

# **National E-learning Indicators**

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*Part of the Australian Flexible Learning Framework*

*Managed by the Flexible Learning Advisory Group on behalf of the Australian Government, all States and Territories in conjunction with ANTA*

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## Introduction

E-learning is a critical means for transforming the central vocational education and training (VET) business of teaching, learning and assessment. By integrating information and communications technologies into the way VET is done, it becomes more flexible, more responsive to client needs, improves quality and access, and fosters innovation.

To demonstrate the benefits of e-learning to VET clients and the community, and show how e-learning contributes to the achievement of national training goals it will be necessary for the VET system to collect data on, analyse and report on the uptake and outcomes of e-learning activity.

The Flexible Learning Advisory Group (FLAG) is committed to a flexible VET system which meets diverse client needs and helps them succeed in a global environment. Since the 1990s, and more recently through the Australian Flexible Learning Framework for the National Vocational Education and Training System 2000-2004 (Framework), FLAG has strategically supported the uptake of e-learning through National, State, Territory and organisational initiatives targeted at development of e-learning content, skills and knowledge.

FLAG has developed a set of performance indicators and data collection tools which can be used to assess the uptake, use and impact of e-learning in VET.

It is intended that implementation of these indicators will provide a baseline on the uptake of e-learning and over time illustrate trends in the uptake and impact of e-learning on skills, employment and system service outcomes. It is envisaged that these indicators may also be adapted and used by individual education and training providers to establish their own organisational goals and benchmarks for e-learning.

## Preparing the ground

An environmental scan of Australian and international research and education agencies in September 2004 identified approximately 250 potential indicators of e-learning. Through consultation over a period of months these were progressively reduced to produce a short list of 12 indicators which addressed issues related to the uptake, use and outcomes of e-learning on VET clients and providers.

These 12 indicators were tested with VET stakeholders to assess the relevance and meaning of the indicators and a range of definitional and data collection issues.

### *Defining e-learning*

A crucial issue in the definition and testing of the indicators was the development of definitions of e-learning and e-business that could be used in the data collection process. Whilst recognising that there are many definitions of e-learning, and that these are evolving as the nature and capability of learning technologies changes, the project has adopted the following definition.

**E-learning** uses electronic media to deliver flexible VET. It includes access to, downloading and use of web, CD-ROM or computer-based learning resources in the classroom, workplace or home. It also includes online access to and participation in course activities (eg online simulations, online group discussions), directed use of the Internet for learning and research purposes, structured learning-based email communication and online assessment activities. E-learning does not include email dissemination of course information, email communication between a teacher/trainer and learner on a single learning issue, or online administration of learning activities.

The definition of e-business identifies services that training organisations can deliver through the use of information and communication technologies (ICT). E-business differs from e-learning in that it addresses administrative, process and basic communication issues more than educational and pedagogical issues.

**E-business** services include client, support and administrative services offered by training organisations that are delivered or supported by information and communications technologies. Eg online publication of general course information and relevant policies, regulations and strategies; online enrolment; online payments and electronic forms; online access to student records; online library services; online information on student support services; online access to and delivery of student support services; and online access to results.

## E-learning indicators

The 12 indicators were selected on the basis that collectively they represented a combination of uptake and outcome indicators and those related to engagement of VET clients and provider flexibility and innovation.

