46%) students preferred topics that can be learned in an hour or less; however, more classroom students said they liked to study topics that take several hours to investigate and learn (37% against 23% for online). A number of respondents qualified their answers. Some representative comments are:

> Depends on what you need to learn. As long as it meets my learning needs, it doesn't matter if it's a brief 'how to' or an in-depth topic.

> I like courses that have topics that don't take long to complete, but that include extra optional readings.

Satisfaction with course

Classroom students tended to be more satisfied with the course than online students. Ninety-one per cent of classroom students said they were 'very satisfied' (35%) or 'satisfied' (56%). 74% of online students were 'very satisfied' (30%) or 'satisfied' (45%); 4% of online students and 3% of classroom students were 'very dissatisfied'.

Seventy-six per cent of online students and 89% of classroom students think they'll finish the course they're studying now. Sixty-nine per cent of online students and 80% of classroom students felt that their course is good value for money.

Employer surveys

Two employer surveys were undertaken—a telephone interview with employers who purchase VET but not online with 200 responses (termed 'traditional' in this report), and an online survey for employers who purchase online training for their staff with 62 responses. Some elements of the surveys were the same (primarily information about company size, training and industry sectors) but each survey also focused on the demand indicators for online training from a purchaser (online survey) or potential purchaser (telephone) perspective. Both employer surveys were approved by the Australian Bureau of Statistics' Statistical Clearing House.

Because of the low numbers of responses to the online employer survey, the percentages that reflect online employer findings could be misleading if used out of the context of this report.

Features of employers participating in the surveys

Organisations from all states and territories participated in both surveys. There were strong similarities in the profile of the two respondent groups (online and traditional) in the following areas:

✧ the number of states in which they operate (63% of both groups operate only in one state and 24% of both groups operate in three or more states)

✧ the years of operation (32% of both groups have been in operation fewer than 10 years; 10% of traditional employers and 18% of online employers have been in operation less than 6 years; 39% of online and 51% of traditional employers have been in operation between 11 and 50 years)

✧ the level of Australian ownership (approximately 90% of both groups are wholly Australian owned)

✧ the proportion that had formal staff training plans (approximately 72% of both groups had formal staff training plans).

The two survey groups were different in the following areas:

✧ Online organisations tended to be larger (38% of traditional employers had fewer than 20 employees, compared with 24% of online employers).

◇ Surprisingly, organisations that purchased online training for their staff had lower rates of internet connection (66% of city locations, 61% of rural city locations and 46% of remote locations had fast, reliable internet connections compared with traditional organisations with 91% of city locations, 80% of rural city locations and 66% of remote locations with fast, reliable internet). This finding may result from the small size of the online employer sample.

◇ There were significantly more government organisations in the online group (the government sector is recognised for its take-up of online training). Industry representation in the traditional group were spread more evenly across all sectors, but this was partly because of the targeting of telephone interviews.

◇ Proportionally more online employers were registered training organisations (50% compared to 42% of traditional employers).

◇ Online organisations had significantly more in-house training staff (81% compared to 64% of traditional employers).

◇ Significantly more traditional employers provided training across all levels (from school studies to university studies) than online employers, except for trade certificates which proportionally more online employers provided. It is not known whether this is a representative finding or a result of the low sample size for the online group.

◇ Proportionally more traditional employers gave their staff uninterrupted time at work to study (64% compared to 47% of online employers). Both groups had about the same proportion of organisations that gave staff paid time away from work to study (74% online and 69% traditional) and both had the same level of formal support strategies (64%). The most commonly mentioned support strategy by both groups was mentoring.

Online employer findings

Context

The average amount of training done online by this group of employers was 16%. Employers with fewer than 10 staff tended to do a greater proportion of their training online (32%) compared to larger organisations (organisations with 20 or more staff averaged 13% of their training online).

Only a third of online employers said they used learning management systems, with the most common system being WebCT (38% of those with learning management systems), followed by Janison and SkillVantage Manager (14% each).

The majority of online training is done individually and only 8% of organisations provide online training in groups.

Findings relating to demand

Source of online training

Almost equal numbers of online organisations buy their online training from outside the organisation (31%) or develop it themselves (32%). Thirteen per cent do both. Small numbers commission outside developers, get online training from their franchisor, or have preferred supplier arrangements.

Fifty per cent of online organisations either fully customise their online training in house or buy standard courses that they then customise for their needs.

Other delivery options considered

Forty-eight per cent of online employers considered other options to online training. The most commonly considered option was traditional (face-to-face) delivery by a third of those that had considered other options (seven organisations). Other considerations were: blended delivery (four

organisations), other online strategies (four organisations), distance/external (two organisations) and CD-ROM (one organisation).

Over half (55%) of the online employers found it easy to get information about online delivery, indicating that nearly half of those already engaged in the online training product still found it difficult to get information about online training.

Most important elements of online training

The most important elements of the online training product were identified as:

✧ appropriate content

✧ compatible software

✧ cost-effectiveness

✧ can fast-track training

✧ training provider understands needs

✧ available immediately

✧ easily updated

✧ Australian standards and examples.

The least important elements were accredited training, word-of-mouth recommendations and brand name.

Preparation for online training

Online employers identified the key characteristics of staff who are successful in online training as adaptable, motivated, committed, good information technology skills, and self-directed. One employer also mentioned that staff need to be willing to undertake pre-course training in how to use the technology.

Fewer than half of the online employers (47%) provide training in online training software, training in web and email protocols (44%), how to manage self-administered study (40%), or how to assess the quality of web material (31%).

Satisfaction with online delivery

Two-thirds of online employers said that they were satisfied with their experience of online training although only 40% said specifically that it had lived up to their expectations. (Only 10% said they were not satisfied.) A number did not answer this question. Those who found that online training had not lived up to their expectations gave the following reasons:

✧ Computer failure often leads to loss of students' assessments.

