

The quality of teaching in VET – evidence

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Introduction

This is the fourth publication from a project to research and make recommendations on the quality of teaching in vocational education and training; on teacher qualifications and continuing professional development of vocational education teachers; the impact teaching has on the quality of vocational education students' experiences and student outcomes; and how this can be evaluated. The project is funded by the Department of Education, Employment and Workplace Relations, managed by the Australian College of Educators and conducted by the LH Martin Institute at the University of Melbourne.

The first publication of this project was *The quality of teaching in VET – literature review*¹. The literature review contextualised the project, identified issues that needed further investigation and shaped the questions the project team explored with participants. The second publication *The quality of teaching in VET – overview* presented the findings of the project's research with different people concerned with vocational education and training. It reported their perceptions of the nature of vocational teaching and the kinds of vocational education teacher qualifications and continuing professional development that are needed.

The project's third publication *The quality of teaching in VET – framework* developed a conceptual framework for evaluating the quality of teaching in vocational education and training, teacher preparation and development programs, the experience of vocational education students and their outcomes. This report *The quality of teaching in VET – evidence* reviews the evidence available to inform the framework outlined in the previous report and recommends improvements and extensions of the measures currently available to evaluate the quality of vocational education. It follows the framework outlined in the previous report by considering what evidence there is from the peer review of teaching, students' satisfaction, students' attainment, graduates' outcomes, graduates' performance, graduates' satisfaction and employers' satisfaction.

The project's next publication will be a paper presenting a range of options, models and proposals for public discussion before the final report, which will propose models for the preparation and continuing development of vocational education and training teachers, and for appropriate evaluation frameworks and quality indicators.

The project team will continue to consult extensively throughout all stages of the research, and the findings will be reported to participants and interested parties as part of the process of developing the final report and recommendations. Each report is a different stage of the project and should be considered holistically as different chapters of a final report.

The conceptual framework for evaluating the quality of teaching in vocational education and training developed in *The quality of teaching in VET – framework* illustrated the many factors which influence the quality of teaching in vocational education and

¹ The *Literature Review* and all other reports from the project are available from the Australian College of Educators website: <https://austcolled.com.au/announcement/study-quality-teaching-vet> viewed 22 August 2010.

training and hence the complexity of evaluating it. The *Framework* report reviewed 7 possible means for evaluating the quality of teaching which are illustrated in Figure 1. We noted that peer assessment is the most direct evaluation of teaching quality, but we noted the variability and cost of peer assessments. The other measures are successively more removed from teaching and the activity being evaluated, which makes it successively more difficult to isolate the effect of teaching from the several other factors that affect student attainment, graduate outcomes and graduates' performance. So while data on students' attainment are relatively inexpensive to collect, it is hard to separate teaching from the several other factors that affect attainment. Surveys of the satisfaction of students, graduates and employers are well established in Australian vocational education, and while each is valuable, each has limitations which make them unsuitable as the sole measure of the quality of teaching. Satisfaction surveys are best used in combination with other measures of teaching quality.

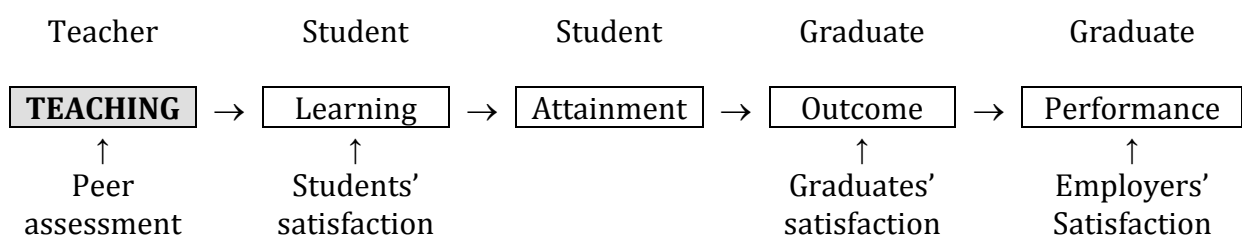
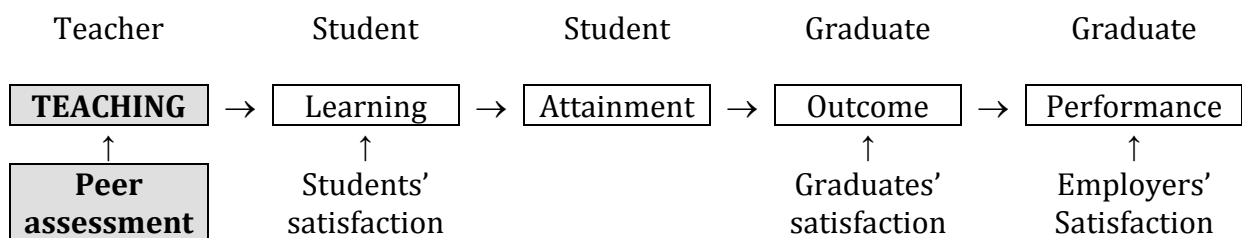


Figure 1: main possibilities for evaluating the quality of teaching

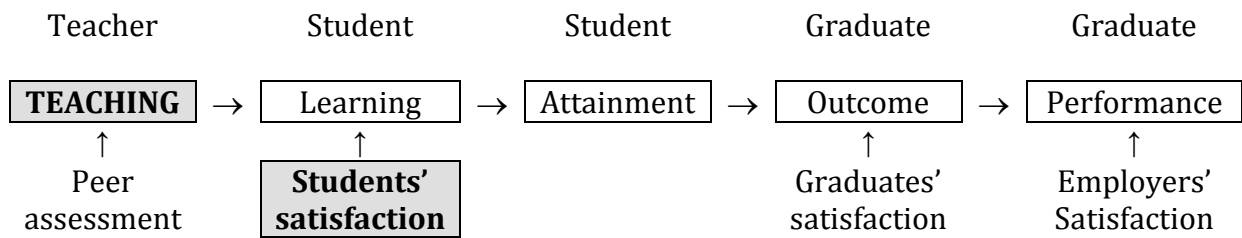
In this report we review the data available for each of the measures considered in the framework, starting with the peer review of teaching.

Peer review of teaching



There are no system data on the peer review of vocational teaching in Australia and little of direct assistance in other countries or in higher education. So if Australian vocational education were to consider using peer review to evaluate the quality of teaching it would have to develop a method from first principles.

Students' satisfaction



There is no national survey of vocational students' satisfaction with their teaching or with their education generally. However, all institutions wishing to offer recognised vocational education in Australia must be registered and a condition of registration is that they comply with the Australian quality training framework. For the most recent data considered in this report institutions were required to comply with the 2007 framework and in particular with its essential standards for registration, which applied from 1 July 2007 to 30 June 2010. Standard 1.1 requires –

- 1.1 The RTO collects, analyses and acts on relevant data for continuous improvement of training and assessment.

(Commonwealth of Australia, 2007: 4)

The 2007 essential standards for registration specify these 3 quality indicators for meeting the continuous improvement standard –

Employer satisfaction (competency development, and training and assessment quality). This indicator focuses on employers' evaluations of learners' competency development, its relevance to work and further training, and the overall quality of the training and assessment.

Learner satisfaction (learner engagement and competency development). This indicator focuses on the extent to which learners are engaging in activities likely to promote high-quality skill outcomes, as well as learners' perceptions of the quality of their competency development and the support they receive from RTOs.

Competency completion rate. This is calculated for qualifications and units of competency/modules delivered, based on data provided by RTOs on the previous calendar year's number of enrolments and qualifications completed and/or units of competency/modules awarded.

(Commonwealth of Australia, 2007: 6)

The 2010 Australian quality training framework (Commonwealth of Australia, 2010) states more explicitly and augments the 2007 standards for registration but so far doesn't change the quality indicators. This section considers student satisfaction; we will consider the measures of employer satisfaction and module completion later in this report.

While the 2007 Australian quality training framework introduced a requirement for registered training organisations to collect, analyse and act on 'relevant data' about student satisfaction, it did not specify or even provide any guidance on an appropriate method. John Ward (2008: 15) of Chisholm Institute of TAFE observed that this resulted in surveys which complied with the framework's requirement but did not provide complete or even useful information about students' satisfaction:

There are no firm indicators of the extent to which registered training organisations across Australia measure levels of student satisfaction. However, anecdotal evidence indicates that many (if not most) VET providers disseminate short surveys at the end of a subject and/or course. The personal experience of this author suggests that such surveys range in quality from very good to very poor—with a strong bias towards very poor. Qualitative examinations of a range of student satisfaction surveys used across a number of TAFE institutions highlight two features that significantly diminish their overall construct validity. The first concerns the way in which satisfaction surveys are designed to collect information that teachers, trainers, and educational administrators want to know, rather than to collect information that is firmly linked to a student's summative appraisal of satisfaction with VET services. . . .

The second issue concerns the narrow focus of questions in these surveys. Because most are disseminated at the end of a module or subject, the vast majority of these instruments are restricted to the collection of information directly related to classroom issues. In the overwhelming majority of cases, information collected by these surveys is limited to one or two dimensions of the learning experience—usually that of teaching and learning (was the subject interesting?) and classroom facilities (was the room temperature adequate for your needs?). Students are rarely surveyed about their attitudes towards the social environment, ancillary support, or the enrolment procedures. In this sense, the information collected provides an incomplete perspective of the construct of student satisfaction. Once again, such surveys do not measure the construct that they purport to measure.

(Ward, 2008: 15)

Ward (2008: 7) developed and tested a survey instrument which he reported using successfully at his institute. Apparently independently of this work (Coates, 2008: 520) the government funded the development of a survey of student satisfaction which resulted in the student survey developed by the Australian Council for Educational Research (Commonwealth of Australia 2008a). The survey is rather long. It asks 35 questions about the students' education in 4 broad domains and 10 summary scales (Table 1).

Table 1: student satisfaction questionnaire’s domains, scales, labels and items

Domain	Scale	Label	Item
Training quality	Trainer quality	LQ1	Trainers encouraged learners to ask questions
		LQ2	Trainers made the subject as interesting as possible
		LQ3	Trainers had an excellent knowledge of the subject content
		LQ4	Trainers explained things clearly
	Overall satisfaction	LQ5	Overall, I am satisfied with the training
		LQ6	I would recommend the training to others
		LQ7	I would recommend the training organisation to others
	Effective assessment	LQ8	I received useful feedback on my assessments
		LQ9	Assessments were based on realistic activities
		LQ10	The way I was assessed was a fair test of my skills and knowledge
		LQ11	The training organisation gave appropriate recognition of existing knowledge and skills
	Clear expectations	LQ12	It was always easy to know the standards expected
		LQ13	I usually had a clear idea of what was expected of me
		LQ14	Trainers made it clear right from the start what they expected from me
	Learning stimulation	LQ15	I was given enough material to keep up my interest
		LQ16	The amount of work I had to do was reasonable
		LQ17	The training was at the right level of difficulty for me
Work readiness	Training relevance	LQ18	The training focused on relevant skills
		LQ19	The training prepared me well for work
		LQ20	The training had a good mix of theory and practice
	Competency development	LQ21	I developed the skills expected from this training
		LQ22	I learned to work with people
		LQ23	I identified ways to build on my current knowledge and skills
		LQ24	I developed the knowledge expected from this training
		LQ25	I learned to plan and manage my work
Training conditions	Training resources	LQ26	Training resources were available when I needed them
		LQ27	The training used up-to-date equipment, facilities and materials
		LQ28	Training facilities and materials were in good condition
	Effective	LQ29	Training organisation staff respected my

Domain	Scale	Label	Item
	support		background and needs
		LQ30	The training was flexible enough to meet my needs
		LQ31	The training organisation had a range of services to support learners
Student engagement	Active learning	LQ32	I set high standards for myself in this training
		LQ33	I pushed myself to understand things I found confusing
		LQ34	I looked for my own resources to help me learn
		LQ35	I approached trainers if I needed help

Source: Commonwealth of Australia (2008b: 8)

Students are asked to respond to each question on a 4 point scale ranging from 'strongly disagree' to 'strongly agree'. Students are then asked to write answers to the questions: What were the best aspects of the training? and What aspects of the training most needed improving? Finally students are asked 6 questions about their program and 7 demographic questions about themselves. Coates (2009: 524) notes that the questionnaire resulted from its development in extensive consultation with several interested groups: 'As with other aspects of research design, survey instruments invariably reflect a compromise between practical, methodological and substantive considerations. Conducting a highly iterative and consultative validation process is one means of finding a balance between these forces'.

The Australian Council for Educational Research produced a student survey guide (Commonwealth of Australia, 2008b) which provides useful advice on how to administer the survey and analyse its data. The questionnaire may be administered onsite on paper, online, by mail, or by phone. The survey guide advises on how to survey a census of all students or a sample of students (Commonwealth of Australia, 2008b: 4-5) and suggests that 'It is probably best to administer the . . . [questionnaire] towards the end of a period of training' (Commonwealth of Australia, 2008b: 11).

The Australian Council for Educational Research (2010a) was also funded to produce a student survey sample cover letter, a student survey sample email, an online survey system and system guide, technical support materials, a student survey questionnaire master and codebook. Institutions may submit their data to the survey management, analysis and reporting tool developed by ACER which converts survey responses into reports that can be used for quality management. ACER also offers a survey processing service which supplies scannable surveys and reads responses through high speed scanning software which generates data files and reports (Australian Council for Educational Research, 2010b).

The student satisfaction survey thus generates a considerable amount of data which are potentially extremely valuable in evaluating the quality of vocational education teaching. An obvious application would be to compare data between institutions. Another application would be to consider data across institutions. For example, it would be extremely interesting to analyse the data about the program that qualifies vocational education teachers, the Certificate IV in Training and Assessment. However, institutions

may have small numbers of enrolments in a particular program of interest which risks reporting results that reflect the personal characteristics of the students completing the survey rather than characteristics of the program. This difficulty may be overcome by aggregating results for the program across years or across institutions.

There are, however, 2 big obstacles to using the data beyond individual institutions. First, while both the 2007 and the 2010 Australian quality training frameworks require institutions to collect, analyse and act on 'relevant data' for continuous improvement of training and assessment and while the government has funded the Australian Council for Educational Research to design, develop and validate a questionnaire and to maintain tools and guides to support institutions in administering the survey, neither the 2007 nor the 2010 Australian quality training framework specify what might be 'relevant data' for satisfying the essential standards for registration. While institutions believe they are expected to use the ACER's questionnaire and some state departments of education require it of publicly funded institutions, the 2007 and the 2010 Australian quality training frameworks leave institutions free to use other instruments or to use only parts of the ACER's questionnaire. The framework would have to specify a common instrument to generate data useful for comparisons across and between institutions. While the advice in the student survey guide produced by ACER is sensible and easily accessible, the administration of the survey would probably have to be standardised further if one wanted to compare results confidently between or across institutions (Curtis, 2010a).

The second big obstacle to using student survey data to evaluate the quality of teaching between and across institutions is that there is no expectation let alone obligation for institutions to report their student satisfaction data centrally. Both these obstacles may be addressed by the quality skills incentive announced by the Australian Government in the 2010-11 Commonwealth budget. The quality skills incentive will offer about \$400,000 annually to the 100 biggest registered training organisations (which includes all 59 Tafe institutes) for performance in 'teaching quality, higher completion rates for modules and qualifications and better access for disadvantaged Australians', and 'Information about RTO performance that becomes available as a result of the Quality Skills Incentive may be made available to students and potential students on the My Skills website, further increasing transparency in the training sector' (Australian Government, 2010; Gillard and Albanese, 2010: 25; DEEWR, 2010: 100).