**Table 1: E-learning indicators**

Indicators	CLIENT Engagement	PROVIDER Flexibility and Innovation
Uptake and Use <sup>1</sup>	<ul style="list-style-type: none"> <li>▪ % of VET unit enrolments that use e-learning.</li> <li>▪ % of VET clients using e-business client, support and administrative services offered by providers.</li> </ul>	<ul style="list-style-type: none"> <li>▪ % of VET providers offering units that use e-learning.</li> <li>▪ % of VET teachers/trainers delivering units that use e-learning.</li> <li>▪ % of VET providers offering e-business client, support and administrative services.</li> </ul>
Outcome <sup>2</sup>	<ul style="list-style-type: none"> <li>▪ Client satisfaction with e-learning experiences in VET.</li> <li>▪ Client satisfaction with e-business experiences in VET.</li> <li>▪ % of VET learners who through e-learning have increased skills and confidence in using ICT.</li> <li>▪ % of VET learners who through e-learning have or expect to have improved employment outcomes.</li> <li>▪ % of VET clients who believe e-learning and e-business gave them flexibility in when, where and how they engaged with VET.</li> </ul>	<ul style="list-style-type: none"> <li>▪ % of VET teachers/trainers who through e-learning have changed teaching practices in the design, development and delivery of units.</li> <li>▪ % of VET teachers/trainers who believe increased access to e-learning resources has improved teaching and learning outcomes.</li> </ul>

Some of the indicators are typical quantitative input-type measures while others are more subjective qualitative measures, particularly the client outcome measures. For these indicators, the questions proposed for capturing data have multiple parts and would provide a richer pool of information than the indicator on its own might suggest.

While Table 1 groups indicators by type and focus, these indicators can also be grouped into three broad categories.

<sup>1</sup> These indicators assess the uptake of e-learning and the volume and sophistication of its use. They are primarily quantitative in that they assess how many learners or employers are engaged in e-learning, or how many providers are offering ebusiness services. These may be expressed in absolute terms or as a proportion of the total number of learners, employers, providers and teachers/trainers.

<sup>2</sup> These indicators assess the impact of e-learning on and the degree to which the application of ICT has changed outcomes for clients and transformed the practices of providers. They are primarily qualitative and more subjective than the indicators of uptake and use. They explore issues related to satisfaction and expectations.

## ***Primary indicators of e-learning***

Six indicators are considered most important in demonstrating the uptake and outcome of e-learning in the VET system.

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

While Indicator 6 is the main indicator of client satisfaction with e-learning, the responses to Indicators 3, 4 and 5 also assess overall satisfaction levels. The individual survey questions against these indicators could be presented separately or integrated with other client satisfaction-type questions.

## ***E-business indicators***

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

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

In the proposed survey questions against these indicators, e-business services are defined as including client, support and administrative services offered by VET providers that are delivered or supported by information and communications technologies. For example, online publication of course information, online enrolment, online payments, online access to student records and online library services. E-business differs from e-learning in that it addresses administrative, process and basic communication issues more than educational and pedagogical issues.

## ***Teaching and training practices***

Three indicators were related to the uptake, use and outcomes of e-learning on VET teachers and trainers.

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

## Data sources

In selecting the short list of indicators FLAG was conscious of avoiding creating a significant data collection or survey response burden on VET clients and providers. As shown in Table 2 although there are 12 indicators the response burden would be spread across four different audiences, minimising the total impact on any group.

**Table 2: E-learning indicators by data source**

Data Source	Indicators											
	E-learning						E-business			Teaching		
	1	2	3	4	5	6	7	8	9	10	11	12
Students			✓	✓	✓	✓		✓	✓			
Employers					✓	✓		✓	✓			
Training Organisations	✓	✓					✓					
Teachers and Trainers										✓	✓	✓

## Appendix A – E-learning indicators

This appendix fully defines each of the 12 recommended e-learning indicators. It provides:

- a definition of each indicator
- information on the data currently available against each indicator
- template questions that can be used to capture information against each indicator
- suggestions for the use and interpretation of the indicator.