✧ The available products are too generic and too expensive.

✧ Products sometimes do not reflect current legislation, or registered training organisation or industry requirements; too many mistakes in the product; material is too intense.

✧ Learners prefer face-to-face.

✧ Many online products seem to be simply theory/information converted to a different delivery medium.

✧ It costs too much to get the interactivity required.

✧ There is a lack of commitment by managers to allow time to do online training.

◇ Much of the online training is still electronic page turning with poor evaluation and assessment associated with the courses. The training does provide basic concepts and, supported by some face-to-face training, a mentoring and coaching program delivers better outcomes.

Presentation and use of graphics

Fewer than half of the online employers felt that it was important to have flashy graphics. Their reasons mainly reflected an interest in content rather than presentation:

◇ Content and relevance have greater impact than cartoons. We do have significant amounts of video and graphics but this is relevant material and not toys.

◇ Instructional design and soundness is the main criteria, not whistles and bells.

◇ It is more important that the communication facilities of a learning management system are utilised than anything else. Pictures and animations can provide learning but there are bandwidth issues and sometimes the pictures and animations have no educational meaning.

◇ These are not necessary and most adult learners find this 'style' patronising—they are after intellectual content.

◇ In the absence of hands-on practical activities, a picture is worth a thousand words.

◇ Some individuals need more visual tools to facilitate learning.

◇ Graphics are more a question of design and attractive presentation to retain user interest for extended periods.

◇ Animation is important otherwise online training could be seen to be no different from text-based learning.

◇ We have staff who come from a range of different demographics, including non-English speaking background and people with literacy problems, and graphics helps them.

Traditional employer findings

Current training

Approximately half (54%) of traditional employers develop training in house; 27% buy it in, and 9% are provided with training by their franchisor. Twelve per cent use a combination of these approaches. Training is provided in general competencies (82%), technical skills (82%) and job-specific skills (86%).

Eighty-six per cent of organisations provide training on their own premises, and 83% send staff out to external training courses and (70%) do both.

The most common types of in-house training are: information technology, occupational health and safety, certificates I–IV, job-specific training and administration. The most common types of training that staff attend away from the worksite are: management, information technology, occupational health and safety, computing, and certificates II–IV.

The largest proportion of training is at certificate IV level (60% of traditional respondents) and certificates of competency or proficiency (also 60%), followed by certificate III (53%) and certificate II (49%).

Fourteen per cent said that it was not easy negotiating with training providers, mainly citing a lack of flexibility and an overly complicated approach.

Staff internet access

Nearly two-thirds (61%) of traditional organisations had internet access for all staff, with small-to-medium organisations having better access than large organisations. A third (32%) provided employees with an online computer at home—mainly to a small proportion (10% or less) of their staff.

Familiarity with online training

Seventy-nine per cent of respondents were familiar with online training. Those who are already familiar with online training are more likely to say that they will purchase online training in the future.

Only 22% of traditional respondents felt that online training is commonly used in their industry sector. The sectors with best knowledge of online training take-up are education and finance.

Purchase of online training

Thirty per cent of traditional employers who responded to the survey had bought online training at some stage. Industry sectors with the highest rate of online purchase were: agriculture (this sector also includes forestry, fishing, and mining); communications; cultural and recreational services; electricity, gas and water supply; finance (this sector also includes insurance, property and business services; health and community services; manufacturing; and personal and other services. Some sectors had relatively few respondents and therefore showed higher percentages than those with more responses. The sector with the highest number of actual purchases of online training was the finance/property/business services sector.

Employers which are also registered training organisations are more likely to have purchased online training (35%) than those which are not (25%). There is less difference between these two groups in planning for future online training purchases, with 55% of registered training organisations anticipating purchasing online training in the future, and 47% of non-registered training organisations considering online training purchases.

The sectors that are most likely to purchase online training in the future are: communications (63% said they would purchase in the future), accommodation (this sector also includes cafes and restaurants) (60%), government and defence (60%), construction (mostly group training companies 57%), and education (54%).

Importance of elements of online training

The most important elements of online training from the traditional employers' perspective were: costs (45%), finding a trainer that understands needs (41%), and Australian standards in materials (38%). The elements with the lowest importance were well-known brand name, and lack of computers at employees' homes. Further analysis of these elements was done against industry sector, with the following findings:

✧ Sectors that placed importance on how much they already knew about online training were: accommodation, agriculture, education, utilities, finance, government, health and manufacturing.

✧ All sectors felt that the set-up costs were important. 100% of the respondents from the accommodation, utilities, and personal services sectors were concerned about these costs.

✧ All sectors felt that the ongoing costs were important. 100% of the respondents from the cultural, utilities, manufacturing, and personal services sectors were concerned about these costs.

✧ The agriculture (highest importance), health, cultural, education, finance, manufacturing and retail sectors felt that the information technology capacity was very important. The communications, utilities and personal services sectors felt that information technology capacity was not an important issue.

- The constructions, cultural, finance, health and retail sectors felt that the amount of information available about appropriate online training products was important.

- Only the communications sector valued brand names of online training products.

- The agriculture, communications, utilities, finance, manufacturing and retail sectors felt that difficulties in doing online study at the worksite was an important consideration.

- The accommodation, utilities, and personal services sectors felt it was important for employees to have computers at home.

- The accommodation, utilities and health sectors felt that the level of staff computer literacy was an important issue.

- Australian standards were felt to be important by the cultural, agriculture, utilities, government, health and retail sectors.

- Over 80% of the accommodation, agriculture, cultural, education, utilities, finance, government, manufacturing, personal services and retail sector respondents felt it was important that the training provider understood their needs.