The government has not yet elaborated how it will measure teaching quality for the quality skills incentive. While the student survey may be used in the medium or longer term, the obstacles mentioned above may persuade the government to rely at least in the short term on teaching quality part of the student outcomes survey, which is discussed later.

Project's study: students and graduates

The project interviewed 32 students and 25 graduates about their experience of vocational education. The aim of the interviews was not to determine the views of a representative sample of vocational education students and graduates, but to see whether there were any issues about vocational education not identified in current surveys. The interviews were therefore exploratory and open ended within an interview framework granted University of Melbourne ethics approval number 1033233. Subjects were informed about the project in accordance with the approved protocol. Interview questions are set out in Appendices A – C, and a list of interviewees is given in Appendix D. A summary of students' and graduates' responses to the projects questionnaire is given in Appendix E.

Why students enrolled in the program

As with the consistent findings of the student outcomes surveys and other studies, most of the students and many of the graduates interviewed for the project said that a key consideration in their enrolling in their program was to get a job, with many mentioning a job in a specific field. Many students also said that their program was important in building a career and some students and many graduates said their program had implications for their professional development within the field in which they were currently working.

Most students in the survey said that they believed their program would help them to achieve their goals, however diverse those goals might be. Fifteen of the 20 graduates who answered this question said that their program had helped them to achieve their goals, whether by improving their skills, confidence and/or getting a job.

Expectations

Students and graduates said that they thought their program would be challenging in some capacity and many said that the program was just what they had expected; while most said that it was better than expected. Some students said that the program was a lot more difficult than they had expected. More graduates than students said that their program was not as challenging as they had hoped while several said that the program was better than they had expected.

What aspects of the program were good?

For many students, a good aspect of their program was the support of teachers and the camaraderie they developed in the program. This includes those who spoke about the quality of teachers; their approachability and encouragement; and the collegiate, supportive atmosphere of the classroom. Several students focussed on the skills and qualifications that the program would provide and many commented on the program delivery and content. Graduates most frequently identified as a good aspect of their program the skills that they developed and/or the qualification they had gained. Three graduates specifically mentioned the importance of their teachers' industry knowledge

as a positive aspect of their program and this was reinforced by several graduates saying that good teachers need industry knowledge and experience.

What aspects of the course need improvement?

Most students said that they did not think their program needed improvement but many said that some aspects of the program content or delivery required improvement. This included those who questioned the appropriateness of some topics, or the fact that some material seemed to be repetitious, or that the program was not comprehensive enough. However, most graduates said that their program should be improved, particularly in delivery and /or content. Some graduates said that some aspect of the class structure needed improvement, either because of too diverse a range of age groups and learning abilities, or too large a class which impacted on access to the teacher.

Who and/or what helped you learn?

Students' most popular response when asked about what helped them learn was about learning through group activities and discussions, including reading in class rather than at home alone; improving communications and sharing experiences; feeling supported and not worrying about being 'embarrassed to ask questions'; and learning from other students. Many students spoke about the important role of their teacher in their learning, largely their personality, their patience, passion and respect. Several students spoke about the importance of self-motivation in their learning. Graduates most commonly referred to experiential learning such as practical examples to support their learning, as well as excursions and guest speakers. As with students, several graduates believed that a teacher's personality was important to their effectiveness.

What makes a good teacher?

When asked to think about a good teacher and to explain what made them good, the most common response centred around the concept of 'respect' for students. Five respondents actually used the word 'respect', as follows:

The teacher has a lot of respect and patience. (Female certificate III student, aged 15-19)

The teachers show respect, and have helped me to understand – not told me I was an idiot. (Male certificate IV student, aged 20-24)

[Not so helpful teacher] Teachers who don't understand students' rights or respect their students (Female certificate IV student, aged 25-44)

Others spoke more generally about good teachers 'treating them like adults', recognising the students as individuals, drawing out their strengths, treating them fairly, appreciating their differences, not discriminating, and not showing favouritism.

The next most popular response to this question was that good teachers needed to be clear in their requirements and be able to explain issues easily to students until they understand; and those who believed good teachers are organised and/or structured. Many students also identified the teacher's personality as a key element in their effectiveness, such as those who believed teachers needed to be passionate and charismatic, but also down to earth; also those who believed good teachers take pride in helping students achieve; and that teachers should be well balanced, happy, approachable, patient, caring and good communicators. Many students identified industry currency as an important attribute of a good teacher. This included those who referred to the breadth of their teacher's industry knowledge or the fact that they were still employed within their field as well as teaching.

Graduates most frequently said that industry currency and clarity and/or organisation were important for good teaching. This included those who believed teachers needed to treat students like adults; understand their differences; teach fairly; support students to achieve their goals; and act as a mentor (although that word wasn't used by graduates).

What makes a not so helpful teacher?

When asked to consider a not so helpful teacher many students said that they had not had a bad teacher and therefore could not comment. Of the remaining interviewees, many spoke of the reverse of what made a good teacher. Consequently, many students referred to teachers who did not respect them, who treated them like children; who did not listen to them or who discriminated against them or others. Some comments include:

A teacher who treats you like a little kid and doubts you. (Female certificate III student, aged 15-19)

Teachers who pick on you are not good. Some teachers can force you to do things, like stand up in front of the class and make you feel really uncomfortable – that has happened to me. (Female certificate III student, aged 15-19)

Discrimination is a problem – because of my language (English is my second language) – sometimes they think you are stupid and treat you that way. (Female certificate IV student, aged 20-24)

An equally common response made by students was about disinterested teachers, including those who seem to be 'just doing a job', not caring about their students, and failing to provide interesting materials or motivating classes. Comments included:

He would come to class and teach what was on paper and no more. (Male advanced diploma student, aged 20-24)

They are just there to work and don't care about the students. (Male certificate IV student, aged 20-24)

For graduates the most frequent response was about teachers' disinterest in some form or other, with many graduates associating this with a not so helpful teacher. The next most frequent response was about a lack of clarity, organisation, and/or preparation. Some graduates referred to the lack of knowledge or industry of some teachers:

Incompetency (male certificate III graduate, 20-24 age group)

She was learning as she went along, and it didn't inspire much confidence (male certificate III graduate, 20-24 age group)

Some teachers have been out of the trade so long, it's not effective (male certificate III graduate, 25-44 age group)

Some of the newer teachers didn't know the material and were learning with the students (male certificate III graduate, 20-24 age group)

Would you recommend the course?

Most of the interviewed students said that they would recommend the program they were currently doing. Some students who said they would recommend the program added some sort of proviso, largely relating either to 'knowing yourself' or to feeling a sense of 'vocation'. Most graduates said they would recommend their program but some said that they would not.

What is the best way to succeed in the program?

Students were asked what advice they might give to help others succeed in their program. Most students said that they would advise other students to ensure that they completed their work, reading and all homework ('whether you think it's relevant or not') and reading. One student said:

If you're not putting in the work, you'll stuff up. Do the work – do all your homework – don't fall behind – don't miss a day at TAFE. A lot of apprentices slack off . . . sort out your week – create a plan. (Male certificate III student in the 25-44 age group)

Several students who identified working hard as important also spoke about paying attention. This included regular attendance at class, listening to the teachers, concentrating, and not distracting others. Many students spoke of the importance of networking in some capacity, whether this meant sharing experiences/problems with classmates, or making connections in your industry. Some others identified some sense of self-knowledge as important to success. This included those who believed that you need to be sure about what you want to do; make sure the course 'fits'; do some research; get some insight – 'know that this is really what you want to do. The teacher prepared us for what to expect because of her own work experience'. (Female certificate III student, 15-19 age group). It also includes those who talked about being motivated

and being aware of their own needs; enjoy the course etc. Some students spoke about the need to be organised, allowing time for study, additional reading and research.

Insights from the project's study

It is clear from what we have covered so far and the elaboration of students and graduates' responses in Appendix E that students' and graduates' responses to open ended questions in the project's study reflect many of the issues covered in the survey of student satisfaction currently used by institutes, and this will be reinforced when we review the results of the student outcomes survey administered to graduates. This is a good finding: it validates the survey instruments already standard in the sector. However, the project identified or emphasised 4 issues not given so much prominence in vocational education's current surveys.

First, students and graduates placed great store in the respect they were shown by teachers: they want teachers to treat them like adults, to accommodate students from different backgrounds and with different levels of preparation, to be patient and considerate of students when they had difficulty handling the material, to treat them as individuals and to treat them fairly. This subject doesn't seem to be included in the student satisfaction survey currently used by institutes. We shall see that the student outcomes survey asks graduates to respond to the statement: 'My instructors treated me with respect' but arguably this issue isn't given as much prominence in the survey as it was given in students' and graduates' more open ended responses in the project's survey.

Secondly, students and graduates volunteered the importance of teachers' personality: their enthusiasm for their subject and for teaching, their commitment to helping students, being caring, and their balance between informality and approachability and a business-like approach to class. This is consistent with much educational theory. Here is not the place for a treatise on educational theory, but it is worth noting that one of the most influential educational theories is Bloom's taxonomy of learning objectives. Bloom posits 3 domains of learning:

affective (about attitudes and feelings)

psychomotor (about doing)

cognitive (about knowing – knowledge, comprehension, application, analysis, synthesis and evaluation).

Bloom's affective domain has 5 levels.

Receiving

This is the lowest level; the student passively pays attention. Without this level no learning can occur.

Responding

The student actively participates in the learning process, not only attending to a stimulus; the student also reacts in some way.

Valuing

The student attaches a value to an object, phenomenon, or piece of information.

Organising

The student can assemble different values, information, and ideas and accommodate them within their own schema; comparing, relating and elaborating on what has been learned.

Characterising

The student holds a particular value or belief that now exerts influence on their behaviour so that it becomes a characteristic.

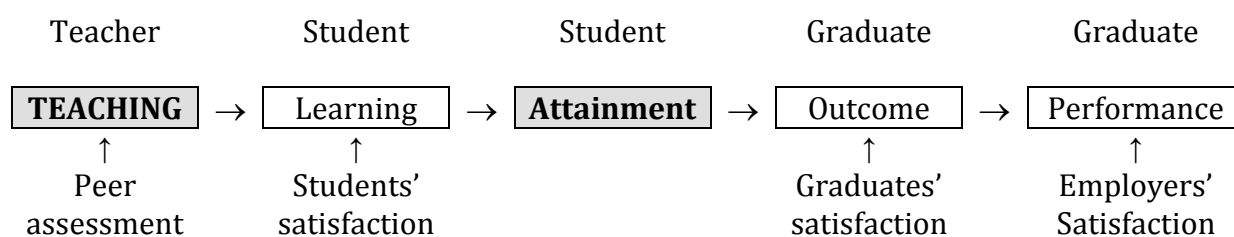
(Bloom, et al, 1956)

In view of this it is surprising that so little attention is given to the affective domain in vocational education and to vocational teachers' capacity to interact with students and develop students' affective domain.

The third issue that emerged from the project's study is that students volunteered that their success depended on their motivation, organisation, setting aside enough time and energy to undertake their study, paying attention and doing the work set by teachers. Again, this is hardly surprising since learning is jointly produced by students and their teacher. Furthermore, numerous studies in higher education have emphasised the significance of students' personal factors in their persistence or attrition. But this isn't given enough attention in vocational education. While it is inappropriate for a teacher or their institution to intervene in students' personal lives, institutions could pay more attention to students' motivation in admitting students, programs should include material on study skills, and teachers have a role in encouraging and enthusing their students.

The fourth issue that emerged from the project's study is the importance of teachers' industry experience, relevance and currency. This is hardly news, since industry experience and currency feature strongly in employers' views about the quality of vocational teaching (as we shall see later). However, it is raised only indirectly in the student survey and again as we shall see later it seems to be completely missing from the student outcomes survey. Even more concerning is the lack of a systematic program to support teachers maintaining their industry currency. This point was discussed in the first project report and it will be developed in a subsequent report about teachers' continuing development. The report will argue that vocational teachers' continuing development should not be confined to the workshops and formal programs common in continuing development for school and higher education teachers; vocational teachers need in addition a special program to ensure their industry currency. While many states have programs, they are neither comprehensive nor systematic.

Students' attainment



We noted that competency completion rate is 1 of the 3 quality indicators specified in the essential standards for registration of the 2007 and 2010 the Australian quality training framework. This is reported extensively within institutions, but no public report seems to be available.

The National Centre for Vocational Education Research (NCVER) has published subject enrolments by subject result in its student statistics, the most recent being for 2006 (NCVER, 2008). Results are shown for 2002, 2004 and 2006 in Table 2. It will be noted that students' subject failure rate fell steadily from 2002 to 2006 while the withdrawal rate increased substantially in 2006 after being stable from 2002 to 2004.

Table 2: students by subject result, 2002, 2004 and 2006, %

Subject result	2002	2004	2006
Assessed – pass	67.7	69.1	68.4
Assessed – fail	8.3	7.5	6.4
Withdrawn	9.0	8.9	9.4
Recognition of prior learning	3.1	2.6	3.2
Continuing studies	6.1	6.5	6.7
Not assessed - completed	5.4	5.1	5.5
Not assessed - not completed	0.4	0.3	0.5
Total	100.0	100.0	100.0

Source: NCVER (2008) table 33 - subject enrolments by subject result, 2002 to 2006, Australia

A related measure load pass rate is reported in the Department of Education, Employment and Workplace Relations' *Annual national report of the Australian vocational education and training system 2008* (DEEWR, 2009: 54). Load pass rates have increased steadily from 2004 to 2008 for all levels of program but particularly certificates II and lower, aside from programs classified as 'other' whose load pass rate has been volatile (Table 3).

Table 3: load pass rates by level of program

Program level	2004	2005	2006	2007	2008
Diploma and above	77.9	77.9	77.8	78.2	79.5
Certificate III and IV	79.8	80.8	80.9	81.2	82.1
Certificate II and lower	71.4	72.3	73.3	73.4	74.0
Other	75.4	77.0	76.6	76.1	74.4
All	77.5	78.2	78.5	78.8	79.7

Source: DEEWR (2009: 54, 94) figure 23: load pass rates for government funded VET students, by student group, 2004 and 2008; figure 58: load pass rates for all students and Indigenous students in government funded VET, 2004–2008.

The Productivity Commission's (2010: 5.46 – 5.48) annual *Report on government services* reports load pass rates by jurisdiction. It will be noted that most jurisdictions report steady increases in load pass rates from 2004 to 2008, with Northern Territory and particularly Queensland reporting substantial increases over the period (Table 4).

Table 4: load pass rates by jurisdiction, 2004 - 2008

Jurisdiction	2004	2005	2006	2007	2008
New South Wales	77.4	77.9	77.9	78.0	78.3
Victoria	76.3	76.5	76.5	76.0	76.9
Queensland	78.1	80.5	81.7	83.5	86.3
Western Australia	74.0	74.9	75.5	76.6	77.9
South Australia	87.0	86.8	87.7	87.7	86.7
Tasmania	79.4	79.8	80.2	78.4	81.3
Australian Capital Territory	80.2	79.8	78.6	79.6	81.3
Northern Territory	69.2	72.8	71.4	74.4	72.5
Australia	77.5	78.2	78.5	78.8	79.7

Source: Productivity Commission (2010) table 5A.50 load pass rates by sex (per cent)

It will be noted that this report considers no data about individual institutions. The absence of any data on individual institutions made available to the public is a considerable weakness in openness and accountability and severely limits public analysis. This will be considered further in the conclusion. In 2006 the NCVET (2006a) published a profile of the 72 TAFE institutes existing in 2003 which gives a useful indication of how informative institutional data may be were it to be published.