### *Primary indicators of e-learning*

<b>Indicator 1</b>	% of VET unit enrolments that use e-learning.
<b>Indicator type</b>	Uptake and use
<b>Component</b>	Client engagement
<b>Data source</b>	VET training organisations
<b>Current data</b>	<p>There is currently no uniform data on the uptake of e-learning by VET learners. The Phase 2 evaluation of the Australian Flexible Learning Framework 2000-2004 identified upward trends in the uptake of e-learning through observation of enrolments on centralised delivery platforms or information systems (eg TAFE VC, NSW TAFE). These suggest that the level of uptake of in 2003 was in the order of 2-10% of VET enrolments and growing exponentially. However, this data is inconsistently defined and does not cover all of the VET system, nor all States and Territories.</p> <p>NCVER's (National Centre for Vocational Education Research) current Student Outcomes Surveys asks TAFE graduates and module completers whether they were enrolled in units that involved delivery through web-based resources or online communication with teachers and other students.</p>
<b>Survey question</b>	<p>Data against this indicator could be obtained by providing VET training organisations with a definition of e-learning and asking the following questions.</p> <ul style="list-style-type: none"> <li>▪ How many VET unit enrolments were there at your organisation in the past 12 months?</li> <li>▪ What proportion of these unit enrolments do you estimate were enrolments in VET units that involved e-learning?</li> </ul>
<b>Indicator use</b>	<p>This is the primary indicator for tracking the uptake of e-learning in VET. In its simplest form it shows neither the volume nor sophistication of use by individual learners, simply whether they are participating in e-learning.</p> <p>Targets could be set against this indicator, recognising that the current level of uptake is low and that in the long-term it is anticipated that flexible learning, and e-learning in particular, will become widespread, though not necessarily universal.</p>

<b>Indicator 2</b>	% of VET providers offering units that use e-learning.
<b>Indicator type</b>	Uptake and use
<b>Component</b>	Provider flexibility and innovation
<b>Data source</b>	VET training organisations
<b>Current data</b>	<p>There is currently no uniform data on the uptake of e-learning by VET providers. Centralised e-learning platforms (such as the TAFE VC in Victoria) record the number of registered training providers using the platform, however, as providers can use other platforms the data is not complete, even within the jurisdictions where such systems exist.</p> <p>A survey of the use of Flexible Learning Toolboxes in April 2004 found that a moderate proportion of training providers used Toolboxes in 2003 (81% of responding TAFE institutes, 50% of responding registered training organisations (RTOs), 47% of responding secondary schools). This survey had a very high response rate from TAFE institutes (87%) with 19% response from private and enterprise RTOs and 9% from secondary schools. The survey only asked about use of Toolboxes, not uptake of other forms of e-learning.</p>
<b>Survey question</b>	<p>Data on this indicator could be captured through a survey of VET training organisations. Data could be captured by providing training organisations with a definition of e-learning and asking the following questions.</p> <ul style="list-style-type: none"> <li>▪ How many VET unit enrolments were there at your organisation in the past 12 months?</li> <li>▪ What proportion of these unit enrolments do you estimate were enrolments in VET units that involved e-learning?</li> <li>▪ Did any of these VET units use e-learning in the following ways? (with Yes/No responses) <ul style="list-style-type: none"> <li>a. Use of multimedia interactive learning resources (eg web-based or CD-ROM learning resources, Flexible Learning Toolboxes) in the classroom.</li> <li>b. Remote use of multimedia interactive learning resources (eg web-based or CD-ROM learning resources, Flexible Learning Toolboxes).</li> <li>c. Use of Flexible Learning Toolboxes.</li> <li>d. Use of State/Territory-based e-learning resources.</li> <li>e. Electronic communication between students or between teachers and students (other than communication on a single learning issue).</li> </ul> </li> </ul> <p>More comprehensive data could be captured in the future by asking questions about the relative uptake of different forms of e-learning and the curriculum areas or industry sectors in which this occurring.</p>
<b>Indicator use</b>	<p>This indicator would be used to track changes in the potential supply of e-learning by VET providers. In this simplest form it estimates the general level of provision of e-learning. The additional questions provide greater insight into the type of e-learning being undertaken and the areas where uptake has been greatest.</p> <p>Over time it might be expected that the proportion of providers and units using e-learning would reach a plateau (at or below 100%), at which time the indicator would become redundant and might be dropped or modified.</p>