Situations where online training could be useful

Specific uses of online training were analysed against industry sector. The following are examples of where online was considered to be useful:

- to help find out about new products: accommodation and government sectors

- to help find out about new procedures: accommodation, construction and utilities sectors

- when new technologies are introduced: communications, construction, manufacturing and personal services sectors

- new staff induction: construction, health and manufacturing sectors

- occupational health and safety training: personal services, agriculture, education and retail sectors

- technical skills training: personal services, communications and construction sectors

- general skills training: government and personal services sectors

- sales training: accommodation sector

- management training and development: cultural and personal services sectors

- training to respond to changing regulations: construction, education, government, and personal services sectors

- when skills are needed urgently: construction, education, finance, government, health and retail sectors.

Ways of getting information about online training

The most useful ways of getting information about online training were: getting the opinion of other people in the industry (79%), browsing websites (75%) and reading written material such as brochures (71%). We also asked what was the best way of getting information, and the clear preference (by 43% of respondents) was via websites, followed by getting the opinion of others in the industry (16%), and having a sales person visit and work through needs (12%).

The least useful ways of getting information were:

- ringing providers and getting an overview of available courses (3%)

- reading ads in newspapers or trade journals (3.5%)

- electronic material via CD-ROM (5%).

Provision of support

Ninety-five per cent of traditional employers felt that the provider of online courses should also provide after-sales support that includes help with software installation and ongoing advice.

Comparative findings

Length of topics

Both groups had similar opinions about the length of time to be spent on individual topics. Approximately half (45% online and 51% traditional) preferred topics that could be learned in an hour or less, although a sizeable group of both employers stated that the length of time needed to suit the content.

Usefulness of online training

The largest response from employers who are already using online training was the usefulness of online training to deliver technical skills (45%). More than 30% of online employers also use online training for general skills, new staff induction, new procedures, occupational health and safety and management development.

Traditional employers thought that online training would be most useful for new procedures (35%) and urgent skills (34%), and more than 30% thought online training would also be useful for occupational health and safety, changing regulations and new technologies.

Table 8:   Usefulness of online training

Training area	% of online employers who use online for this purpose	% of traditional employers who said online would be useful for this purpose
Technical skills	45	28
General skills	39	26
New staff induction	34	29
New procedures	31	35
Occupational health and safety	31	32
Management	31	26
Changing regulations	29	32
New products	26	24
New technologies	24	31
Urgent skills	16	34
Sales	6	15
Other	16	0

24/7 access to online training

Online employers were more likely to want online training after normal business hours (73% compared to 54% of traditional employers), and during school holidays (73% compared to 33%). The reasons for wanting training outside normal business hours (including school holidays) were convenience, flexibility, too busy during working hours, employee choice, and having more time to spend on the training.

Types of online training commonly used by industry sector

The responses of online employers are shown in table 9 against the industry sector in which they operate.

Table 9:   Types of online training by industry sector

Sector	Type of online training commonly used
Agriculture, forestry, fishing, mining	◇ communication services ◇ own learning web-site ◇ own programs: Cebec System, Facom system ◇ self-based training, left up to staff
Retail training	◇ communication ◇ construction ◇ information technology skills ◇ technology skills
Cultural and recreation services	◇ computer-based training ◇ wine appreciation courses
Education	◇ apprenticeship training ◇ automotive ◇ Certificate IV in Workplace Training ◇ competency-based training ◇ frontline management ◇ hospitality ◇ information technology ◇ management ◇ office based ◇ Occupational health and safety ◇ retail
Finance, insurance, property and business services	◇ compliance training ◇ integra ◇ intranet ◇ market training ◇ PS 146, PS2 T basic induction ◇ tax
Government administration and defence	◇ competency-based ◇ project management ◇ team partnering

Online training not commonly used by industry sector

Table 10 gives a summary of the reasons that online employers gave for their industry not commonly using online training.

Table 10:   Reasons online training not used in identified industries

Sector	Reason not commonly used
Accommodation, cafes, restaurants	◇ a resort company, so no need ◇ work is hands on, no computers ◇ hotel environment is transient
Agriculture, forestry, fishing, mining	◇ help via email would be more convenient ◇ it has not been available ◇ no need for it ◇ not aware of the capacity of online training ◇ old-fashioned ideas held by many ◇ provider availability ◇ scale of operation too small to afford ◇ training comes from manufacturers
Construction	◇ hands-on trade so not needed ◇ plumbers generally don't use computers
Cultural and recreation services	◇ initial set up costs ◇ majority of training is hands on bar and gaming skills ◇ nature of industry, 80% small business, 70% casual employees ◇ only large businesses have online capacity

Sector	Reason not commonly used
Education	✧ community-based training is more hands on ✧ face-to-face meetings are more dominant ✧ group training has provided training ✧ hasn't been needed ✧ hotels don't understand it ✧ lack of computer literacy ✧ new providers want more interaction and face to face ✧ no need for it ✧ online training does not include accountability for what was learned ✧ people aren't familiar with it ✧ too expensive ✧ we're heading in that direction
Electricity, gas and water supply	✧ due to type of workers, technology is kept off site ✧ hands on industry likes face-to-face training ✧ the resources don't target this industry much ✧ too costly ✧ too much variety and different components
Finance, insurance, property and business services	✧ because of the technical nature of this industry ✧ field-based staff ✧ it needs to be up to date with changes in tax etc. ✧ it's a new concept for the finance industry ✧ needs to be further developed ✧ not relevant ✧ not specific enough ✧ prefer face-to-face ✧ the information structure is not effective compared to others
Government administration and defence	✧ behind in access and money ✧ decision-makers over 55 not familiar with the internet ✧ it's a cultural shift and means getting people to find time and commit ✧ need a classroom situation ✧ prefer face-to-face ✧ provided by local government ✧ too costly ✧ too much training already available
Health and community services	✧ access ✧ cost ✧ few have up-to-date competencies ✧ hands-on course ✧ health training at high level requires face-to-face ✧ most do not have the technology ✧ technological black hole ✧ we are in the people business
Manufacturing	✧ hands-on training is still the best ✧ not heard of it ✧ not needed yet, needs to be more research ✧ technical skills ✧ too inconvenient ✧ we do production work in the vineyards
Transport and storage	✧ not suitable need practical component
Wholesale and retail trade	✧ has to be done face to face in this industry ✧ never explored, always had an alternative ✧ not moved that far yet ✧ not specialised enough