Subject completion rates are shown in Figure 2. Assuming these data can be analysed without further statistical analysis, we note that there are 4 outliers: the 2 institutes with unusually low load completion rates of around 50% and 2 institutes with unusually high rates of around 95%. There are a further 13 institutes whose load completion rates invite further investigation. Seven institutes have unusually low load completion rates of from about 67% to about 75%. It would be useful to try to identify the reasons for these unusually low completion rates to determine whether anything can and should be done to improve them. Six institutes have unusually high completion rates of from about 87% to about 92% and it would be useful to investigate whether

these institutes may have practices that could improve the completion rates of other institutes.

But for three-quarters of the institutes with subject completion rates of from about 77% to about 85% the data shown in Figure 2 are not informative without further analysis. The differences in subject completion rates between these 55 institutes may be statistically significant, but without further analysis they would not be material – the differences of at most plus or minus 4% are not big enough to warrant much effort to investigate and change.

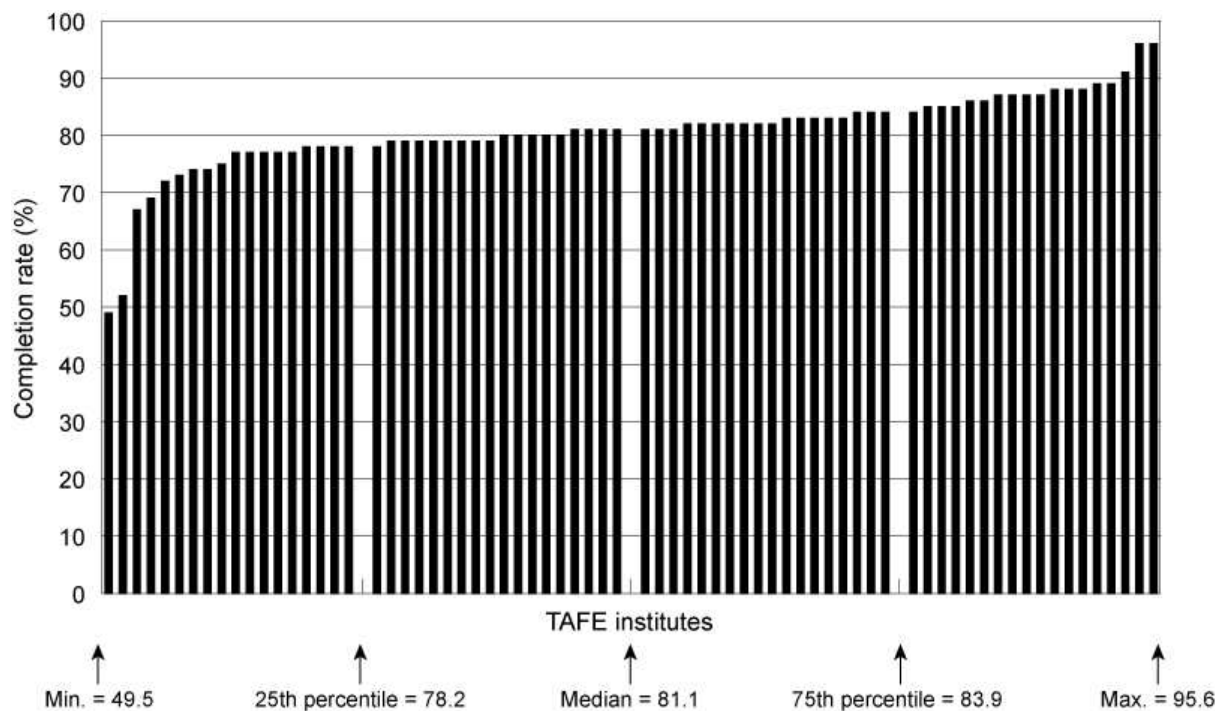


Figure 2: subject completion rate per TAFE institute, 2003

Source: NCVET (2006a: 23) figure 13: subject completion rate per TAFE institute, 2003

But the institutional data shown in Figure 2 and the other institutional data shown in this report need to be analysed further to determine their worth in evaluating the quality of teaching. From the data presented so far we may infer that subject completion rates differ by level of program and jurisdiction. From other work we may infer that subject completion rates differ by students’ ethnicity (Indigenous students and students who speak a language other than English at home have markedly lower load pass rates – DEEWR, 2009: 53, 94), sex (males have a higher load pass rate – DEEWR, 2009: 53), age (older students have a higher load pass rate– DEEWR, 2009: 52), and probably also by field of education, study load (full time/ part time) and study mode (on campus, work-based, distance education). Subject completion rates may also differ by disability status (DEEWR, 2009: 53), students’ prior educational attainment, students’ socio economic status and institute’s location and size.

It is therefore necessary to separate the effect on subject completion rates of these and any other student demographic and institutional characteristic that institutes can’t or

shouldn't change to leave the residual or remaining effect which is assumed to be the result of institutional characteristics which the institution can and should influence. This may accentuate or further smooth out the differences between institutions. This analysis therefore needs to be done for subject completion rate and any other measure of student attainment of interest to determine whether it may be useful to evaluate the quality of teaching. The statistical techniques for this analysis are well established but they require extensive data and some expertise in computing and data and statistical analysis.

NCVER's Dr David D Curtis (2010b) was good enough to provide and discuss with us his draft technical paper *Evaluating institutional performance indicators in VET* which includes his analysis of Tafe institutes' competency completion rates drawn from the 2008 students and courses collection. Curtis conducted a multilevel regression analysis to determine the effect of various student and institutional characteristics on competency completion rates. Curtis (2010b: 40-1) found several student demographic and study characteristics affected competency completion rates.

Table 5 shows the student demographic and study characteristics which Curtis found had the biggest influence on competency completion rate. The characteristics are listed by size of effect, whether positive or negative. Thus domestic fee paying students were 10.6% more likely to complete their competencies than students whose main source of funding was from the government. Conversely, Indigenous students were 7% less likely to complete their competencies than non Indigenous students. These results confirm the effect of various student characteristics on subject completion rates inferred above from reported statistics.

Table 5: influence of students' demographic and study characteristics on competency completion rates (%)

Student characteristic	Influence
Domestic fee paying (ref government funded)	10.6
Apprenticeship	9.0
Study full time	7.7
Current study architecture and building (ref management)	7.4
Indigenous	-7.1
Current study health (ref management)	6.7
Study at school	6.3
Unemployed	-6.1
Age > 64 (ref 15-19)	5.5
Age 45-64 (ref 15-19)	5.3
Current study engineering (ref management)	5.3
International fee paying (ref government funded)	5.1
Current study education (ref management)	4.4
Current study information technology (ref management)	-4.0
NESB	-3.8
Age 25-44 (ref 15-19)	3.8
Disability	-3.3
Current study certificate II (ref diploma)	3.0
Complete year 12 (ref no year 12)	2.7

Student characteristic	Influence
Remote location (ref metro)	2.5
Study mode work (ref classroom)	2.5
Current study certificate III (ref diploma)	2.3
Outer regional location (ref metro)	2.2
Post school qualification	2.0
Current study certificate IV (ref diploma)	-2.0
Age 20-24 (ref 15-19)	1.3
Male	-0.4

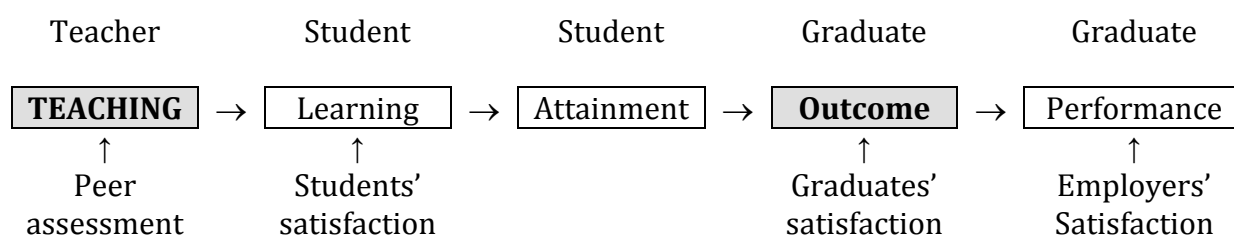
Source: adapted from Curtis (2010: 40-1) Table 5 Influence of individual-level demographic characteristics on CCR and Table 6 Influence of individual-level study-related characteristics on CCR.

Curtis (2010b: 15) also tested several institutional characteristics such as their size but found none had a significant affect on their students' competency completion rates. Curtis found that only 5% of the variation in competency completion rates was due to institutions, but that this effect was statistically significant (page 15).

Curtis adjusted each Tafe institute's competency completion rate for its students' characteristics so that an institution wasn't advantaged by having an unusually big number of domestic fee paying students or apprentices. Adjusting for student characteristics shrunk the differences between low- and high-performing institutes (Curtis, 2010b: 16). Curtis plotted results for each unidentified institute on a box and whisker graph which shows the confidence interval for each observation, allowing readers to identify which differences between institutions are significant and which are within the margin of error of the study. Curtis' graph isn't reproduced here, but it is similar in shape to Figure 2 above. Curtis (2010b: 16) concludes that 20 institutes have competency completion rates significantly above the average, 20 are statistically no different from average, and 20 are below average. Curtis adds that the 5 lowest performing institutes are substantially below the national average.

The conclusion Curtis (2010b: 17) came to is that profile-adjusted competency completion rate appears to be a valid, fair and informative indicator of the performance of providers.

Graduates' outcomes



A comprehensive source of information on vocational education graduates' outcomes is NCVER's annual student outcomes survey. This survey originated in 1995 as a survey of the destination of all graduates of Tafe institutes but since 1999 has included students who completed a module without completing their program or re enrolling (NCVER, 2010a). The Centre also changed the survey from requesting information of all graduates and module completers to a 'stratified, randomly selected sample, with survey responses weighted to population benchmarks from the national VET provider collection' (NCVER, 2009b: 4).

The student outcome survey is quite long, comprising 56 questions, although respondents are not asked to answer all questions. Included amongst the questions are:

What was your **main** reason for doing the training?

Did the training help you to achieve your **main** reason?

Have you enrolled **in any other study since undertaking the training** shown on the front of the form?

Did you have a job of any kind at 29th May 2009?

What was your occupation and what were the main tasks you usually performed in your **main** job at 29th May 2009?

How much did you usually earn (before tax or anything else is taken out) in your **main** job at 29th May 2009?

Which of the following **job-related benefits** do you feel you have received as a result of undertaking the training shown on the front of the form?

(More than one box can be crossed)

Got a job

Was able to set up/expand my own business

Change of job

A promotion (or increased status at work)

An increase in earnings

Other *(please specify)*

How relevant is the training to your **main** job at 29th May 2009?

When did you commence your **main** job at 29th May 2009?

Before I began the training

While undertaking the training

After I finished the training

How long did it take to find a job **after** undertaking the training?

Were you actively looking for work at 29th May 2009?

Which of the following **personal benefits** do you feel you have received as a result of undertaking the training shown on the front of the form?

Did you have a paid job at any time during the **six months before** undertaking the training shown on the front of the form?

What was your occupation and what were the main tasks you usually performed in your **main** job during the **six months before** undertaking the training?

(NCVER, 2009a, original emphasis)

It is therefore possible to compare respondents' employment status, industry, level and wage before their program with the same information after their program and consider the extent to which respondents believe that these changes were due to their vocational education. It is also possible to analyse the extent to which vocational education contributed to respondents' main reason for studying. NCVER reports these and other 'key findings', 'key outcome measures' and 'key characteristics' from the student outcomes survey in its annual report on the student outcomes survey as part of its vocational education and training statistics.

NCVER also publishes on its web site additional tables from the student outcomes survey and since 2008 has published data cubes which allow users without sophisticated computing skills to construct their own tables from the data cube or summary record database. However, the Centre still does not publish data on all the questions asked in the student outcomes survey and these have to be requested specially.

Since NCVER has reported extensively much of the data from the student outcomes survey and has published additional analyses of items of interest (for example, Ryan 2000 and 2002) they are not analysed in detail here. This report will consider simply only 2 graduates' outcomes: employment and proceed to further study.

Employment

Table 6 shows the percentage of graduates employed after graduating by field of education for 1999, 2001, 2006 and 2009. Vocational education adopted the Australian standard classification of education (ABS, 2001) in 2002 and so field of education data published before and after this date should be compared carefully. It will be noted that

the employment rate for all graduates increased from a relatively high 72.8% in 1999 to an even higher 77.8% in 2009. As we shall see, employment rates are affected by several factors outside institutes' control.

It will be noted further that graduates' employment rates differ markedly by field of education. The modest employment rates for information technology and creative arts are presumably due to the soft labour markets in those fields. The poor employment rates for mixed field program are due to a combination of the types of programs classified as mixed field (or multi field before 2002) and the characteristics of the students enrolled in these programs, as Ryan (2000: 25) explains:

The graduates of TAFE multi-field education undertook courses in English as a second language, literacy and numeracy courses or pre-vocational/pre-employment courses. Students of such courses tend to be concentrated in low-level certificate qualifications

The nature of these courses suggests that graduates of them would be among the more disadvantaged in the labour market and, hence, more likely to be unemployed or not in the labour force before undertaking their course. From figure 1, we know that these individuals have substantially worse employment outcomes than other groups of graduates. Despite the disadvantaged nature of the characteristics of those students undertaking TAFE multi-field education courses, their employment outcomes could only be seen as disappointing.

(Ryan, 2000: 25)

Table 6: percentage of graduates employed after graduating by field of education, selected years

Field of education	1999	2001	2006	2009
Natural and physical sciences	62.9	61.5	73.5	70.9
Information technology	NA	NA	64.5	55.8
Engineering and related technologies	85.4	86.8	87.3	85.9
Architecture and building	87.1	86.8	88.7	87.2
Agriculture, environmental and related studies	78.6	75.5	85.1	81.9
Health	76.7	79.9	87.3	84.1
Education	88.6	86.0	87.8	89.8
Management and commerce	73.8	74.1	80.7	76.3
Society and culture	60.2	59.7	76.9	80.1
Creative arts	NA	NA	69.9	60.9
Food, hospitality and personal services	77.7	78.0	78.2	76.4
Mixed field programs	30.3	31.7	49.5	47.5
All	72.8	73.4	79.6	77.8

Sources: NCVET (2009b: 15) table 5 findings for graduates by various training characteristics, 2009 (%); NCVET student outcomes survey, released November 2006 - table 15 graduate findings by various training characteristics; NCVET (2001: 15) table 6: Per cent of graduates by labour force status as at 25 May 2001 by field of study, age, sex, ATSI, NESB, disability and level

of qualification; and NCVER (1999: 13) table 6: per cent of graduates by labour force status as at 28 May 1999 by field of study, age, sex, ATSI, NESB, disability and level of qualification.

Note: the field of education classification was introduced in 2002; programs were classified differently before 2002.

It would be very interesting to analyse the employment rate and other outcomes of the program that qualifies vocational education teachers, the Certificate IV in Training and Assessment. We understand from a related study being conducted by NCVER that the employment rate for the Certificate IV in Training and Assessment is very high because most graduates already have a job before starting the program, but other responses of interest are whether the program helped graduates achieve their main reason for studying and how relevant the program is to their main job. The student outcomes survey has been structured to generate reliable results at broad levels of aggregation and is not reliable for all individual programs at all institutes. We have noted that while data at this level of detail may in future be available from institutional surveys, they aren't currently available. This is considered further in the conclusion.

Next we consider graduates' employment by level of qualification (Table 7). Table 7 covers the period of the introduction of qualifications consistent with the Australian qualifications framework. While results for only AQF qualifications are considered here, they did not have such extensive coverage in 1999 and 2001. Outcomes were reported separately for diplomas in 1999 and 2001 but in 2006 and 2009 outcomes for diplomas were reported with those for higher level qualifications.