<b>Indicator 3</b>	% of VET learners who through e-learning have increased skills and confidence in using ICT.
<b>Indicator type</b>	Outcome
<b>Component</b>	Client engagement
<b>Data source</b>	VET learners
<b>Current data</b>	There is currently no uniform data on the impact of e-learning on the ICT skills and confidence of VET learners. Surveys of TAFE students conducted in 2000 and 2001 for the Victorian Office of Technical and Tertiary Education found that around 80% of online students said that their online experiences at TAFE had increased their confidence in using online technologies. The continued increase in reach and use of the Internet and other communications technologies across the community is also contributing to increased skills and confidence in using ICT.
<b>Survey question</b>	<p>Data on this indicator could be captured through a survey of VET learners by providing them with a definition of e-learning and asking the following questions.</p> <ul style="list-style-type: none"> <li>▪ How would you rate the impact of your VET e-learning experience on your skills and confidence in using information and communications technology? <i>Please rate each aspect using the following scale – Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, Not Applicable.</i> <ol style="list-style-type: none"> <li>a. Before I started my course I was confident in using computers and technology.</li> <li>b. The e-learning in my course has increased my confidence in using computers and technology.</li> <li>c. Before I started my course I had good computer skills.</li> <li>d. The e-learning in my course has increased my ability to use computers and technology.</li> <li>e. The e-learning in my course has led me to use computers and technology more in other areas of my life.</li> </ol> </li> </ul> <p>An alternative questioning approach might be to ask learners to rate the level of increased skills and confidence in ICT by assessing these before and after their VET e-learning experience.</p>
<b>Indicator use</b>	<p>This indicator is important in assessing the way in which e-learning supports the more widespread uptake and use of ICT in society, and whether VET e-learning contributes to enhancing skills for a knowledge-based economy and society.</p> <p>Of particular interest is the combination of responses to parts a. and b., and parts c. and d. For example, students with a high level of base computer skills may indicate that e-learning did not substantially increase their ability to use computers, reducing the overall response to part d. However, a positive response to part d. for those students who indicated low prior skills in part c. would be an encouraging outcome.</p>

<b>Indicator 4</b>	% of VET learners who through e-learning have or expect to have improved employment outcomes.
<b>Indicator type</b>	Outcome
<b>Component</b>	Client engagement
<b>Data source</b>	VET learners
<b>Current data</b>	NCVER's annual national Student Outcome Surveys of TAFE graduates and module completers assess the impact of courses or modules on employment circumstances in two ways. Firstly, by asking students to identify their main reason for doing the course and then whether the course helped them to achieve this main reason. Secondly, the survey asks about job-related benefits received as a result of the student undertaking the course. Cross referencing of responses to these questions would give some indication of whether courses partially or completely delivered via web-based resources and/or online communication produce different expectations of job-related benefits. These surveys are targeted at TAFE students only.
<b>Survey question</b>	<p>Data on this indicator could be captured through a survey of VET learners by providing them with a definition of e-learning and asking the following questions.</p> <ul style="list-style-type: none"> <li>▪ How would you rate the impact of your VET e-learning experience on your employment opportunities and outcomes? <i>Please rate each aspect using the following scale – Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, Not Applicable.</i> <ol style="list-style-type: none"> <li>a. The e-learning in my course helped me to get a better job, get a promotion, or get more responsibility in my job.</li> <li>b. I think the e-learning in my course will in the future help me to get a better job, get a promotion, or get more responsibility in my job.</li> <li>c. The e-learning in my course helps me to do my job better.</li> <li>d. I enjoy my work more because of the e-learning in my course.</li> </ol> </li> </ul>
<b>Indicator use</b>	This indicator assesses in a general way the incremental impact of e-learning on employment outcomes for VET clients. The question is subjective and will be influenced by students' expectations and knowledge of job options associated with their course, and the e-learning component of their course. In capturing this data and analysing the results it will be important to be mindful of the fine line in distinguishing between the impact of the course and the overall learning experience on actual or potential employment outcomes, and the specific impact of e-learning. This is an important indicator as positive contributions to VET outcomes strengthen the case for promotion and adoption of e-learning.