Online student survey instrument

This survey had a much more 'user-friendly' presentation online

Hi, thank you for opening the survey website. The survey is being done by an independent research company under the Australian Flexible Learning Framework's research program to find out how online courses can be designed to better meet students' needs. Any identifying information (if provided) will only be used for the purpose of quality control.

If you have any queries you can email us on emailus@kppm.com.au

About you and the course you have enrolled in

1a	What course are you studying? (Please type in the course name—e.g. Certificate III in Aquaculture) *box provided*
1b	What is the postcode where you live?
2	How old are you? (click on one) <15 15–19 20–24 25–29 30–34 35–39 40–49 50–59 60–69 Over 70
3	Are you male/female?
4	Which school/training organisation are you enrolled with? *box provided*
5	Which of the following <u>best describes</u> the course you are enrolled in? (click one) School studies Certificate of competency or proficiency Bachelors degree or higher Advanced diploma Diploma Associate diploma Advanced certificate – post trade Advanced certificate – other Certificate – trade Certificate IV Certificate III Certificate II Certificate I Other certificate (please state) *box provided* Other (such as specific product training please state) *box provided* If you chose (a) above please go to question 7

6	Have you done any other study since you left school? Y/N/D If YES, what? (click all further study boxes – multiple answers allowed) Certificate of competency or proficiency Bachelors degree or higher Advanced diploma Diploma Associate diploma Advanced certificate – post trade Advanced certificate – other Certificate – trade Certificate IV Certificate III Certificate II Certificate I Other certificate (please state) *box provided* Other (such as specific product training please state) *box provided*
7a	Are you in paid employment as well as studying? Y/N/D If YES are you employed (click one): Full time Part time Casual Other (please state) *box provided*
7b	If you are currently in paid employment: (click the box if the answer is yes) Is your study relevant to your paid employment? Y/N Is your training required by your employer Y/N Is your employer paying for the course Y/N Are the costs shared between you and your employer Y/N Is your employer giving you time away from work to study Y/N Is your employer giving you uninterrupted time at work to study Y/N Is your employer providing learning support (such as a mentor or help in managing your study time) Y/N Is your employer providing a computer with web access for you to study at home? Y/N Is your employer providing a computer with web access for you to use at work? Y/N
8	What is the <u>main</u> purpose of your study (click one) to get a qualification to help get a job to improve chances of promotion at work it is a work requirement to comply with legislation or government regulations to learn as much as possible about a particular subject to enter university or further study Other (please state) *box provided*
9	Who had the <u>most influence</u> on your decision to enrol in your current course? (click one) Me Parents Employer Other (please state) *box provided*

10a	Did you enrol in your current course because: (multiple answers OK)
	It had an online component
	It was the only course available in my chosen area of study
	It fitted with the rest of my study timetable
	The course is provided locally
	Other reasons (please state) *box provided*
10b	Which of these was the <u>most important</u> factor in choosing your current course? (click one)
	It had an online learning component
	It was the only course available in my chosen area of study
	It fitted with the rest of my study timetable
	The course is provided locally
	Other reasons (please state) *box provided*
11	Which of the following <u>influenced</u> your decision to enrol in an online course?
	(multiple answers OK)
	cost of the course
	can live a long way from the training provider
	course can be paid for online
	course can be done after hours
	course can be adapted to suit my needs
	course can be done during holiday periods
	IT (computer) support is provided
	course provides social interaction with other students
	learning support is provided
	there is contact with lecturers out of teaching hours
	there is the choice of studying alone or in groups
	access to online library/database resources
	can 'fast track' to finish the course quickly
	Australian examples/case studies are provided
	can juggle work, study and other activities
	other reasons (please state) *box provided*

SECTION 2

We are interested in the components of your course that you are doing 'online' and the rest of the
questions in this survey concern your online learning.

12a	Do you study any units/modules in the following ways:
	Web supplemented – The unit is delivered face to face but there is access to additional information via the web if you choose. **Y/N**
	If YES, please indicate the number of units/modules studied in this way *box provided*
	Web Dependent – There is some face-to-face delivery but at least one of the following is a <u>compulsory</u> requirement:
	Students must use the web to get material or information necessary to complete the unit and/or …
	Students must use the web to communicate with staff and/or other students **Y/N**
	If YES, please indicate the number of units/modules studied in this way *box provided*
	Fully Online – All interactions with staff and students, material or information, learning activities, assessment and support services are delivered via web and email. **Y/N**
	If YES, please indicate the number of units/modules studied in this way *box provided*
12b	What subjects or topics are you studying online in your course? *box provided*

12c	Approximately what % of the units in your course are done online? (click one) 100% 75% 50% 25% less than 25%
13	How did you find out about online study? (multiple answers OK) My school/training organisation told me My employer told me Friends/family told me Surfing the web Hard-copy brochures CD ROM I saw an ad in the paper Word of mouth Other (please state) *box provided*
14	How long have you been studying online? (click one) Less than 6 months 6 to 12 months 1–2 years Over 2 years
15	What alternatives did you consider before choosing to study online: (multiple answers OK) Same course but classroom based Same course but paper-based distance education Different course but classroom based Different course online Other (please state) *box provided*
16	Did you have to wait to enrol for your online study? Y/N/D If YES, how long did you wait? (click one) Less than a month 1–3 months 4–6 months More than 6 months
17	How important are the following in relation to your online study?