People with higher levels of education generally have better labour market outcomes than people with lower levels of education (see, for example, the works cited by Banks, 2010: 4). This generalisation applies to several labour market outcomes such as wage, employment rate, times unemployed, length of any unemployment; it applies to all levels of education from PhD to people without any schooling; and it applies at least to Australia, the UK and the US and probably to many other OECD countries. It is therefore surprising that vocational education graduates with a diploma or above have a somewhat lower employment rate than graduates with higher level certificates, as reported in Table 7. Nonetheless, it is consistent with Ryan's (2000: 12) findings for 1998, even correcting for graduates' employment before they started their vocational education and for graduates who proceed to further study. Furthermore, it seems that the employment rate for graduates with a diploma and above has fallen further behind the rate for graduates with higher level certificates since the mid 2000s. This is probably due to compositional changes. The number of young people enrolled in vocational education has increased markedly since 2005 (NCVER, 2010b) and many seem to be enrolling in diplomas as a pathway to baccalaureates.

While the employment rate for graduates with a diploma and above is somewhat lower than the rate for graduates with a certificate IV or III, it is still very high. One possible reason may be is that many students, particularly younger students, use diplomas as a transition qualification to higher education rather than for entry to work (Stanwick 2006b) But the employment rate for graduates of certificates II is low, and the rate for certificate I graduates is poor, as Karmel and Nguyen (2006) have previously reported. And as Stanwick (2005; 2006a) showed, this is consistent with other outcomes for lower level certificates, all of which are poor: their pass rate, module completion rate,

program completion rate and rate at which they proceed to further study are all poor. These poor outcomes for lower level certificates seem to be a characteristic of the type of qualification since they are taught by teachers in fields of education and in institutes which have much stronger outcomes for higher level qualifications.

Table 7: percentage of graduates employed after graduating by level of qualification, selected years

Qualification	1999	2001	2006	2009
Diploma (and above)	77.2	78.4	(82.6)	(80.8)
Certificate IV	78.3	77.3	83.7	83.6
Certificate III	71.8	78.1	85.6	83.0
Certificate II	60.3	65.8	73.3	69.6
Certificate I	57.7	59.8	55.7	53.0
All	72.8	73.4	79.6	77.8

Sources: NCVER (2009: 11) table 5 findings for graduates by various training characteristics, 2009 (%); NCVER student outcomes survey, released November 2006 - table 15 graduate findings by various training characteristics; NCVER (2001: 38) table 3: all graduates: selected graduate and employment characteristics by qualification completed in 2001; NCVER (1999: 13) table 6: per cent of graduates by labour force status as at 28 May 1999 by field of study, age, sex, ATSI, NESB, disability and level of qualification.

Note 1: diploma (and above) reports only diplomas in 1999, 2001.

Note 2: reports only AQF qualifications, which did not have such high coverage in 1999 and 2001.

Table 8 shows that there are substantial differences in employment rates between jurisdictions, and that these have changed over time. These are illustrated more clearly in the following Table 9.

Table 8: percentage of graduates employed after graduating by jurisdiction, selected years

Jurisdiction	1999	2001	2006	2009
New South Wales	70.8	72.1	77.2	74.2
Victoria	75.0	73.5	80.8	78.5
Queensland	73.3	74.5	80.0	80.5
South Australia	80.6	84.6	80.7	77.0
Western Australia	71.0	70.0	81.1	78.9
Tasmania	71.0	78.2	82.7	80.9
Northern Territory	76.7	80.6	79.6	81.0
Australian Capital Territory	73.6	80.3	86.4	86.8
Australia	72.8	73.4	79.6	77.8

Sources: NCVER (2009: 10) table 4 key findings for graduates and module completers by state/territory, 2009 (%); NCVER student outcomes survey, released November 2006 - table 1 graduate key findings by state/territory; NCVER (2001: 18) table 7: per cent of graduates by

labour force status as at 25 May 2001 by State/Territory; and NCVER (1999: 16) table 7: per cent of graduates by labour force status at 28 May 1999 by state/territory.

Table 9 shows the difference between the employment rate for each jurisdiction and the national employment rate. We note that the employment rate for vocational graduates in New South Wales has been about 2% less than the national employment rate during most of the decade from 1999. Victoria’s employment rate was over 2% the national employment rate at the start of the decade but fell to less than 1% more than the national employment rate by the end of the decade. Queensland’s employment started the decade a little higher than the national average, but increased strongly since the late 2000s, presumably fuelled by high inter state migration and its mining boom. South Australia started the decade with a much higher employment rate than the national average but ended with a rate below the national average, presumably due to the closure of several big manufacturers in Adelaide. The employment rate for Western Australia was below the national average for the first half of the decade but turned around strongly to be higher than the national average for the second half of the decade, again presumably due to its mining boom.

This supports the intuitive view that graduates’ employment is related to the structure and health of the economy and is supported further in the following Table 10.

Table 9: difference between the employment rate for each jurisdiction and the national employment rate, selected years

Jurisdiction	1999	2001	2006	2009
New South Wales	-2	-1.3	-2.4	-3.6
Victoria	2.2	0.1	1.2	0.7
Queensland	0.5	1.1	0.4	2.7
South Australia	7.8	11.2	1.1	-0.8
Western Australia	-1.8	-3.4	1.5	1.1
Tasmania	-1.8	4.8	3.1	3.1
Northern Territory	3.9	7.2	0	3.2
Australian Capital Territory	0.8	6.9	6.8	9
Australia	0	0	0	0

Table 10 shows that the employment rate increased by remoteness from major cities in 2008. This seems counter intuitive and it is not clear why this is the case – NCVER reported this data differently in previous years. However, it further supports the view that employment rates are affected by the structure of the local economy.

Table 10: percentage of graduates employed after graduating by remoteness region, 2008

Region	Employed %
Major cities	79.6
Inner regional	82.1
Outer regional	81.4
Remote/ very remote	82.8
Australia	80.7

Source: NCVET student outcomes survey 2008, released December 2008 table 31: key findings for graduates by remoteness (ARIA+) region

We have noted that employment outcomes for vocational education graduates are strong for all programs aside from mixed field programs and programs at certificate II and particularly certificate I. There is considerable overlap between mixed field programs and programs at certificates I and II (Stanwick 2005: 19; 2006a: 19) and so the poor employment rates (and other outcomes) for these programs may be due to the same factors.

We have also noted that the employment rates for most vocational education programs, while strong, differ noticeably by year, field of education, level and region. This confirms the suggestion in the previous report *The quality of teaching in VET – framework* that employment rates are affected by several factors and that it would be very difficult to separate any affect of teaching quality. In the next section we consider vocational education’s further education outcomes.

Further education

Preparing graduates for further education has not been valued very highly by Australian vocational education since at least 1992, and so while NCVET collects data on graduates who proceed to further education, it does not include much of this data in its standard reports. Nonetheless, proceeding to further education is a successful outcome of all sectors of education and it is worth reviewing what data are available to investigate how this may reflect on the quality of vocational teaching.

In the future vocational education is likely to give more attention to and report more fully graduates proceeding to further education to monitor the target adopted by the Council of Australia Governments to ‘Double the number of higher qualification completions (diploma and advanced diploma) between 2009 and 2020’ (COAG, 2008: 6). This was included in the national agreement for skills and workforce development, which is 1 of 6 new national agreements endorsed by the Council of Australian Governments as part of a new intergovernmental agreement on federal financial relations adopted at COAG’s meeting on 29 November 2008.

Table 11 shows for 2009 the proportion of graduates in each field of education who proceeded to further education. The fields are ranked by proportion of graduates who proceed to further education. Also shown are the proportion and rank of each field’s

graduates who are employed after graduation. There is clearly an inverse relation between employment rate and proceeding to further education, with a high correlation of -0.86. Many students, particularly young students, enrol in vocational education as a pathway to further education including higher education and so proceed to further education in preference to employment. For other graduates employment and enrolment may be substituted for each other, that is, some graduates may enrol in further education because they can't get a job.

Table 11: percentage and rank of graduates employed and percent and rank enrolled in further study after graduating by field of education, 2009

Field of education	Employed		Enrolled	
	%	Rank	%	Rank
Information technology	55.8	11	49.2	1
Creative arts	60.9	10	46.6	2
Mixed field programs	47.5	12	46.2	3
Natural and physical sciences	70.9	9	41.7	4
Health	84.1	4	36	5
Management and commerce	76.3	8	35	6
Society and culture	80.1	6	34.6	7
Agriculture, environmental and related studies	81.9	5	28.4	8
Food, hospitality and personal services	76.4	7	27.1	9
Education	89.8	1	26.9	10
Architecture and building	87.2	2	26.6	11
Engineering and related technologies	85.9	3	23.9	12
All	77.8		32.1	

Sources: NCVER VET graduate outcomes, salaries and jobs, table 1: outcomes of graduates 6 months after completing their training by field of education, 2009; and NCVER (2009b: 15) table 5 findings for graduates by various training characteristics, 2009 (%).

Next we compare the proportion of graduates who proceed to further education by qualification level from 1999 to 2009. Unfortunately the data aren't complete, but there seems to be a marked drop of 8% in the proportion of graduates proceeding to further education over the decade. Wheelahan (2010) expressed concern at this trend, observing that outcomes are particularly poor for young graduates. The fall was least for diploma graduates, of almost 4%. It was highest for higher level certificates, with an average fall of almost 14% in the proportion of certificate III and IV graduates proceeding to further education (Table 12). More extensive analysis would be needed to confirm this trend, but if it exists it greatly weakens the educational ladder of opportunity from higher level certificate programs. While the fall in the proportion of graduates of lower level certificates proceeding to further education is about the overall fall of 8%, this is nonetheless concerning since it worsens the outcomes for graduates who already have poor outcomes.

Table 12: percentage of graduates enrolled in further study after graduating by level of qualification, 1999 and 2009

Qualification	1999	2009
Diploma (and above)	38.4	(34.6)
Certificate IV	46.3	29.1
Certificate III	39.7	
Certificate II	44.3	37.3
Certificate I	46.3	
All	40.3	32.1

Sources: NCVER VET graduate outcomes, salaries and jobs, table 2: outcomes of graduates 6 months after completing their training by field of education and qualification, 2009; and NCVER (1999: 73) table 3: all graduates: selected graduate and employment characteristics by qualification completed in 1998.

Again, there are unfortunate gaps in the data found in NCVER's standard reports on graduates proceeding to further study, but it appears from Table 13 that there are marked differences in the proportions of graduates proceeding to further education between jurisdictions, and that these have changed over the decade. There is a low negative correlation of -0.24 between jurisdictions' proportion of graduates' proceeding to further study and employment rate, so other factors must be influencing jurisdictions' proportion of graduates proceeding to further study.

Table 13: percentage of graduates enrolled in further study after graduating by jurisdiction, selected years

Jurisdiction	1999	2006	2009
New South Wales	42.9	33.3	37.2
Victoria	34.9	28.8	32.0
Queensland	41.0	25.0	24.9
South Australia	38.0	33.3	33.0
Western Australia	41.0	32.8	33.2
Tasmania	36.0	27.9	30.8
Northern Territory	40.9	34.5	32.3
Australian Capital Territory	37.2	36.6	34.6
Australia	40.3	30.2	32.1

Sources: NCVER student outcomes survey 2009, released December 2009, table 1: key findings for graduates by state/territory, 2009; NCVER student outcomes survey, released November 2006 - table 1 graduate key findings by state/territory; and NCVER (1999: 68) table 1: all graduates: selected graduate and employment characteristics by State or Territory where course completed in 1998.

From Table 14 it appears there is a direct relation between proceeding to further study and region classified by remoteness, with the proportions of graduates proceeding to further education falling steadily as they become more distant from the major cities.

This may reflect at least partly the opportunities for further study, which reduce as one gets further out from the major cities.

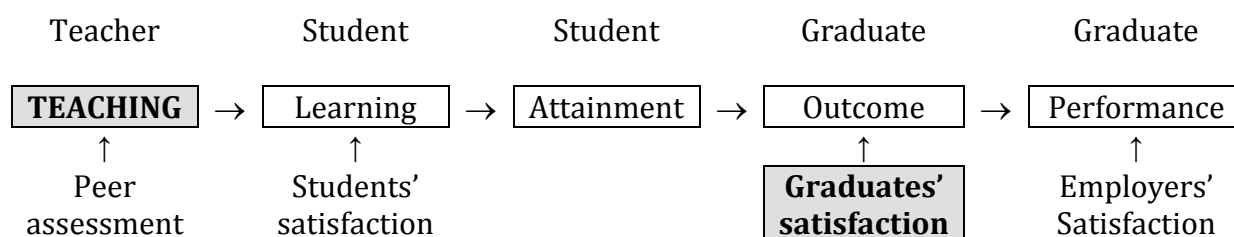
Table 14: percentage of graduates enrolled in further study after graduating by remoteness region, 2009

Region	Studying %
Major cities	33.8
Inner regional	31.5
Outer regional	29.0
Remote/ very remote	26.2
Australia	32.1

Source: NCVET student outcomes Survey 2009, released December 2009, table 13: key findings for graduates by remoteness (ARIA+) region, 2009.

There are extensive data on vocational education graduates' outcomes. We have reviewed only a little of the data on only 2 of the outcomes: graduates' employment and proceed to further study. Even this limited review has been informative and has suggested both areas needing attention and lines of further investigation. But while these outcomes indicate the success of the system overall, it would be very difficult to relate them to the quality of vocational teaching.

Graduates' satisfaction



As might be expected, the student outcomes survey collects extensive information on graduates' satisfaction. The survey asks 3 general questions of interest:

- 13 Would you recommend the training you have undertaken to others?
- 14 Would you recommend the institution where you undertook the training to others?
- 22 How would you rate, **on average**, your satisfaction with the overall quality of the training?
Using the scale box below, please rate your level of agreement with the following statement:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Overall, I was satisfied with the quality of this training					

Here we consider only graduates' response to the last question, indicating their overall satisfaction with the quality of their training. We note from Table 15 that from 2006 to 2009 from 88% to 89% of all graduates either agreed or strongly agreed with the statement that overall they were satisfied with the quality of their training. This is a very high level of overall satisfaction. There is little variation in overall satisfaction between fields of education except that graduates consistently report lower although still high levels of overall satisfaction for information technology and education programs.

Table 15: percentage of graduates who overall were satisfied with the quality of their training by field of education, 2006 - 2009

Field of education	2006	2007	2008	2009
Natural and physical sciences	89.8	87.9	93.6	89.3
Information technology	80.7	84.0	86.7	84.0
Engineering and related technologies	88.6	88.3	87.7	89.6
Architecture and building	87.8	89.8	88.0	89.1
Agriculture, environmental and related studies	89.4	89.7	88.5	90.6
Health	88.2	86.7	86.9	88.1
Education	85.0	85.6	83.2	85.6
Management and commerce	88.1	89.0	87.5	88.3
Society and culture	88.1	89.3	89.3	90.7
Creative arts	85.7	85.8	86.0	88.7
Food, hospitality and personal services	90.0	90.7	89.3	89.9
Mixed field programs	89.6	90.2	88.3	90.3
All	88.1	88.8	88.1	89.0

Sources: NCVET (2009: 11) table 5 findings for graduates by various training characteristics, 2009 (%); NCVET- SOS 2008 - graduates overall satisfaction by various characteristics, table 1 field of education by overall satisfaction with quality of training for estimated population; NCVET student outcomes survey, released December 2007 table 5: graduates findings by various training characteristics, 2007; and NCVET student outcomes survey, released November 2006 - table 15 graduate findings by various training characteristics.