<b>Indicator 5</b>	% of VET clients who believe e-learning and e-business gave them flexibility in when, where and how they engaged with VET.
<b>Indicator type</b>	Outcome
<b>Component</b>	Client engagement
<b>Data source</b>	VET learners and employers with employees undertaking VET units
<b>Current data</b>	There is currently no uniform data on the flexibility offered to VET clients through e-learning and e-business. Some small scale qualitative surveys have identified the convenience of e-learning as a differentiating factor, especially for learners balancing work, personal and study commitments.
<b>Survey question</b>	<p>Data on flexibility for learners could be captured through a survey of VET students by providing them with a definition of e-learning and asking the following questions.</p> <ul style="list-style-type: none"> <li>▪ How would you rate the following aspects of your VET e-learning and e-business experience? <i>Please rate each aspect using the following scale – Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, Not Applicable.</i> <ol style="list-style-type: none"> <li>a. The e-business services offered by my provider enabled me to choose what time of year I enrolled in my course.</li> <li>b. The e-learning components of my course enabled me to choose when I started and finished my course (eg time of year).</li> <li>c. The e-learning components of my course enabled me to choose when I did my study (eg time of day).</li> <li>d. The e-learning components of my course enabled me to choose where I did my study (eg home, workplace, campus).</li> <li>e. The e-learning components of my course enabled me to choose what I studied (eg a particular unit, elective, module or course).</li> <li>f. The e-learning components of my course enabled me to choose how I undertook learning activities (eg face-to-face, using technology).</li> </ol> </li> </ul> <p>Data on the benefits of flexibility for employers could be captured by asking similar questions.</p> <ul style="list-style-type: none"> <li>▪ How would you rate the e-business services offered by your training organisation? <i>Please rate each aspect using the following scale – Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, Not Applicable.</i> <ol style="list-style-type: none"> <li>a. The e-business services enabled me to choose when my employees enrolled in their courses.</li> <li>b. The e-business services gave me flexibility to select convenient payment options.</li> <li>c. The e-business services were convenient for gathering information about the training organisation and course options.</li> </ol> </li> </ul>
<b>Indicator use</b>	Rather than assessing the impact of e-learning on VET learning and employment outcomes, this indicator assesses flexibility and process and learning efficiencies for VET clients. Increased flexibility in VET demonstrates the system's responsiveness to client demand.

<b>Indicator 6</b>	Client satisfaction with e-learning experiences in VET.
<b>Indicator type</b>	Outcome
<b>Component</b>	Client engagement
<b>Data source</b>	VET learners and employers with employees undertaking VET units
<b>Current data</b>	NCVER conducts annual national Student Outcome Surveys of TAFE graduates and module completers that rate learners overall satisfaction with the quality of VET training. However, these do not address satisfaction with e-learning experiences, other than identification of the course delivery mode that learners found most satisfying. Some VET providers undertake client satisfaction surveys, although these tend to be targeted to learners more than employers, are not comparable, and again do not address satisfaction with e-learning experiences.
<b>Survey question</b>	<p>Data on student satisfaction with e-learning could be captured by providing them with a definition of e-learning and asking the following questions.</p> <ul style="list-style-type: none"> <li>▪ How would you rate the following aspects of your VET e-learning experience? <i>Please rate each aspect using the following scale – Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, Not Applicable.</i> <ol style="list-style-type: none"> <li>a. E-learning increased my capacity for learning.</li> <li>b. E-learning increased my enjoyment of learning.</li> <li>c. I would recommend e-learning to my friends or work colleagues.</li> </ol> </li> </ul> <p>Data on employer satisfaction with e-learning could be captured by asking similar questions.</p> <ul style="list-style-type: none"> <li>▪ How would you rate the following aspects of your VET e-learning experience? <i>Please rate each aspect using the following scale – Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, Not Applicable.</i> <ol style="list-style-type: none"> <li>a. E-learning increased my employees' capacity for learning.</li> <li>b. E-learning increased my employees' enjoyment of learning.</li> <li>c. I would recommend e-learning to other employees and employers.</li> </ol> </li> </ul> <p>These questions could be presented in surveys as a cluster or integrated with other client satisfaction-type questions that use a Likert scale to capture responses.</p>
<b>Indicator use</b>	<p>These questions are subjective, and depend entirely on the individual learner's or employers' approach to learning, expectations of learning and their actual e-learning experience. Some employers may indicate that they do not have enough knowledge of their employees' learning experience to answer the questions. Nevertheless, the responses to these questions, particularly the inclination to recommend e-learning, are indicative of overall satisfaction levels.</p> <p>Questions asked against other indicators identified in this report (eg Indicators 3, 4 and 5) also point to client satisfaction levels.</p>