		Very important	Important	Can't decide	Not very important	Not at all important
	Cost of the course					
	You can pay for the course online					
	The course can be adapted to suit your needs					
	That IT (computer) support is included with the course					
	That learning support is included with the course					
	You can study by yourself or with others as it suits you					
	That you can 'fast track ' the course and finish it quickly					
	That you can juggle work, study and other activities					

	You can live a long way from the training organisation					
	You can do the course at any time including school holidays					
	You can have frequent social interaction with other students					
	You can have contact with lecturers outside normal teaching hours					
	(If employed) your employer provides learning support					
	(If employed) your employer provides IT support					
	You can access resources such as libraries and databases online					
18	The course includes Australian examples and case studies					
19	We have listed the same factors again and this time we would like to know which of these is the <u>single most important factor</u> that would influence your decision to enrol in further online studies? (click one) Cost of the course You can pay for the course online The course can be adapted to suit your needs That IT (computer) support is included with the course That learning support is included with the course You can study by yourself or with others as it suits you That you can 'fast track ' the course and finish it quickly That you can juggle work, study and other activities You can live a long way from the training organisation You can do the course at any time including school holidays You can have frequent social interaction with other students You can have contact with lecturers outside normal teaching hours (If employed) your employer provides learning support (If employed) your employer provides IT support You can access resources such as libraries and databases online The course includes Australian examples and case studies Other reason (please state) *box provided*					
20	Material on the internet can be in plain text or animated and flashy (which takes longer to download). How important is it to you that online education and training material is presented with lots of pictures and animations? (click one) Very important Important Not important Not at all important Can't decide					
21	Do you prefer online learning that: (click one) Has topics that take several hours to investigate and learn Has topics that can be learned in an hour or less Other (please state) *box provided*					

22	How satisfied are you with the online components of the course you are now studying? (click one) Very satisfied Satisfied Unsatisfied Very unsatisfied If you are not satisfied with the online parts of your course, what improvements could be made? *box provided*
23	Do you think you'll finish the online course you're studying now? Y/N/D If NO, why not? *box provided*
24	Would you study online again? Y/N/D Please comment: *box provided*
25	Would you recommend online study to a friend? Y/N/D If No, why not? *box provided*
26	Do you think that your online course is good value for money? Y/N/D If NO, why not? *box provided*
	If you could change anything in your online study, what would it be? Please comment: *box provided*

Optional question

Quality control purposes only:

We would like to contact a small number of people who have completed this survey for quality assurance purposes. If you are happy for us to get in touch and ask you a couple of quick questions, please provide contact details. Your contact details will not be linked to your survey response and will be destroyed when we have finished the quality control process.

Your name:

Contact (phone/email/post)*:*

Classroom student survey

The formatting of this survey has been modified

Hi, thank you for doing the survey. The survey is being done by an independent research company under the Australian Flexible Learning Framework's research program to find out how online courses can be designed to better meet students' needs. (Online training uses internet and email to get lessons and information, and communicate with teachers and other students.)

Any identifying information (if provided) will only be used for the purpose of quality control. If you have any queries you can phone us on 08 8240 0491 or email emailus@kppm.com.au

1   What course are you studying?

2   What is the postcode where you live?

3   How old are you? (circle one)

4   Are you male or female?

5   Which school/training organisation are you enrolled with?
       In which state is your course located?
       In which city/town is your course located?

6   Which best describes the course you are doing? (circle one)
       School studies
       Certificate of competency or proficiency
       Bachelors degree or higher
       Advanced diploma
       Diploma
       Associate diploma
       Advanced certificate – post trade
       Advanced certificate – other
       Certificate – trade
       Certificate IV
       Certificate III
       Certificate II
       Certificate I
       Other certificate (please specify)
       Other (such as specific product training – please specify)

7   What is the main purpose of your study (circle one)
       to get a qualification
       to help get a job
       to improve chances of promotion at work
       it is a work requirement
       to comply with legislation or government regulations
       to learn as much as possible about a particular subject
       to enter university or further study
       other (please specify)

8   Who had the most influence on your decision to enrol in your current course? (circle one)
       Me
       Parents
       Employer
       Other (please state)

9a How important was price in your decision to study? (circle one)
      Very important
      Important
      Not important
      Not at all important

9b Do you think your course is good value for money?

    If NO, why not?

10 Do you have regular access to a computer with email or web connections?

    If YES, do you regularly use (regularly = at least once a week): (circle as many as apply)
      The web for general information or surfing
      Email
      Chat
      Bulletin boards
      Standard applications like Word or Excel
      Games
      The web to research assignments

11a Do you use email to communicate to your lecturers/teachers in the course you're doing now?

11b Do you use email to communicate with other students in the course you're doing now?

12a Do you use a computer to do your assignments?

12b If YES, where is the computer that you most frequently use: (circle one)
      at home
      at work
      at the training organisation/school
      at a public library
      at an internet café
      other (please state)

13 Did you know that you can study some courses online (using the web to get your lessons)?

14a Have you ever enrolled in an online course?

    If NO, please go to Q15

14b If YES (to 14a), what courses have you enrolled in? (please list)

15 Is there any reason you would not enrol in an online course?

    If you have reasons, what are they?