Graduates' overall satisfaction is split by level of program (Table 16). Programs at certificate IV and above had below average overall satisfaction, certificate III programs had average satisfaction and lower level certificates had above average levels of overall satisfaction. Although the differences are quite small at only 1% or 2%, they are consistent from 2006 to 2009. This isn't expected since we have seen that lower level certificates have much poorer outcomes for graduates than higher level programs, yet they score higher levels of overall satisfaction than programs with much better outcomes. Graduates clearly distinguish between their overall satisfaction and the outcomes from their programs.

Table 16: percentage of graduates who overall were satisfied with the quality of their training by level of qualification, 2006 - 2009

Qualification	2006	2007	2008	2009
Diploma and above	86.3	87.6	84.1	87.8
Certificate IV	86.5	87.3	85.7	87.6
Certificate III	87.6	88.9	88.2	89.2
Certificate II	89.7	89.7	89.8	90.4
Certificate I	90.9	91.0	90.5	89.8
All	88.1	88.8	88.1	89.0

Sources: NCVET (2009: 11) table 5 findings for graduates by various training characteristics, 2009 (%); NCVET- SOS 2008 - graduates overall satisfaction by various characteristics, table 1 qualification by overall satisfaction with quality of training for estimated population; NCVET

student outcomes survey, released December 2007, table 4: key findings for graduates and module completers from all VET providers by state/territory, 2007; and NCVET student outcomes survey, released November 2006 - table 15 graduate findings by various training characteristics.

Next we consider graduates' overall satisfaction by geography. From Table 17 we can see that most jurisdictions' results bounce around from year to year. For example, New South Wales' level of overall satisfaction was below the national average in 2006, just above the national average in 2007, below average in 2008 and marginally above the national average in 2009. Only Tasmania has been consistent: it has had higher levels of overall satisfaction than the national average consistently from 2006 to 2009.

Table 17: percentage of graduates who overall were satisfied with the quality of their training by level of qualification, 2006 - 2009

Jurisdiction	2006	2007	2008	2009
New South Wales	87.5	89.0	87.5	89.7
Victoria	88.0	88.9	88.0	88.1
Queensland	89.0	89.3	89.0	87.7
South Australia	87.3	89.0	87.3	91.9
Western Australia	87.6	87.1	87.6	89.6
Tasmania	90.2	90.0	90.2	91.6
Northern Territory	89.1	86.6	89.1	85.4
Australian Capital Territory	87.3	84.2	87.3	89.3
Australia	88.1	88.8	88.1	89.0

NCVER (2009: 10) table 4 key findings for graduates and module completers by state/territory, 2009 (%); NCVET (2008: 8) table 4: key findings for graduates and module completers by state/territory, 2008; NCVET student outcomes survey, released December 2007, table 4: key findings for graduates and module completers from all VET providers by state/territory, 2007; NCVET student outcomes survey, released November 2006 - table 1 graduate key findings by state/territory.

There is a distinct pattern to graduates' satisfaction by region, with fewer graduates from the major cities than the national average satisfied overall with their training, and progressively higher levels of graduates' overall satisfaction their further distance from the major cities (Table 18). While the pattern is distinct, there is no obvious explanation. Perhaps more remote institutes are smaller and thus generate higher levels of satisfaction. This could be readily tested were standard data published for each institute.

Table 18: percentage of graduates who overall were satisfied with the quality of their training by remoteness, 2008

Region	Satisfied %
Major cities	88.1
Inner regional	89.1
Outer regional	90.7
Remote/ very remote	92.1
Australia	89.0

Source: NCVER student outcomes survey 2008, released December 2008, table 31: key findings for graduates by remoteness (ARIA+) region.

NCVER's (2006a: 23) profile of TAFE institutes shows graduates' overall satisfaction by institute for 2003, which is reproduced in Figure 3. It will be noted that this figure is even flatter than the previous Figure 2: subject completion rate per TAFE institute, 2003. Again, the results would have to be analysed to determine whether graduates' overall satisfaction were related to graduates' demographic or institutional characteristics that cannot or should not be changed. But on its face, Figure 3 does not discriminate strongly between institutes.

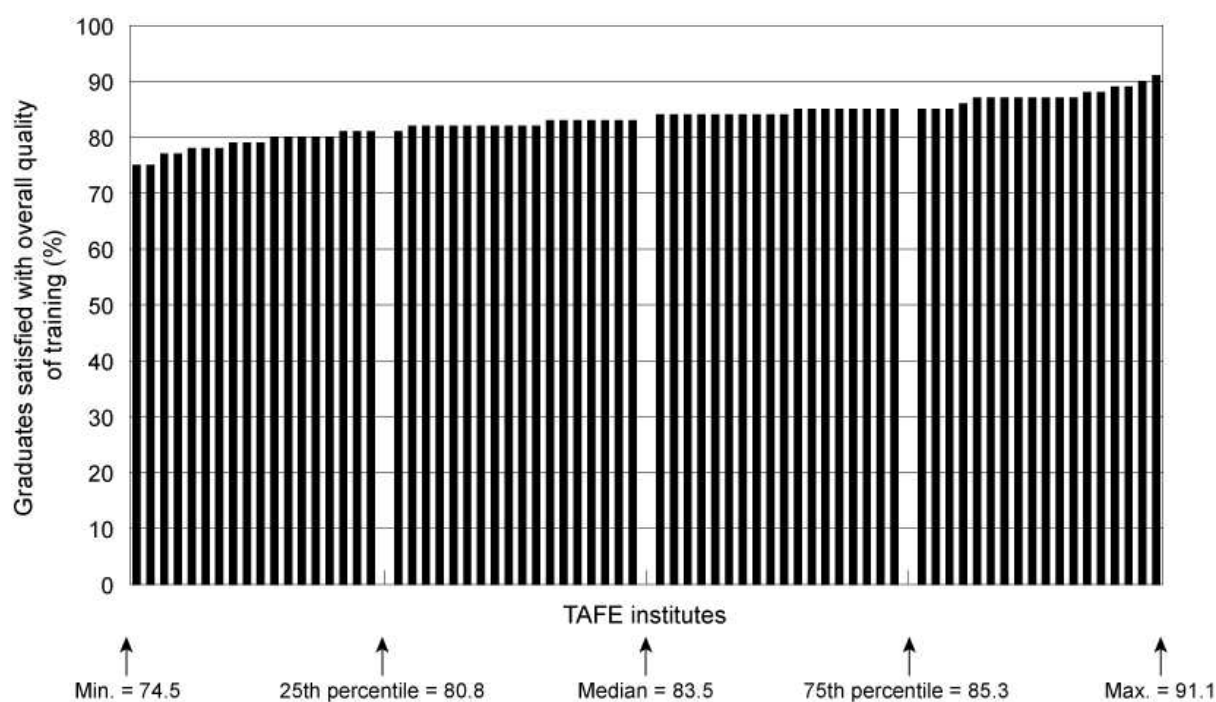


Figure 3: proportion of graduates satisfied with overall quality of training per institute, 2003

Source: NCVER (2006a: 23) figure 14: proportion of graduates satisfied with overall quality of training per institute, 2003.

The student outcomes survey asks graduates to respond to 19 statements about their training. The question is:

- 21 How would you rate, **on average**, the following aspects of the training?
(Please cross one box for each aspect using the scale below).

The questionnaire then presents graduates with the 19 statements set out in Table 19 and asks graduates to respond: strongly disagree, disagree, neither agree nor disagree, agree, strongly agree or not applicable.

Table 19: statements on training in the student outcomes questionnaire

Teaching	
1	My instructors had a thorough knowledge of the subject content
2	My instructors provided opportunities to ask questions
3	My instructors treated me with respect
4	My instructors understood my learning needs
5	My instructors communicated the subject content effectively
6	My instructors made the subject as interesting as possible
Assessment	
7	I knew how I was going to be assessed
8	The way I was assessed was a fair test of my skills
9	I was assessed at appropriate intervals
10	I received useful feedback on my assessment
11	The assessment was a good test of what I was taught
Generic skills and learning experiences	
12	My training developed my problem solving skills
13	My training helped me develop my ability to work as a team member
14	My training improved my skills in written communication
15	My training helped me to develop the ability to plan my own work
16	As a result of my training I feel more confident about tackling unfamiliar problems
17	My training has made me more confident about my ability to learn
18	As a result of my training, I am more positive about achieving my goals
19	My training has helped me think about new opportunities in life

Source: NCVET (2009a: 4)

These data are an extremely valuable source of evidence of graduates' views on the quality of their vocational education. However, while each institution has access to its own results, it seems that the most recent national data on these items were published in 2002 (NCVER, 2003: 14 ff).

Curtis's (2010b) paper (referred to above) includes his analysis of responses to the 20 questions in the 2009 student outcomes survey. Curtis conducted an exploratory factor analysis and a subsequent confirmatory factor analysis to confirm that the survey is a good instrument for measuring satisfaction with the factors it seeks to measure: teaching, assessment and learning experiences, and that the 3 factors cohere quite well to form a single overall indicator of student satisfaction (Curtis, 2010b: 20). Curtis notes that over 80% of graduates either agree or strongly agree with most items. Because the items are so easy to endorse they don't measure the traits they investigate very well and they don't discriminate well between institutions. Curtis (2010b: 22) says that the instrument would be more precise and discriminatory if its items were harder to endorse.

The 4 scales in the student outcomes survey generate 4 indicators of institutions' performance: graduates' perceptions of teaching quality, assessment quality, learning outcomes and overall program quality. It is then desirable to convert graduates' responses to a numerical value so they may be summarised. One possibility would be to assign a value to each response such as those set out in Table 20 and to summarise responses by summing or calculating the mean of graduates' responses to each item.

Table 20: possible scoring of satisfaction responses

Response	Possible score
Strongly agree	2
Agree	1
Neither agree nor disagree	0
Disagree	-1
Strongly disagree	-2
Not applicable	?

As Curtis (2010b: 42) observes, this method encounters 2 problems. First, responses from 'strongly agree' to 'strongly disagree' are on a nominal or categorical scale: respondents chose their response by categorising it as 'strongly agree', 'agree', etc. The possible scores are useful if they are on an interval scale which would allow differences and averages or means to be calculated. But the step from 'neither agree nor disagree' to 'agree' isn't necessarily the same as the step from 'agree' to 'strongly agree': respondents mightn't need much of a difference in performance to change their response from 'neither agree nor disagree' to 'agree', but they may need a bigger difference in performance to change their response from 'agree' to 'strongly agree'. So having a difference of 1 in the possible score between 'strongly agree' and 'agree' may be understating that difference if a difference in 1 in the possible score is also given to the difference between 'neither agree nor disagree' and 'agree'.

The second problem with converting questionnaire responses to a possible score is that some items might be easier to agree with than others. Thus, graduates may find it easier to agree with item 2 'My teachers provided opportunities to ask questions' than with item 4 'My teachers understood my learning needs'. As Curtis (2010b: 42) explains, the Danish mathematician Georg Rasch developed a method to scale results on achievement tests and responses to attitude surveys to produce interval-scaled scores which takes into account the differences between items and responses. The Rasch method is also able to deal with 'not applicable' responses and non responses.

Curtis undertook a multilevel regression model of graduates' responses on the 4 scales of teaching quality, assessment quality, learning outcomes and overall quality. He found that more favourable responses were provided by females, Indigenous graduates, non metropolitan graduates, graduate older than 24, graduates without year 12, graduates without a post school qualification and by graduates of programs below diploma level. However, graduates who report having a disability made harsher judgments than others (Curtis, 2010b: 23).

However, the 10 student demographic and study characteristics included in the models explained only 2.5% of the variation between graduates on overall satisfaction, only 2.1% of the variation on teaching, 1.9% on assessment and 5.6% of the variation in graduates' responses on learning outcomes (Curtis, 2010b: 23). This shows how little we still understand of graduates' satisfaction with their education (a similarly small amount of the variation in higher education graduates' responses to its course experience questionnaire is explained by student data).

Curtis nonetheless took student characteristics into account in calculating results for institutions. He produced figures of institutions' results on each measure that aren't reproduced here but have rather steeper gradients than Figure 3: proportion of graduates satisfied with overall quality of training per institute, 2003. This indicates that Figure 3 the teaching satisfaction measures adjusted for student characteristics discriminate between institutions better than unadjusted overall satisfaction. Nonetheless, graduates' satisfaction with the teaching on each of the 4 measures don't discriminate between two-thirds of Tafe institutes, as reported in Table 21.

Table 21: number of institutions performing significantly differently from the average on each teaching measure

Measure	Institutions which perform significantly differently from the average	Institutions with no significantly different performance from the average
Overall satisfaction	Top 6 and bottom 7	47
Perception of teaching	Top 8 and bottom 9	43
Perception of assessment	Top 8 and bottom 11	41
Learning outcomes	Top 10 and bottom 9	41

Source: summarised from Curtis (2010b: 24-7)

Curtis (2010b: 29) concludes that the profile-adjusted indices of client satisfaction appear to be valid and fair indicators of the performance of institutes. However, they lack the level of discrimination that is desired of such indices, which could be a consequence of constraints that operate on vocational education providers.

Graduates' suggestions

At the end of the student outcomes survey graduates and module completers are asked: do you have any suggestions for improving the training shown on the front of the form? These comments are passed to institutions, but were reported for the first time by Josie Misko and Suellen Priest (2009) of the NCVER in *Students' suggestions for improving their vocational education and training experience*. Misko and Priest examined comments in the 2006 student outcomes survey. Almost 10,000 graduates provided one or more comment so Misko and Priest examined comments from a random sample of 1,254 graduates and they classified suggestions into 9 categories. Some 40% of graduates made suggestions about improving their program's relevance or design and a quarter made suggestions on each of improving staff attributes and behaviours and

improving teaching and learning practices (Table 22). The percentages in Table 22 exceed 100 because graduates made more than 1 suggestion.

Table 22: graduates suggestions for improving their program

Category of suggestions	% of respondents
Improving course relevance and design	41
Improving staff attributes and behaviours	27
Improving teaching and learning practices	25
Improving access to courses, facilities and services	16
Improving assessment practices	14
Improving learning resources, equipment and materials	9
Improving initial information provision	6
Improving administration and learning support services	7
Other	1

Source: Misko and Priest (2009: 9) Table 1 Student suggestions for improvement

Misko and Priest (2009: 9) report that the most frequent suggestions for improving program relevance or design were to increase practical knowledge and skill. This includes implementing formal work placements (the most frequent of such suggestions) and improving the quality of existing work placements. Their tabulation of some of these suggestions is given in Table 23 (Misko and Priest 2009: 9).

Table 23: graduates' suggestions for improving program relevance or design

Include practical work-placement component and improve quality of experience
Ensure course currency and relevance to industry
Add extra components to course content
Review time allocated for course completion
Review structural design and qualification level of course
Add depth to course content
Continue availability of courses
Customise course to take account of student needs
Improve student selection processes
Address mandatory requirements for course (including attendance)
Have systems to deal with changed requirements during life of course
Other

Source: Misko and Priest (2009: 9) Table 2 Suggestions for improvement to course relevance and design

Misko and Priest (2009: 11) report that their category of suggestions to improve staff attributes and behaviours included suggestions that teachers be available, willing and able to help graduates with their learning by providing person or online support (as required) and prompt feedback on assignments and progress. Graduates in fully-on-the-job programs want more visits from instructors. Graduates particularly want continuity of teachers for the duration of a particular subject (Table 24).