**E-business indicators**

<b>Indicator 7</b>	% of VET providers offering e-business client, support and administrative services.
<b>Indicator type</b>	Uptake and use
<b>Component</b>	Provider flexibility and innovation
<b>Data source</b>	VET training organisations
<b>Current data</b>	There is currently no uniform data on the number of VET providers offering e-business services to their clients. Anecdotally, the number of VET providers offering e-business services has grown over the past five years, but across the entire VET system it is not known how widespread this is.
<b>Survey question</b>	<p>Data on this indicator could be captured through a survey of VET training organisations asking the following questions.</p> <ul style="list-style-type: none"> <li>▪ Does your organisation offer the following e-business services to individual VET students? (Yes/No responses) <ul style="list-style-type: none"> <li>a. Online publication of general course information and relevant policies, regulations and strategies</li> <li>b. Online enrolment</li> <li>c. Online payments and electronic forms</li> <li>d. Online access to student records</li> <li>e. Online library services</li> <li>f. Online information on student support services</li> <li>g. Online access to and delivery of student support services</li> <li>h. Online access to results.</li> </ul> </li> <li>▪ Does your organisation offer the following e-business services to employers? (Yes/No responses) <ul style="list-style-type: none"> <li>a. Online publication of general course information and relevant policies, regulations and strategies</li> <li>b. Online enrolment</li> <li>c. Online payments and electronic forms.</li> </ul> </li> </ul>
<b>Indicator use</b>	This is the primary indicator for tracking the provision of e-business services in VET. Whilst it does not show the volume of uptake or sophistication of use by VET clients (see Indicators 8 and 9), the provision of services using alternative methods provides flexibility to clients. Over time, as provision of e-business services by VET providers becomes universal, this indicator could become redundant, or be modified to explore issues related to 'type of use'.

<b>Indicator 8</b>	% of VET clients using e-business client, support and administrative services offered by providers.
<b>Indicator type</b>	Uptake and use
<b>Component</b>	Client engagement
<b>Data source</b>	VET clients
<b>Current data</b>	There is currently no uniform data on the uptake of e-business services offered by VET providers. Surveys of TAFE students conducted in 2000 and 2001 for the Victorian Office of Technical and Tertiary Education found that 40-50% of students were aware of their provider offering online enrolment, results and library services. Anecdotally, the use of e-business services has grown over the past five years, but across the entire VET system it is not known how widespread this use is.
<b>Survey question</b>	<p>Data on student and employer awareness and uptake of e-business services could be captured by asking the following questions.</p> <ul style="list-style-type: none"> <li>▪ In the last 12 months have you used, or been aware of, any of the following e-business services offered by your training organisation? (responses from 'Used service', 'Aware of service but not used', and 'Not aware of service')</li> <li>a. Online publication of general course information and relevant policies, regulations and strategies</li> <li>b. Online enrolment</li> <li>c. Online payments and electronic forms</li> <li>d. Online access to student records</li> <li>e. Online library services</li> <li>f. Online information on student support services</li> <li>g. Online access to and delivery of student support services</li> <li>h. Online access to results.</li> </ul>
<b>Indicator use</b>	This indicator would be used to track the uptake of e-business services in VET. Uptake is anticipated to increase as more providers offer e-business services and then level off as clients express their preferences for service delivery using different methods. The level of uptake by learners and employers may vary.