16 Are there any courses that you would consider studying online?

    If YES, which courses would you be interested in studying online?

17 How important do you think are the following factors for an online course?
    (tick one box for each question)

	Very important	Important	Can't decide	Not very important	Not at all important
Cost of the course					
You can pay for the course online					
The course can be adapted to suit your needs					
That IT (computer) support is included with the course					
That learning support is included with the course					
You can study by yourself or with others as it suits you					
That you can 'fast track ' the course and finish it quickly					
That you can juggle work, study and other activities					
You can live a long way from the training organisation					
You can do the course at any time including school holidays					
You can have frequent social interaction with other students					
You can have contact with lecturers outside normal teaching hours					
(If employed) your employer provides learning support					
(If employed) your employer provides IT support					
You can access resources such as libraries and databases online					
The course includes Australian examples and case studies					

18 We have listed the same factors again and this time we would like to know which of these is
    the single most important factor that would influence your decision to enrol in online studies?
    (circle one)
        Cost of the course
        You can pay for the course online
        The course can be adapted to suit your needs
        That IT (computer) support is included with the course
        That learning support is included with the course
        You can study by yourself or with others as it suits you
        That you can 'fast track ' the course and finish it quickly
        That you can juggle work, study and other activities
        You can live a long way from the training organisation
        You can do the course at any time including school holidays
        Frequent social interaction with other students
        Contact with lecturers outside normal teaching hours
        (If employed) your employer provides learning support
        (If employed) your employer provides IT support
        You can access resources such as libraries and databases online
        The course includes Australian examples and case studies

19   Material on the internet can be in plain text or animated and flashy (which takes longer to download). How important is it to you that education and training material is presented with lots of pictures and animations? (circle one)
>   Very important
>   Important
>   Not important
>   Not at all important
>   Can't decide

20a   How important is it that you have regular one-to-one contact with your lecturers? (circle one)
>   Very important
>   Important
>   Not important
>   Not at all important

20b   If you think that regular contact with your lecturers is important or very important, how happy would you be if this contact was only through email (and you had no phone or face-to-face contact)? (circle one)
>   Very happy
>   Quite happy
>   Don't mind either way
>   Unhappy
>   Very unhappy

21   Do you prefer courses that: (circle one)
>   Have topics that take several hours to investigate and learn
>   Have topics that can be learned in an hour or less
>   Other (please state)

22   What is your overall satisfaction level with the course you are now studying? (circle one)
>   Very satisfied
>   Satisfied
>   Unsatisfied
>   Very unsatisfied

23   Do you think you'll finish the course you're studying now?

>   If NO, why not?

Quality control purposes only

We would like to contact a small number of people who have completed this survey for quality assurance purposes. If you are happy for us to get in touch and ask you a couple of quick questions, please provide contact details. Your contact details will not be linked to your survey response and will be destroyed when we have finished the quality control process.

Your name:

Contact (phone/email/post)*:*

Telephone employer survey (not online VET purchaser)

The formatting of this survey has been modified

Hi, my name is XXX and I am conducting a survey on behalf of the Australian Flexible Learning Framework's research programs to find out the level of interest in online courses. The survey takes about 10 minutes. Do you have a few minutes now? Any identifying information will only be used for the purpose of quality control.

Intro Are you providing or supporting online training for your staff at the moment? Y/N/D

    If yes, ask if they would be prepared to do an online survey instead.

    If they agree get email address and send online survey.

1a Can I confirm the name of your organisation: _____

1b State in which contact person operates: _____

2 How many employees do you have? (circle one)
- a 1–5
- b 6–9
- c 10–19
- d 20–100   Commonwealth Government Statistical
- e over 100   Clearing House Approval Number 01406-01

3a How many states does your organisation operate in?

    How many city locations does your organisation have? _____

3b   What percentage of these locations have fast, reliable internet access? _____%

    How many rural city locations does your organisation have? _____

3c   What percentage of these locations have fast, reliable internet access? _____%

    How many remote or isolated locations does your organisation have? _____

3d   What percentage of these locations have fast, reliable internet access? _____%

4 What percentage of your staff have access to the internet at work? _____%

5 How many years has your organisation been in operation? _____yrs

6 Is the organisation (circle one)
- a Wholly Australian owned
- b Partly Australian owned
- c Wholly owned by an overseas company

7 What industry sector do you operate in (circle one)
- d Agriculture, forestry, fishing, mining
- e Manufacturing
- f Electricity, gas and water supply
- g Construction
- h Wholesale and retail trade
- i Accommodation, cafes and restaurants
- j Transport and storage

     k   Communication services

     l   Finance, insurance, property and business services

     m   Government administration and defence

     n   Education

     o   Health and community services

     p   Cultural and recreational services

     q   Personal and other services

     r   Other (please state) _____

8   Is your organisation part of an industry cluster? Y/N/D

9   Does your organisation have dedicated in-house HR or training staff? Y/N/D

11   Do you provide any of your employees with an online computer at home? Y/N/D

11a   If Yes, what % of employees? _____%

12   Is your organisation a registered training organisation? Y/N/D

13   Do you generally (circle one)

     a   develop training yourself

     b   buy it in

     c   our franchise provides our training

     d   other (please state) _____

14   Does your organisation have a <u>formal</u> staff training plan? Y/N/D

15   Do you provide or purchase training that covers (circle as many as apply)

     a   general competencies (communication, OH&S etc.)

     b   technical skills

     c   job specific skills

16   I'm going to read you a list of training types, can you tell me if you pay for or provide each type of training to your staff : (multiple responses allowed)

     a   School studies

     b   Certificate of competency or proficiency

     c   Bachelors degree or higher

     d   Advanced diploma

     e   Diploma

     f   Associate diploma

     g   Advanced certificate – post trade

     h   Advanced certificate – other

     i   Certificate – trade

     j   Certificate IV

     k   Certificate III

     l   Certificate II

     m   Certificate I

     n   Other certificate (please specify) _____

     o   Other (such as specific product training please specify) _____

17   Do you: (multiple responses allowed)

a   provide training in house, or

b   send your employees to external training courses?