Table 24: graduates' suggestions for improving staff attributes or behaviours

Improve provision of learning support
Improve quality of performance, self-organisation and subject interest
Improve communication with students, teaching staff and employers
Improve knowledge and practical industry experience
Improve fairness and consistency
Improve behaviour management strategies for dealing with disruption

Source: Misko and Priest (2009: 11) Table 3 Student suggestions for improvement in staff attributes and behaviours.

Misko and Priest (2009: 12) report that most suggestions for improving teaching and learning practices were to incorporate practical or hands-on learning in classrooms or classroom workshops (Table 25)

Table 25: graduates' suggestions for improving teaching and learning practices

Increase practical learning tasks
Increase face-to-face contact and one-on-one teaching
Modify time allocated for learning activities (mostly extensions) and improve training schedules
Provide a good balance of direct teaching and self-paced learning activities which engage students
Provide variety of learning activities, including group work, role plays and online interaction
Make clear course and other requirements (to students and employers) and rigorously monitor quality of performance
Reduce class sizes
Customise teaching to take account of student levels of knowledge and experience
Improve teaching flow
Provide students with basic skills training including writing skills
Address issues of duration or abolition of class-time breaks

Source: Misko and Priest (2009: 12) Table 4 Student suggestions for improvement to teaching and learning activities

Unsurprisingly, graduates say that they want to be able to access programs, facilities and equipment (including texts and computers), at times that meet their particular needs (Misko and Pries, 2009: 14) (Table 26).

Table 26: graduates' suggestions for improving teaching and learning practices

Change course timetables
Provide easy access to materials and equipment
Deliver courses in closer campuses
Provide easy access to better facilities and equipment (including out of hours and weekends)
Improve systems for recording, certificating, and recognising achievement
Provide access to other learning options (including further training)

Source: Misko and Priest (2009: 14) Table 5 Suggestions for improving access to courses, facilities and services

Graduates say that they want clarity, rigour, consistency and relevance in assessments (Misko and Pries, 2009: 15) (Table 27).

Table 27: graduates' suggestions for improving assessment practices

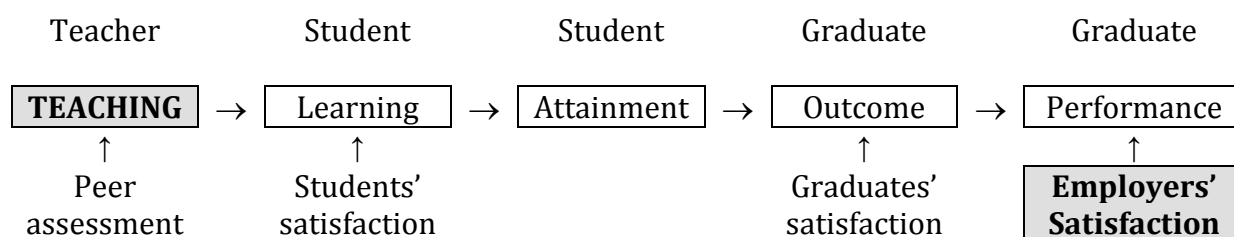
Improve clarity and explanation of assessment requirements
Increase rigour of assessments
Improve timeliness and relevance of feedback on assessments
Include appropriate number of assessments
Improve fairness, consistency and relevance of assessments
Apply grading of assessments
Apply RPL [recognition of prior learning] assessments
Address timing and flexibility of assessments (including online submission)

Source: Misko and Priest (2009: 15) Table 6 Suggestions for improving assessment processes

Graduates' suggestions for improving their program provide valuable insights into interpreting the statistical data from the student outcomes survey. Because graduates' comments are open ended they also go beyond the closed items of the survey. For example, graduates suggested graded assessment and made suggestions for improving the relevance of assessments.

Analysing respondents' comments is very time consuming. However, it can be partly automated. The Australian Government funded 10 universities to develop and test CEQuery, a software tool which analyses respondents' comments to the course experience questionnaire, matches them with their demographic data, and produces a range of tables, graphs and other reports (Scott, 2006: iv-v; Graduate Careers Australia: 2004).

Employers' satisfaction



NCVER's research surveyed employers in 1995, 1997, 1999 and 2001, concentrating on their satisfaction with vocational education and training graduates they had recently hired. In 2005 the centre changed the survey to ascertain employers' use and views of the VET system. The survey now concentrates on employers who had used the vocational education system with jobs that require vocational qualifications, with apprentices and trainees or by using nationally recognised training. The centre has conducted the survey in this form biennially since 2005.

Some 57% of all employers had used the vocational education in some way in 2009, but these employed about 85% of all employees. Some 34% of employers employing 63% of all employees used the system by employing staff who required vocational qualifications, 31% of employers employing 57% of all employees employed an apprentice or a trainee and 26% of employers employing 61% of all employees used nationally recognised training in 2009 (Figure 4).

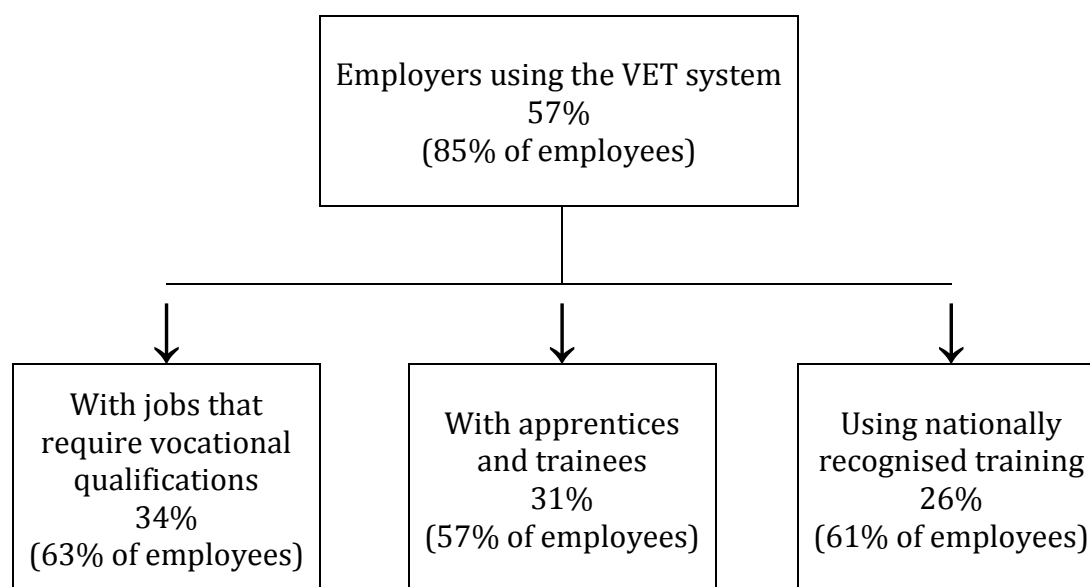


Figure 4: proportion of employers which used the vocational education and training system in 2009

Sources: NCVER (2009c: 7) Table 1 Key findings 2005, 2007 and 2009 (%), (2006a: 5) Figure 2: Percentage of employers engaging in the last 12 months with the VET system and other forms of training, 2005.

The survey of employers' use and views of the VET system reports substantial differences in the proportion of employers who are satisfied with vocational education and training between years and between jurisdictions. However, Roberts (2010: 9) applied statistical tests to find that many of these differences are due to differences in the size and industry of the employers responding to the survey. Roberts (2010: 8) used a logistic regression model to correct for differences in employers' reported satisfaction due to statistical fluctuations.

Table 28 gives Roberts' (2010: 10) results for employers' response to the question: 'How satisfied or dissatisfied are you with formal vocational qualifications in providing employees with the skills required for their job?' Satisfaction levels are generally very high: over 80% for most jurisdictions for most years. There are big apparent differences between jurisdictions but it is now clear how much of these differences are due to vocational education's performance and how much to differences in the employers responding to the survey in each jurisdiction. Roberts (2010: 10) examined how much of the differences in employers' responses in each jurisdiction between years is real and how much was due to other factors, such as the distribution of responding businesses by size and industry. Roberts (2010: 10) found that the differences marked with a double asterisk are statistically significant.

Table 28: estimates of employers' satisfaction with formal vocational qualifications in providing employees with the skills required for their job

State	Estimates %			Differences %	
	2005	2007	2009	2005 to 2009	2007 to 2009
New South Wales	80.5	82.1	82.9	2.4	0.7
Victoria	84.4	83.0	88.2	3.8	5.1**
Queensland	77.3	78.1	83.2	5.9	5.1
South Australia	83.1	88.3	90.6	7.5**	2.3
Western Australia	88.2	80.1	88.4	0.2	8.2**
Tasmania	80.7	87.6	87.4	6.7	-0.3
Northern Territory	78.6	82.0	85.4	6.9	3.5
ACT	75.9	83.3	82.6	6.7	-0.7

Roberts (2010: 10) Table 2 Model estimates of employer satisfaction with vocational qualifications as a job requirement

** Significant difference at the 95% confidence level

Roberts' estimates of employers' satisfaction with apprentices and trainees and with nationally recognised training are given in Table 29 and Table 30.

Table 29: estimates of employers' satisfaction with apprentices and trainees

State	Estimates %			Differences %	
	2005	2007	2009	2005 to 2009	2007 to 2009
New South Wales	74.1	85.2	85.2	11.1**	0.0
Victoria	90.1	90.9	91.2	1.1	0.3
Queensland	83.7	84.3	84.4	0.7	0.2
South Australia	88.7	91.4	91.9	3.2	0.5
Western Australia	85.2	78.3	86.2	1.0	7.9**
Tasmania	85.3	92.0	91.3	6.0**	-0.8
Northern Territory	91.7	89.3	87.7	-4.0	-1.6
ACT	76.9	87.9	89.1	12.2**	1.3

Roberts (2010: 10) Table 3 Model estimates of employer satisfaction with apprentices/trainees

** Significant difference at the 95% confidence level

Table 30: employers' satisfaction with nationally recognised training

State	Estimates %			Differences %	
	2005	2007	2009	2005 to 2009	2007 to 2009
New South Wales	80.9	82.8	89.0	8.1**	6.2**
Victoria	85.1	85.9	89.0	3.9	3.1
Queensland	94.3	95.4	96.2	1.9	0.8
South Australia	85.1	90.1	92.4	7.2**	2.2
Western Australia	82.1	84.9	94.7	12.7**	9.8**
Tasmania	85.3	89.3	90.3	4.9	1.0
Northern Territory	90.2	88.6	94.9	4.7**	6.3**
ACT	90.4	92.2	91.5	1.2	-0.6

Roberts (2010: 10) Table 4 Model estimates of employer satisfaction with nationally recognised training

** Significant difference at the 95% confidence level

The survey of employers' use and views of the vocational education and training system produces useful results. However, the survey isn't big enough to produce differences between years which are statistically significant in most cases. The survey would have to be very much bigger and more expensive to produce results for individual institutions.

Project's study: employers

The project team liaised extensively with the 9 registered training organisations that participated in the first stage of the project (see *The Quality of Teaching in VET: Overview*), several skills councils and several unions to identify employers willing to be interviewed about the quality of vocational education. It is difficult to gain access to workplaces for this kind of research because of the time and commitment that it

requires, even if the survey is short. Unless there is a direct interest in the topic, employers find it difficult to allocate time needed to participate in such research. While many employers have an interest in vocational education, issues about vocational education teachers seem more remote. However, industry representative bodies are directly interested in vocational teachers and the quality of teaching and while it proved easy to gain access to people in these institutions (as demonstrated in the first stage of the project), it was more difficult to gain access to employers. As a consequence, the team found only 17 employers willing to participate in the project. This was very disappointing and reduces employers' capacity to influence vocational teaching. Nonetheless, the employer interviews generated important results for the project because those employers who did participate were highly engaged with this issue.

A member of the project team opened each interview by explaining the purpose of the study and why they were being invited to participate. Employers were asked about their enterprise and experience with vocational education and training. Employers were then asked for their views. The interview framework is set out in Appendix C and a summary of employers' responses is given in Appendix F.

What kinds of qualities and attributes do you want students/ apprentices/ trainees to have?

Employers were asked: 'Given that you are an employer of a VET student/ apprentice/ trainee or recent VET graduate, could you please tell us what kinds of qualities and attributes you want them to have? To what extent do you think that the students/ apprentices/ trainees or graduates you have employed have these qualities and attributes?' Employers' most common response was that trainees should have a sense of responsibility, enthusiasm, commitment and/or good work ethic. Some comments included:

Decent work ethic. Willing to learn and follow instructions. Reliable.

Two things – key attributes – passion and attitude - That can't be trained.

Most kids . . . can learn what to do, it is more their willingness to work and attitude.

Several employers said that they expected competence and skills and an understanding of business requirements and gave equal prominence to some level of initiative and adaptability and good manners and presentation. Employers believed that their trainees had these qualities to some degree.

To what extent do you think VET teaching and training focuses on these qualities and attributes?

Employers were asked: ‘To what extent do you think VET teaching and training focuses on these qualities and attributes?’ Half of the employers thought that, in general, vocational teaching developed the required qualities and attributes. However, some employers gave a mixed response believing that vocational education concentrates on instilling some of the qualities and attributes but not all; that vocational education relied too much on industry to instil these qualities; or that vocational education varied too much from state to state. Some employees said that they did not believe that vocational teaching and training developed these qualities.

What aspects of the training are good and why are they good?

Employers with apprentices or trainees were asked: ‘Could you please tell us about the aspects of the training you think are good and why they are good?’ When asked about the aspects of training that were good, several mentioned delivery and content, arguing that good training recognised prior learning; balanced theory and practice; provided innovative approaches to training; flexible delivery and elective choices; contextualised courses; currency of subject matter; and experiential learning. Some employers recognised the important role of teachers, particularly those who were able to instil responsibility and values in their students; had industry currency and were able to instil knowledge through real-life examples.

What aspects of the training do you think need improvement?

Employers with apprentices or trainees were asked: ‘Could you please tell us about the aspects of the training that you think need to be improved, why they need to be improved and the kinds of improvements would you like to see?’. The most common response was currency and industry knowledge. This included those who believed that apprentices needed to have a greater understanding of industry context; that training was sometimes too theoretical and not practical enough for work; that training was sometimes not up to date (i.e. new legislation etc.); that instructors were sometimes not current; and/or that there should be greater collaboration between trainers and industry. One illustrative comment was:

Some aspects could be updated so that they learn about current building strategies and techniques. It is good to show them how it used to be done but not as useful as learning about current stuff.

What kind of training do you think is most effective and why is it effective?

All employers (and not just those who employed apprentices) were asked: ‘What kind of training do you think is most effective and why is it effective?’ Of the 15 employers who answered this question, only 1 said that the best training should be done on the job. The remaining 14 spoke of a combination of practical and theoretical training; individual

class-based training; and a mixture of industry and VET delivery - training which works hand-in-hand with TAFE – TAFE provides the theory and this is backed up on site.

Do you have any views on the quality of VET teaching or training, and if so, can you please outline them?

All employers were asked: ‘Do you have any views on the quality of VET teaching or training, and if so, can you please outline them?’ Only 1 employer said that they believed that there was generally little confidence in the quality of vocational education. Many said that they were happy with the quality of vocational teaching, the quality of delivery and the quality of apprentices. But many others gave mixed responses about quality including those who thought the quality of teachers was good, but the nature of resources, or duplication of material was poor; or that teachers had too limited time. Some also argued that quality varied across colleges and between teachers. Some comments included:

I believe the teachers do a great job but the bureaucratic paperwork is over the top and inefficient. All TAFEs work to the same list of competencies but every TAFE develops its own teaching materials. This is a waste when you have 30 or 40 TAFEs duplicating the same work. Now it is based around money – the job used to be to teach.