<b>Indicator 9</b>	Client satisfaction with e-business experiences in VET.
<b>Indicator type</b>	Outcome
<b>Component</b>	Client engagement
<b>Data source</b>	VET learners and employers with employees undertaking VET units
<b>Current data</b>	There is currently no uniform data on client satisfaction with the e-business services offered by VET providers.
<b>Survey question</b>	<p>Data on student satisfaction with e-business services could be captured by asking the following questions.</p> <ul style="list-style-type: none"> <li>▪ How would you rate the e-business services offered by your training organisation? <i>Please rate each aspect using the following scale – Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, Not Applicable.</i> <ol style="list-style-type: none"> <li>a. I found it easy to access e-business services.</li> <li>b. Using e-business services was more efficient than using the telephone, personal attendance or written communication.</li> <li>c. I would recommend using e-business services to my friends or work colleagues.</li> </ol> </li> </ul> <p>Data on employer satisfaction could be captured by asking similar questions.</p> <ul style="list-style-type: none"> <li>▪ How would you rate the e-business services offered by your training organisation? <i>Please rate each aspect using the following scale – Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, Not Applicable.</i> <ol style="list-style-type: none"> <li>a. I found it easy to access e-business services.</li> <li>b. Using e-business services was more efficient than using the telephone, personal attendance or written communication.</li> <li>c. I would recommend using e-business services to other employees or employers.</li> </ol> </li> </ul>
<b>Indicator use</b>	This indicator assesses the overall impact of e-business on VET clients. Individual aspects assess characteristics or features of the client's e-business experience.

## Teaching and training practices

<b>Indicator 10</b>	% of VET teachers/trainers delivering units that use e-learning.
<b>Indicator type</b>	Uptake and use
<b>Component</b>	Provider flexibility and innovation
<b>Data source</b>	VET teachers and trainers
<b>Current data</b>	There is currently no uniform national data on the uptake of e-learning by VET teachers and trainers. Some individual training organisations have captured this data according to their definition of e-learning, but this practice is neither consistent nor universal. The Phase 2 Evaluation of the Australian Flexible Learning Framework 2000-2004 identified public and private training organisations where strong encouragement and support for the adoption of e-learning has led to a high proportion of staff within the organisation or teaching department using e-learning. However, this approach is not currently representative of the entire VET system.
<b>Survey question</b>	<p>Data on this indicator could be captured from VET teachers and trainers by providing them with a definition of e-learning and asking the following questions.</p> <ul style="list-style-type: none"> <li>▪ Have you ever delivered VET units that use e-learning? (Yes/No)</li> <li>▪ In the last 12 months did you deliver any VET units that used e-learning in the following ways? (Yes/No responses) <ul style="list-style-type: none"> <li>a. Online access to and downloading of learning materials and resources.</li> <li>b. Use of multimedia interactive learning resources (eg web-based or CD-ROM learning resources, Flexible Learning Toolboxes) in the classroom.</li> <li>c. Remote use of multimedia interactive learning resources (eg web-based or CD-ROM learning resources, Flexible Learning Toolboxes).</li> <li>d. Use of Flexible Learning Toolboxes.</li> <li>e. Online access to and participation in course activities.</li> <li>f. Online simulations.</li> <li>g. Online group discussion (synchronous/asynchronous).</li> <li>h. Posting messages to a group through an online bulletin board.</li> <li>i. Structured learning-based email communication between learners and other learners or between learners and teachers/trainers.</li> <li>j. Electronic submission of work.</li> <li>k. Online assessment activities.</li> </ul> </li> </ul>
<b>Indicator use</b>	This indicator would be used to track the level of uptake of e-learning by VET teachers and trainers. The first question aims only to determine whether or not teachers and trainers have ever used e-learning. The nature and scope of recent use is secondary and valuable information on how e-learning is being delivered to learners.