If only one circled: Why is this your preferred method of staff training?

_____

If both circled: What training do you tend to send people out for, and what training do you tend to do in-house?

a   provide training in house _____

b   send to external training courses _____

18   Do your employees get paid time away from work to study? Y/N/D

19   Do you provide employees with uninterrupted time at work to do their training assignments? Y/N/D

20   Do you have formal support strategies to help employees who are undertaking training (such as mentor, help with study management etc)? Y/N/D

If YES describe the support strategies you use_____

21a   Are you familiar with online training? Y/N/D

21b   The next few questions are about online training. We are defining online training as training that is web based - that is, students use the internet to get course information, do assignments and communicate with their lecturers. It can apply to training that is done at work or at home, and it isn't restricted to courses that are available in the local area.

22   Have you ever purchased online training, intra-net or computer based training (e.g. CD-ROM) for you or your staff? Y/N/D

If YES, please describe what type of computer-based training you have purchased in the past:

online _____

intra-net _____

computer-based _____

23   Are you likely to purchase online (that's web-based) training in the future? Y/N/D

24a   I am going to read you a list of ways of getting information about purchasing online training. Can you say whether each would be useful.

   a   A sales person to visit you and work through your needs in detail
   b   To ring providers and get a quick overview of available courses
   c   To browse websites and make your initial decision based on online info
   d   To see ads in newspapers and trade journals to help you locate providers
   e   Read written material (brochures and booklets)
   f   Read electronic material via a CD-ROM
   g   To get the opinion of other people in your industry
   h   Other (please state) _____

   Of the list I just read, what is the best way of getting information about purchasing online training. (I can read the list again if you like).

24b   Answer _____

25   Would staff like to be able to access online training after normal (9–5) business hours? Y/N/D

   If YES, why? _____

26   Would staff like to be able to access online training in school holiday periods? Y/N/D

   If YES, why? _____

27   Do you find training providers easy to negotiate with? Y/N/D
   If NO, why? _____

28   I'm going to read you a list of considerations about online training and want you to answer on a scale of 1 for very important and 5 for very unimportant (that's 1 for very important and 5 for very unimportant) for each question. So … If you were considering online training, how important would the following issues be when making your decision? (repeat scale if necessary) (tick one box per question)

	Very important 1	Important 2	Can't decide 3	Not important 4	Not at all important 5
How much you already knew about online training					
The set-up costs					
The ongoing costs					
ROTATE SCALE					
Your organisation's IT capacity					
The amount of information you could find on appropriate training products					
A well-known brand name					
Difficulty in doing online study at the work site					
ROTATE SCALE					
Employees don't have computers to study online at home					
The level of staff computer literacy					

Training materials include relevant Australian standards or state-based content

Whether you can find a training provider that understands the online training needs of your organisation

29 If you were considering purchasing online training, would you expect the training/course provider to provide after-sales support that includes help with software installation and on-going advice? Y/N/D

30 Is online training commonly used in your industry sector? Y/N/D

If **YES**, what type of training? _____

If **NO**, why not? _____

31 Which of the following training formats would you prefer to purchase for your staff? (circle one)
a Topics that take several hours to investigate and learn
b Topics that can be learned in an hour or less
c Other (please state) _____

32 I'm going to read you a list of questions and want you to answer on a scale of 1 for very useful and 5 for not useful at all (that's 1 for very useful and 5 for not useful at all) for each question. How useful do you think online training would be in your organisation in the following situations? (circle one for each question)

	Very useful 1	Useful 2	Can't decide 3	Not very useful 4	Not useful at all 5
To help people find out about new products					
To help people find out about new procedures					
When new technologies are introduced					
ROTATE SCALE					
New staff induction					
OHS&W training					
Technical skills training					
ROTATE SCALE					
General skills training (employability skills, key competencies etc)					
Sales training					
Management training and development					
ROTATE SCALE					
Training to respond to changing regulations					
When skills are needed urgently and scheduled training is not available for some time					

33   Are there any other situations where online training could be useful for your organisation?

34   Do you have any other comments about online training?

Quality control purposes only

Our supervisors would like to contact a small number of people who have completed this survey for quality assurance purposes. If you are happy for us to get in touch and ask you a couple of quick questions, please provide contact details. Your contact details will not be linked to your survey response and will be destroyed when we have finished the quality control process.

Your name:

Organisation name:

Contact (phone/email)*:*

Time taken to complete (mins):

Online employer survey

The formatting of this survey has been modified

Hi, thank you for opening the survey web site. The survey is being done by an independent research company under the Australian Flexible Learning Framework's research program to find out how online courses can be designed to better meet employers' needs. Any identifying information (if provided) will only be used for the purpose of quality control. If you have any queries you can email us on **emailus@kppm.com.au**

Commonwealth Government Statistical Clearing House Approval Number 01407-01

1	What is the name of your organisation?
2	How many employees do you have?: 1–5 6–9 10–19 20–100 over 100
3	How many states does your organisation operate in?
3a	What state are you located in?
4	How many city locations does your organisation have? What percentage of these locations have fast, reliable internet access? % How many rural city locations does your organisation have? What percentage of these locations have fast, reliable internet access? % How many remote or isolated locations does your organisation have? What percentage of these locations have fast, reliable internet access? %
5	How many years has your organisation been in operation?
6	Is the organisation (click one) Wholly Australian owned Partly Australian owned Wholly owned by an overseas company
7	What industry sector do you operate in? (click one) Agriculture, forestry, fishing, mining Manufacturing Electricity, gas and water supply Construction Wholesale and retail trade Accommodation, cafes and restaurants Transport and storage Communication services Finance, insurance, property and business services Government administration and defence Education Health and community services Cultural and recreational services Personal and other services Other (please state) _____
8	Is your organisation part of an industry cluster? Y/N/D
9	Does your organisation have dedicated in-house HR or training staff? Y/N/D
10	Is your organisation a registered training organisation? Y/N/D