The quality of teaching is higher at some colleges – there are differences between colleges.

What makes a good teacher/ trainer?

All employers were asked: ‘Please think about a teacher/trainer who you thought was good; could you please explain why they are good? What did they do that you thought was good? The most common remarks were that teachers needed to have industry currency and qualifications and the knowledge to teach best practice. One commented:

Expect understanding of, and worked in industry – not always the case. Would like to give teachers work placements – to teach they need to understand industry or it becomes very text-book.

Interestingly, some employers responded similarly to students and graduates: 7 employers said that good teachers need to treat their students/apprentices like adults, respect them; listen to them; and understand their differences. Clarity and organisation were highlighted by some employers, including those who believed a good teacher needs to be clear; instil knowledge effectively; and/or be organised and structured.

What makes an ineffective teacher/ trainer?

All employers were asked: ‘Please think about a teacher/trainer who you thought was not effective; could you please explain why they were not effective? What did they do that you thought was not effective? One employer said that they had never known a bad

teacher and another said that while their trainers were good, their effectiveness was often impacted by the amount of paperwork they had to do and the consequent lack of time. The most common concern of the other employers was teachers' indifference. Employers spoke of teachers who didn't care about their students, who were arrogant; and/or were 'just doing the job' - a 'tick and flick'. Concerns about a lack of industry knowledge and currency formed the second most popular response.

How can VET improve so that it is more effective in meeting your needs?

All employers were asked: 'How can VET improve so that it is more effective in meeting your needs?' The most common response was ensuring flexibility. This included those who spoke of more flexibility in delivery over different timeframes; dedicating more time to training; different delivery options for greater accessibility (e.g. virtual classrooms, online, instead of travelling distance to TAFE etc.); and recognition of prior learning. Flexibility also related to industry currency, which was mentioned by some employers. For example, TAFE needs to be flexible to cope with changes and trends in industry – such as the use of new materials. TAFE needs to keep doing this, to keep up to date with changes and to continue to consult with employers.

Quality was an issue for some employers, including those who talked about vocational education being too focussed on money and changing for the purposes of funding rather than industry needs, or the needs of apprentice - consider the training first and the money second. One employer said that training organisations jump from one project and training program to the next all based on how to access the latest Government budget allocation, vote winning training proposal or cuts to funding for existing systems. Some employers also thought there needed to be more scrutiny of trainers to achieve higher standards and professionalism. One employer said that there are lots of loopholes. For example, when teachers do professional development, if they have mates in industry they can sign you off, and another said that there is a total lack of monitoring of the system to ensure that what was being said was being done.

In summary, we have seen that employers' views on the quality of vocational teaching are similar to many of the views expressed by students and graduates. Perhaps unexpectedly, employers like students and graduates believed that teachers' affective skills are important, partly because they want teachers to develop students' effective skills of being responsive, having desirable values and acting on those values. Less surprisingly but no less importantly, employers stressed the importance of teachers having experience in industry and being familiar with current industry practices.

Conclusion

This report reviewed the sources of evidence available in Figure 1: main possibilities for evaluating the quality of teaching

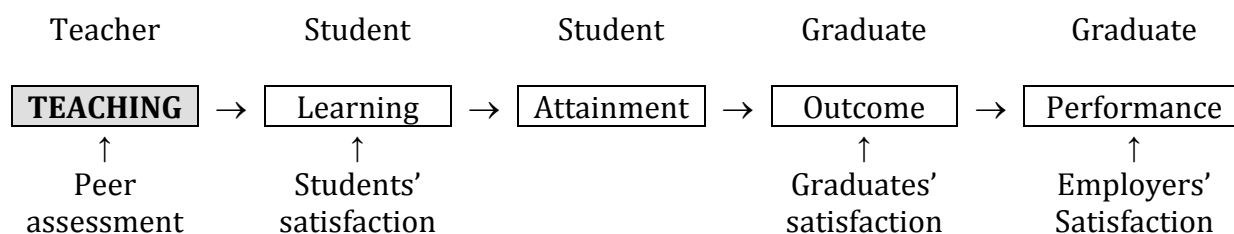


Figure 1: main possibilities for evaluating the quality of teaching

Much of the potentially most useful evidence isn't available. Evidence from the peer evaluation of teaching would be extremely valuable but isn't available because the method is so rarely used, in Australia and elsewhere, in vocational and other sectors of education.

Data from institutions' surveys of their students in compliance with the Australian quality training framework's standards for registration would also be extremely valuable in evaluating the quality of teaching. But these data aren't collected consistently and even if they were, not all are reported centrally and none are reported publicly. Changes to practice and policy would be needed to make these data useable and available. However, since considerable effort is already invested by students in completing the survey and by institutions in collecting and reporting results, it seems wasteful not to invest modest additional effort to make the data useable and available for system analyses.

Much other potentially useful data aren't available because extensive data from longstanding and well tested collections are not published for individual institutions. This is a failure of public accountability as well as transparency, and severely limits public analysis. Some of this will be addressed by the Australian Government's online database My Skills (Commonwealth of Australia, 2010b) but current policies and practices will leave much other data unavailable. Even non-institutional data aren't published fully, although they are obtainable by special request of NCVET.

Yet other data wouldn't be very informative even if it were published. This is because some data are collected from a sample of respondents which allows reliable conclusions to be drawn generally or at a high level of aggregation, but does not support detailed analysis. Some of the limitations of sample size may be overcome (if the data were published) by aggregating results over years or across institutions. This, however, means that the results for individual programs couldn't be compared over time without a very long time series or between institutions.

The solution to this problem is technically simple but practically difficult: either to increase the same size or change from a sample to a census survey of the whole population of graduates. This would be very expensive and incurs other problems of ensuring that there are enough responses to ensure the responses reflect the views of the population.

Notwithstanding these limitations and difficulties sufficient data are available and reviewed in this report to draw some conclusions about the quality of vocational teaching. The next report will consider how existing evidence and its possible staged extensions may be used in the short and longer term to evaluate the quality of teaching in vocational education and training.

Acknowledgements

We are pleased to acknowledge Professor Mike Lawson of Flinders University's School of Education and Director of its Centre for the Analysis of Educational Futures for his advice on the design of the questionnaires used in the project and reported here. We are also pleased to acknowledge Dr David Curtis, Senior Research Fellow, NCVET, for his advice on interpreting the findings from our interviews with students and graduates, his analysis of students' and graduates' opinions about their training in the student outcomes survey and for allowing us to access and report on his draft technical paper *Evaluating institutional performance indicators in VET*.

Appendices

Appendix A: study on the quality of teaching in vocational education and training – student survey

What kind of course are you enrolled in – for example, a certificate III, diploma etc?

What is the name of your qualification?

Are you studying full-time or part-time?

In what year did you enrol?

In what year will you finish

What is your age?

- | | | | |
|--------------------------|---------------|--------------------------|-------------------|
| <input type="checkbox"/> | 15 – 19 years | <input type="checkbox"/> | 20 – 24 years |
| <input type="checkbox"/> | 25 – 44 years | <input type="checkbox"/> | 45 years and over |

Have you studied before in VET? If you have could you please tell us a little bit about it?

Your views:

Why are you enrolled in this course? (More than one reason is possible)
Do you think your course will help you achieve your goals? Why?

For new students

What do you think studying this course will be like?

For students nearing the end of their course

What did you expect studying this course would be like? Has it turned out the way you expected? What is different or the same?

Can you please describe the aspects of your course so far that you think are good and tell us why?

Can you please describe the aspects of your course that you think are most in need of improvement and tell us why?

Who and/or what helped you to learn?²

How did they/it help you to learn?²

Please think about a teacher who you thought was good (it could be a current teacher or a past teacher) and explain why they are good? What did the teacher do that that you thought was good?

² * From (Askell-Williams and Lawson 2006)

Please think about a teacher who you didn't find helpful (it could be a current teacher or a past teacher) and explain why? What didn't you find helpful?

Would you recommend the course you are doing to your friends? Why or why not? If you were talking to a friend about the best way to succeed in this course, what would you tell them to do? What would you tell them was a waste of time?

What advice can you give us on how to improve learning in your course?

Appendix B: study on the quality of teaching in vocational education and training – graduate survey

About you:

What qualification did you complete?

When did you complete it?

What is your age?

15 – 19 years 20 – 24 years
 25 – 44 years 45 years and over

Sex Female Male

Your views:

Why did you do your course? (More than one reason is possible)

Did it help you to achieve your goals? Why?

What did you expect studying this course would be like? Did it turn out the way you expected? What was different or the same?

Can you please describe the aspects of your course that you thought were good and tell us why?

Can you please describe the aspects of your course that you thought were most in need of improvement and tell us why?

Who and/or what helps you to learn?³

How do they/it help you to learn?*

Please think about a teacher who you thought was good (it could be a current teacher or a past teacher) and explain why they are good? What did the teacher do that that you thought was good?

Please think about a teacher you who you didn't find helpful (it could be a current teacher or a past teacher) and explain why? What didn't you find helpful?

Would you recommend the course you are doing to your friends? Why or why not? If you were talking to a friend about the best way to succeed in this course, what would you tell them to do? What would you tell them was a waste of time?

What advice can you give us on how to improve learning in your course?

³ * From (Askell-Williams and Lawson 2006)

Appendix C: study on the quality of teaching in vocational education and training – employer survey

To interviewer

Explain purpose of the interview – to help think about the way we can evaluate the quality of teaching in VET and the impact it has on student outcomes

Why they are being asked – because they are an employer of a VET student/ apprentice/trainee or recent VET graduate, and we are interested in their views because this will help us form recommendations on how to evaluate the quality of teaching in VET.

About you and your business/enterprise:

What kind of business/enterprise are you working in?
What is your position in the business/enterprise?

Sex Female Male

Approximately how many employees work in your business?

Do you have much to do with VET, for example through:

Employing VET graduates?

Employing apprentices/trainees?

Your employees who are studying for a VET qualification?

Using TAFE or another training enterprise to conduct training for your business?

A combination of the above or some other form of contact?

Your views

Given that you are an employer of a VET student/apprentice/trainee or recent VET graduate, could you please tell us what kinds of qualities and attributes you want them to have?

To what extent do you think that the students/apprentices/trainees or graduates you have employed have these qualities and attributes?

To what extent do you think VET teaching and training focuses on these qualities and attributes?

For businesses/enterprises with apprentices/trainees

Do you employ apprentices or trainees? If so, what are the arrangements for their training (for example, they go to training at TAFE or another VET institution one day a week or for block release, training is fully on the job, or some other model)?

Could you please tell us about the aspects of the training you think are good and why they are good?

Could you please tell us about the aspects of the training that you think need to be improved, why they need to be improved and the kinds of improvements would you like to see?

For all businesses/enterprises

What kind of training do you think is most effective and why is it effective?

Have you tried to get information about VET or organise training for your enterprise or employees? If you have, to what extent did you find it easy or difficult to get the information you needed? What kind of information do you need about VET and what is the best way for you to get it?

Do you have direct contact with VET/TAFE teachers or trainers? If you do, what is the nature of this contact? Do you have any views on the quality of VET teaching or training, and if so, can you please outline them?

What do you expect of a VET/TAFE teacher or trainer?

Please think about a teacher/trainer who you thought was good; could you please explain why they are good? What did they do that you thought was good?

Please think about a teacher/trainer who you thought was not effective; could you please explain why they were not effective? What did they do that you thought was not effective?

How can the vocational education and training system best meet your business/enterprise's needs? To what extent do you think that VET meets these needs and why? How can VET improve so that it is more effective in meeting your needs?

Appendix D: study on the quality of teaching in vocational education and training – respondents

Students

Sex	Age group	Qualification
Male	25-44 years	Certificate II in ESL (Access)
Female	15-19 years	Certificate II in Hospitality
Male	15-19 years	Certificate II in Hospitality
Female	15-19 years	Certificate III in Aged Care Work
Female	15-19 years	Certificate III in Aged Care Work
Female	25-44 years	Certificate III in Aged Care Work
Female	Over 45 years	Certificate III in Aged Care Work
Female	20-24 years	Certificate III in Children's Services
Female	25-44 years	Certificate III in Children's Services
Female	20-24 years	Certificate III in Commercial Cookery
Male	25-44 years	Certificate III in Commercial Cookery
Male	25-44 years	Certificate III in ESL (Access)
Male	25-44 years	Certificate III in ESL (Access)
Female	Over 45 years	Certificate III in ESL (Further Study)
Female	Over 45 years	Certificate IV ESL (Access)
Female	25-44 years	Certificate IV in Community Services Work
Female	25-44 years	Certificate IV in Community Services Work
Female	20-24 years	Certificate IV in Disability
Female	25-44 years	Certificate IV in Disability
Male	25-44 years	Certificate IV in ESL
Male	Over 45 years	Certificate IV in ESL
Female	Over 45 years	Certificate IV in ESL (Access)
Female	25-44 years	Certificate IV in Frontline Management
Female	25-44 years	Certificate IV in Hairdressing
Female	25-44 years	Certificate IV in Nursing
Male	20-24 years	Certificate IV in Plumbing
Female	25-44 years	Diploma of Laboratory Technology
Female	20-24 years	Diploma of Laboratory Technology
Female	20-24 years	Diploma of Nursing (Enrolled Division 2)
Female	25-44 years	Advanced Diploma of Accounting
Male	20-24 years	Advanced Diploma of Accounting
Female	25-44 years	Advanced Diploma of Disability

Graduates

Sex	Age group	Qualification
Female	Over 45 years	Certificate III and Certificate IV in Tourism
Male	20-24 years	Certificate III in Electrotechnology
Male	20-24 years	Certificate III in ESL (Further Study)
Female	25-44 years	Certificate III in Hairdressing (Fast track)

Sex	Age group	Qualification
Male	20-24 years	Certificate III in Hospitality
Male	20-24 years	Certificate III in Hospitality (Operations)
Male	20-24 years	Certificate III in Hospitality (Operations)
Male	20-24 years	Certificate III in Hospitality (Operations)
Male	20-24 years	Cert III in Joinery, Shopfitting and Stairbuilding
Male	20-24 years	Certificate III in Multimedia
Female	25-44 years	Certificate III in Business Admin (Medical)
Male	25-44 years	Certificate III in Offsite Construction
Male	Over 45 years	Certificate III in Offsite Construction
Male	25-44 years	Certificate III in Offsite Construction (Shopfitting)
Male	20-24 years	Certificate III in Offsite Construction (Shopfitting)
Female	25-44 years	Certificate IV Training and Assessment
Female	20-24 years	Diploma of Accounting
Female	20-24 years	Diploma of Art (Applied Photography)
Female	20-24 years	Diploma of Business (Legal Services) Horn of Africa
Male	25-44 years	Diploma in Carpentry
Female	20-24 years	Diploma of Children's services
Male	25-44 years	Diploma of Computer Systems
Female	25-44 years	Diploma of Arts (Small Companies and Community Theatre)
Female	25-44 years	Diploma of Tourism/Dip of Events (Dual Qualification)
Male	25-44 years	Advanced Diploma of Information Technology

Employers

Sex	Position	Industry
Male	Apprentice Administration	Aviation
Male	Owner	Construction (cabinet makers)
Male	Owner/Manager	Construction (carpentry)
Male	Director	Construction (carpentry)
Male	Supervisor	Construction (general)
Female	General Manager	Construction (general)
Male	Owner/Manager	Construction (joinery)
Male	Production Manager	Construction (joinery)
Male	Regulator	Electrical
Male	Manager	Food
Female	Learning and Recruitment Officer	Food
Male	Training Manager	Hospitality
Male	Director HR	Hospitality
Male	Executive Chef	Hospitality
Female	Training & Development Coordinator	Plastics
Male	Owner	Plumbing
Male	Director/Owner	Plumbing

Appendix E: summary of students' and graduates' responses to the project's questionnaire

Why students enrolled in the program

Students and graduates were asked: 'Why are you enrolled in this course? (More than one reason is possible)'.