<b>Indicator 11</b>	% of VET teachers/trainers who through e-learning have changed teaching practices in the design, development and delivery of units.
<b>Indicator type</b>	Outcome
<b>Component</b>	Provider flexibility and innovation
<b>Data source</b>	VET teachers and trainers
<b>Current data</b>	Events such as the annual national NET*Working conferences and State/Territory-based initiatives such as 'Riding the Wave' in Queensland and 'Flexible Learning Week' in Victoria have showcased the many innovative ways in which teachers and trainers across a broad spectrum of training organisations and curriculum areas have through e-learning changed teaching practices in the design, development and delivery of units. Despite this, there is currently no uniform data on the impact of e-learning on VET teachers and trainers.
<b>Survey question</b>	<p>Data on this indicator could be captured from VET teachers and trainers by providing them with a definition of e-learning and asking the following questions.</p> <ul style="list-style-type: none"> <li>▪ How would you rate the impact of technology on your teaching practices? <i>Please rate the impact using the following scale – Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, Not Applicable.</i> <ol style="list-style-type: none"> <li>a. I now use technology to draw on a wider pool of teaching resources.</li> <li>b. I now encourage students to draw on more web- and computer-based resources.</li> <li>c. Through use of technology I am able to create more individualised learning for my students.</li> <li>d. Through e-learning I have built more team learning into the unit.</li> <li>e. I encourage greater interaction between students through the use of technology.</li> </ol> </li> </ul>
<b>Indicator use</b>	<p>This indicator can track general changes in teaching practices through e-learning, by simply noting the proportion of teachers who responded positively to any of the options in the question. For example, the survey may find that 80% of teachers and trainers are now encouraging students to draw on web and computer-based resources. Analysis of the responses to each of the individual components of the question would identify the areas of greatest impact on teaching practices.</p> <p>It could be argued that any VET teacher/trainer using e-learning has changed their teaching practices, and it is recognised that there are potentially other impacts of e-learning on teaching practices than those listed in this question.</p>

<b>Indicator 12</b>	% of VET teachers/trainers who believe increased access to e-learning resources has improved teaching and learning outcomes.
<b>Indicator type</b>	Outcome
<b>Component</b>	Provider flexibility and innovation
<b>Data source</b>	VET teachers and trainers
<b>Current data</b>	There is currently no uniform data on the views of VET teachers and trainers with regard to the impact of e-learning resources on teaching and learning outcomes. While there is known to have been an increase in the use of e-learning resources (as demonstrated through the increased use of Flexible Learning Toolboxes and enrolments in units on major learning management systems), the qualitative impact of these resources has not been measured.
<b>Survey question</b>	<p>Data on this indicator could be captured from VET teachers and trainers by providing them with a definition of e-learning and asking the following questions.</p> <ul style="list-style-type: none"> <li>▪ Have you accessed VET units that use e-learning from any of the following sources? (Yes/No responses) <ul style="list-style-type: none"> <li>a. Your organisation's own learning management system.</li> <li>b. State/Territory-based e-learning resources.</li> <li>c. Flexible Learning Toolboxes.</li> <li>d. EdNA Online.</li> <li>e. Other sources external to your organisation.</li> </ul> </li> <li>▪ How would you rate the impact of increased access to e-learning resources on your teaching and learning outcomes? <i>Please rate each suggested change using the following scale – Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree, Not Applicable.</i> <ul style="list-style-type: none"> <li>a. I now have access to more learning resources than I did two years ago.</li> <li>b. I now use more e-learning resources than I did two years ago.</li> <li>c. The e-learning resources I can now access are of high quality.</li> <li>d. The e-learning resources I can now access have improved my teaching practices.</li> <li>e. The e-learning resources I can now access have improved learning outcomes for my students.</li> </ul> </li> </ul>
<b>Indicator use</b>	This indicator potentially serves a dual purpose, as it addresses issues related to both access to e-learning resources and the impact of these resources on teaching and learning outcomes.

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