11	Do you generally (click one) develop online training yourself buy online training from outside the organisation get online training from your franchisor other (please state) *box provided*
12	What per cent of your training is done online? %
13	Is your online training mainly: (click one) Bulk-purchased, licensed libraries Standard online courses from training providers Fully customised in house Standard courses with some customising for your needs Chosen by individual employees as negotiated Other (please state) *box provided*
14	Do you use online training in your organisation in the following situations; (multiple answers OK) To help people find out about new products To help people find out about new procedures When new technologies are introduced Induction of new staff OHS&W training Technical skills training General skills training (employability skills, key competencies etc) Sales training Management training and development Training to respond to changing regulations When skills are needed urgently and scheduled training is not available for some time Other (please state) *box provided*
15	Does your organisation pay for or provide online training for your staff in any of the following categories: (multiple responses allowed) School studies Certificate of competency or proficiency Bachelors degree or higher Advanced diploma Diploma Associate diploma Advanced certificate – post trade Advanced certificate – other Certificate – trade Certificate IV Certificate III Certificate II Certificate I Other certificate (please specify) Other (such as specific product training – please state) *box provided*
16	Do you use learning management systems/software? Y/N/D If YES which of the following do you use?: (multiple answers OK) WebCT Janison Toolbox Blackboard Other (please state) *box provided*

17a	Did you consider a range of options before you purchased online training? Y/N/D If YES what other options did you consider? *box provided* Did you find it easy to get the information you needed? Y/N/D
17b	Has the training you purchased lived up to your expectations? Y/N/D If NO, why not? *box provided*
18	Does your organisation have a formal staff training plan? Y/N/D
19	Do your employees get paid time away from work to study? Y/N/D
20	Do you provide employees with uninterrupted time to study at work? Y/N/D
21	Do you have formal support strategies to help employees who are undertaking training (such as mentor, help with study management etc)? Y/N/D If YES describe the support strategies you use *box provided*
22	Do you mostly do your online training: (click one) Individually In groups?
23	What types of preparation do you give employees who will be studying online: (multiple answers OK) Training in the software that will be used for the online training Training in how to manage self-administered study Web and email protocols How to assess the quality of online content Other (please state) *box provided*
24	What are the key characteristics of people who successfully complete online training? *box provided*
25	How important were the following factors in your decision to purchase online training?

	Very important	Important	Can't decide	Not important	Not at all important
Cost-effective					
A well-known brand name					
Word of mouth recommendations in choosing online training?					
Content was appropriate to the organisation's needs					
The training provider understood the online training needs of the organisation					
The material was customised to our needs					
The material could be easily up dated in house					
That employees could fast track their training and finish it more quickly					
The material was available immediately					
The training is accredited					
The software was compatible with our IT infrastructure					
Training materials included relevant Australian standards or state based content					

26	Can staff access online training after normal (9–5) business hours? Y/N/D If NO, would you like to be able to? Y/N/D How would it help your business to access training after hours? *box provided*

27	Can staff access online training in school holiday periods? Y/N/D
	If NO, would you like to be able to? Y/N/D
	How would it help your business to access training during holiday periods? *box provided*
28	Are you more likely to purchase online training that has lots of pictures and animation Y/N/D
	Why? *box provided*
29	Is online training commonly used in your industry sector? Y/N/D
	If YES, what type of training is done online? *box provided*
	If NO, why not? *box provided*
30	Which of the following training formats would you prefer to purchase for your staff? (click one)
	Topics that take several hours to investigate and learn
	Topics that can be learned in an hour or less
	Other (please state) *box provided*
31	What is your overall satisfaction level with the online training you are using at the moment?
	Very satisfied
	Satisfied
	Not satisfied
	Not at all satisfied
	Comment? *box provided*
32	What opportunities do you see for the online training industry in the future?
	box provided
33	How long has it taken you to fill in this questionnaire?
	(mins) *box provided*

Optional question

Quality control purposes only:

We would like to contact a small number of people who have completed this survey for quality assurance purposes. If you are happy for us to get in touch and ask you a couple of quick questions, please provide contact details. Your contact details will not be linked to your survey response and will be destroyed when we have finished the quality control process.

Your name:

Organisation name:

Contact (phone/email/post)*:*

Appendix 3

Focus group questions

The discussion in the focus groups centred on the following questions:

1 What is your experience of online training?

2 What is your view of online training as a tool for VET?

3 Do you see your future use of online training to be any different to your current situation? In what way? What will trigger change?

4 How useful would the following online training opportunities be for your business: sales training, management training, induction, OHS&W, general skills, technical skills, new products or procedures.

5 How does the cost of online training compare to other forms of training?

6 Do you find that training providers understand your needs?

7 Is after sales IT support needed? How should it be priced?

8 What are the features and benefits of online training that would increase your interest in online VET? (Prompt for discussion of graphics, currency of material, immediacy of access.)

NCVER

The National Centre for Vocational
Education Research is Australia's
primary research and development
organisation in the field of vocational
education and training.

NCVER undertakes and manages
research programs and monitors the
performance of Australia's training
system.

NCVER provides a range of
information aimed at improving the
quality of training at all levels.