Current students

When asked why they enrolled in the course, 11 students said that a key consideration was the opportunity this would provide them to get a job. Five of those respondents, however, also spoke of getting a job in a specific field. For example, 1 female student in the 25-44 age group who was undertaking a certificate in childcare, stated that while she was doing the course 'to get me a job and more money', she 'always wanted to work with children – I dreamed of being a nurse working with babies, but couldn't because I left school so early'. A male student of hospitality in the 15-19 age group said that 'I want it to lead to a job and eventually my own business, perhaps a little pub'. Five of the students who indicated that getting a job was a factor in enrolling also said that they were looking at the course as a means of building their confidence or providing some sort of foundational skills (i.e. improved language skills for those of non-English speaking backgrounds). For example, one student who was originally from Sudan was undertaking a certificate in disability said 'I need to do the course to get a job . . . I also want to do it to improve my English'. Another student in the 25-44 age group said that while she could have gone straight into a diploma course, she preferred the 'step by step' approach of doing a certificate III first and then a certificate IV (in which she was now enrolled). In total, 11 students said that that had enrolled in their course for some sort of foundational experience, whether that was language based or related to confidence, such as the male diploma student who said he was doing the course 'to understand the Australian education system [and] cultural environment . . .'

Of the 32 students interviewed, 11 believed that their course was important in building a career, whether that was a building a career in a field they had always 'dreamed' of working in; or whether they were retraining for a different career path. For example, one female hairdressing student in the 25-44 age group stated that she loved hairdressing, that her mother and aunt were both hairdressers and she had dreamed of having her own salon. Another female student in the same age group said that nursing had been her dream since she was child.

Six students said their course had implications for their professional development within the field in which they were currently working, whether that meant for their own satisfaction and aspirations, necessity, or as related to promotional prospects. A male student in the 20-24 age bracket stated that he was doing a Certificate IV to 'increase my knowledge and make me a better plumber'. One female student in the 25-44 age group said that she wanted to 'get better qualifications so that I can change things in the workplace'. Another spoke of the fundamental need to take the course – her original certificate in aged care was out of date and she needed to upgrade her skills to be able to work in Victoria. A female student in the same age group said that she wanted to

further herself and was doing the course as part of her professional development, with a view to getting 'a promotion or a better job elsewhere as a result'. Three students (2 of whom were focussed on developing a career, and one on professional development) clearly said that they were enrolled in their specific course because they had heard positive things about it, or because the timing of the course suited their needs, such as 'I had heard that there was very high quality of teaching and very professional teachers and equipment'; and 'I liked the pace of the course – I could do it at other places in 6 weeks, 5 days a week, but I thought that would be too intense and too much'.

Only 2 students, both in the 15-19 age group, indicated that they were enrolled in the course because they were unsure of what they wanted to do. One said she had tried other industry areas, but had failed to complete the courses or to find a job; while the other said she thought her course suited her personality and hoped that it would lead to a career.

Graduates

Of the 27 graduates interviewed, the biggest group (n = 12) indicated that they had enrolled in their course as part of their professional development within the job in which they were employed, or because their job required them to have the qualification. None of these graduates indicated that there were reasons other than this for enrolling. The second most frequent response (n = 7) was that they had enrolled in the course for the purpose of entering a career in a specific field. For example one male advanced diploma graduate in the 25-44 age group indicated that he had always been interested in IT and so he searched on the internet for IT courses and found a pathway from certificate IV to advanced diploma. Of those graduates who indicated that some form of development had motivated them to enrol in their course, 2 also indicated that they saw it has an opportunity to build some foundational skills, including English language and confidence; one indicated that a second motivation was to get a job.

Five graduates indicated that getting a job was a key driver for their enrolment; and an equal number were looking to develop some foundational skills. Only 1 graduate indicated that she enrolled in her course without really knowing what she wanted to do, but acknowledging that she needed a job at the end of it.

Did/will the course help them achieve their goals?

Students and graduates were asked: 'Do you think your course will help you achieve your goals? Why?'

Current students

Of the 29 students who answered this question, the majority (n = 23) said that they believed the course would help them to achieve their goals, however diverse those goals might be. Six students were unsure about whether the course would help them achieve their goals: 2 because they felt they still had a way to go to get to their goal; another 2 were retraining following redundancy and 'hoped' their courses would lead to a job; and the last 2, who had both indicated getting a job as a central reason for enrolling, were unsure, but hoped to get a job.

Graduates

Of the 20 graduates who answered this question, 15 said that the course had helped them to achieve their goals, whether by improving their skills, confidence and/or getting a job. One male graduate said: 'Definitely!' because what he got from the course helped him to walk straight into his full-time job – not so much on the strength that he had graduated with an Advanced Diploma but on what he learned during the course and what skills he could demonstrate to an employer (male advanced diploma graduate, 25-44 age group).

Three graduates said they were not yet sure about achieving their goals, either because they were still studying and had not therefore got to where they wanted to be, or were not sure that the skills they had developed as part of the course were what they really needed. For example, one female certificate III hairdressing graduate in the 25-44 age group said that her goal was to have her own salon in 10 or 20 years, and while she was heading in the right direction towards her goal, she was concerned about her level of skills. Two graduates said that the course had not helped them to achieve their goals – one because she didn't enjoy it and realised it just 'wasn't for her' (female certificate III graduate, 45+ age group); the other because he had not worked in the industry on which his course was based since graduating (male certificate III graduate, 20-24 age group).

What did you expect studying the course would be like?

New students were asked: 'What do you think studying this course will be like?' and students nearing the end of their course and graduates were asked: 'What did you expect studying this course would be like? Has it turned out the way you expected? What is different or the same?'

Current students

When asked about their expectations of the course in which they were enrolled, 30 students responded and the majority (n = 21) indicated that they thought it would be challenging in some capacity. This included those who thought it would be difficult (some had not studied for a long-time); have a heavy workload; or be a good mixture of difficult and easy (requiring commitment and growing their confidence). One male interviewee (in the 20-24 age group) said that he hoped the teachers would challenge him without 'spoon feeding' information. Two respondents (one of whom also responded in this category of 'challenging') expected that study would be like being at school. Five students said that they either hadn't thought about what to expect or had no idea. Three believed that the course would be easy.

Following on from this question, students were asked whether their expectations had been met. Of the 27 students who answered this question, 9 said the course was just what they had expected; while the majority (n = 10) said that it was better than expected. This latter group included those who were relieved that their learning was not affected by having English as a second language; and those who were pleasantly surprised by the level of support from teachers, friendliness of classmates and that they

'fit in' more than they thought they would. It also included those whose interest in the subject matter was piqued more than anticipated; as one interviewee said 'it's beyond my expectations. I'm excited to come to school'.

Six students indicated that the course was a lot more difficult than they had expected. This included 1 student who commented on the number of 'drop-outs' due to the difficulty of coping with the course; 1 who said they got less support from teachers than they had hoped for; 1 who was more challenged by juggling work and the course than she had expected; 1 who had underestimated the challenge of self-motivation while undertaken a distance education course; 1 who found it more difficult, but recognised the benefits of being challenged; and 1 who simply stated that she had thought it would be easy, and it wasn't. Two students indicated their disappointment that the course was not more challenging or of a higher quality. One said 'the quality of teaching is not what I expected . . . don't get the support wanted from teachers – you get more help from other people [students]'; the other, who was an English language student, was disappointed that some topics (e.g. pronunciation) were not explored in more depth.

Graduates

Eleven of the 25 graduates interviewed indicated that they thought their course would be challenging in some capacity. Again, this included those who thought it would be difficult; have a heavy workload; or be a good mixture of difficult and easy. One of these graduates expected the course to be like a university course, taught in a big lecture theatre rather than small classes – she found the latter much more satisfactory (female diploma graduate, 20-24 age group). Four graduates in total expected that their course would be easy or boring, or both. For example, 1 female graduate said she thought it would be 'easy as' to become a hairdresser in a year – 'just put a little bit of colour here' (female certificate III graduate, 25-44 age group). Another simply said he 'expected it to be boring' (male certificate III graduate, 25-44 age group). Seven graduates indicated that they were not really sure what to expect, or hadn't really thought about it – 'I didn't know what to expect, but it was certainly more enjoyable than I thought' (female diploma graduate, 20-24 age group).

When asked whether the course had met their expectations, of the 23 graduates who responded, 5 said the course was just what they had expected. However, unlike students, more graduates (n = 7) said that their course was not as challenging as they had hoped for. For example, 1 graduate said that 'there was a disconnect between the job and what they were being taught' and that in reality the training didn't help him all that much (male certificate III graduate, 20-24 age group). Another said that he spent the vast majority of his apprenticeship 'learning very little in the workplace' (male certificate III graduate, 45+ age group). Six graduates said that the course was better than they had expected, including 1 who said that TAFE was much better than university because he believed he was better able to develop friendships with fellow students in that environment as opposed to the lecture structure of university (male diploma graduate, 25-44 age group). Five graduates said they found the course more difficult than they had expected. For example, the hairdressing graduate who had believed the course would be 'easy as', said when asked whether it had met expectations – 'Absolutely not!' - she had thought that she would come out as a senior

hairdresser, but now believed that she required at least 2 more years of training to be technically competent (female certificate III graduate, 25-44 age group).

What aspects of the course were good?

Current students and graduates were asked: 'Can you please describe the aspects of your course so far that you think are good and tell us why?'

Current students

All student interviewees responded when asked about their thoughts on the good aspects of their course and many had multiple responses. The majority (n = 17) highlighted the support of teachers and the camaraderie they developed in the course as positive aspects of their course experience. This includes those who spoke about the quality of teachers; their approachability and encouragement; and the collegiate, supportive atmosphere of the classroom. One student noted 'there is a lot of class discussions . . . group dynamics are good and we are encouraged to talk about our experiences'. In addition, 2 students spoke of the importance of their teachers having industry currency as one of the good aspects of their course (as is explained later, 10 said that good teachers needed industry knowledge and experience).

A number of responses (n = 17, including 5 who had also highlighted the importance of support from teachers and classmates) focussed on the skills and qualifications that the course would provide. For example, 1 female student in the 25-44 age group stated that 'the course will give me good access to lots of jobs. It is different to uni – I have lots of practical work in the lab – most subjects are practical'.

Nine commented on the course delivery and content. This included comments about the flexibility of the course – 'many in the classes are mums, so we are able to drop off and pick up our kids . . . there is a great classroom atmosphere – it is both educational and fun'. Three students highlighted the dual benefits of appropriate delivery and the practical skills that this could bring, as one female student said 'the chance to get a placement was fantastic – this was the first time for me in an office environment – everything we'd learnt we were able to put into practice'.

Three students (all of whom had talked about the support they received from teachers as a positive element of the course) also talked about the quality of resources used during the course - 1 that the materials were easy to read and understand; another that access to computers was important; and the third that they were able to use the 'best quality products' in the practical parts of their course.

Two students, 1 male in the 45 plus age group, and 1 female in the 25-44 age group said that everything about the course was good. Interestingly, however, both made comments when asked what aspects needed improvement (the first that the class was too diverse, with some disruptive people; the second that finding placements on your own was difficult).

Graduates

The most frequent response made by graduates when asked about the good aspects of their course was about the skills that they developed and/or the qualification they had gained. Four of those graduates also spoke about the delivery which helped impart those skills. For example, 1 graduate said that a particularly good aspect of his course was learning about a project life cycle from planning to implementation, working a 'real world project with a real client' (male advanced diploma graduate, 25-44 age group). Another said that he liked the theory, although 'it's more than you use on the job' and of the units he did 'there were heaps I liked' (male certificate III graduate, 20-24 age group). In total 5 graduates spoke about the delivery of their course positively, and an equal number referred to the level of support received as a good aspect of their course. This included those who enjoyed the opportunity for 'personalised learning' (male certificate IV graduate, 20-24 age group); or the fact that 'teachers are very open to students' ideas' (female certificate III graduate, 25-44 age group) and teachers who were 'fair, friendly and relaxed and put the students at ease [and] were prepared to spend time with you if you were weak in a certain area' (male certificate III graduate, 45+ age group); or those who relished the support of both students and teachers (female diploma graduate, 20-24 age group).

With regard to teachers, 3 graduates specifically referenced the importance of their teachers' industry knowledge as a positive aspect of their course (again, as explained later, 13 thought that good teachers needed industry knowledge and experience). Only 1 graduate spoke about the quality of equipment as a good element of the course; and 2 graduates had nothing good to say about their course – 1, who had done on the job training said that 'on-the-job training with the contractor is not the way to go – it is better to go to an actual institute' (male certificate III graduate, 20-24 age group); the other said that the course was alright 'but it wasn't taught well' (male certificate III graduate, 20-24 age group).

What aspects of the course need improvement?

Students and graduates were asked: 'Can you please describe the aspects of your course that you think are most in need of improvement and tell us why?'

Current students

Twelve students said that they did not think their course needed improvement. Eleven, however, commented that some aspects of the course content or delivery required improvement. This included those who questioned the appropriateness of some topics, or the fact that some material seemed to be repetitious, or that the course was not comprehensive enough, for example, 1 advanced diploma student in the 25-44 age group commented that she thought the course would 'cover things across the board as this is what it is supposed to be I was disappointed that it is only from 1 perspective'. Those who thought the delivery needed improving also included those who wanted more choice of electives; those who said that finding placements by themselves was difficult or challenging when they already had a job; and those who believed the course was being delivered in too short a timeframe.

Four students spoke about the lack of support. Two of these had already spoken about the support they received from teachers and their class as a positive, but that it was the lack of additional support that needed addressing (i.e. language and literacy support). The other two spoke about support more generally, saying:

Although they said there would be, there was no assistance outside class actually. Many were part-time or casual and you could stand around and wait for 10 other students to ask their questions . . . trying to locate the lecturer could be hard. Emails did not give the same quick response. (Female certificate IV student, aged 25-44)

I don't have a student support group – feel like I'm not going to make it . . . feel like others know more than me . . . Teachers don't help us to work together as a group . . . to learn from each other . . . I'm am quiet by nature . . . need to be pushed. (Female diploma student, aged 20-24)

Not getting the hours of teaching expected . . . the teacher is only available for 2 hours . . . doesn't respond to email or answer phone calls . . . I feel the teacher is trying to push us through to finish the course rather than teach. (Female advanced diploma student, aged 25-44)

Four students referred only to the need to improve the quality or availability of resources used for the course. And 3 students believed that class numbers were too big and/or had too great a diversity of age groups and learning abilities to be effective.

Graduates

Only 3 graduates believed the course they had completed did not require any improvement; while 2 believed that everything about their course needed improvement. From the remaining 20 who answered this question, the most frequent response (n = 10) related to improvements in delivery and /or content. For some this related to too tight a timeframe – 'there is a lot to cover in only 2 years' (female diploma graduate, 20-24 age group) or that it was 'full on – fast and furious' and needed to be longer (female certificate III graduate, 25-44 age group). Others found some of the units too repetitive and not particularly relevant, and one commented that 'the certificates are signed off too easily' (male certificate III graduate, 25-44 age group). Six graduates commented on some aspect of the class structure as an area needing improvement, either because of too diverse a range of age groups and learning abilities, or too large a class which impacted on access to the teacher. Four graduates were concerned about the equipment used during their course, both because of the lack of currency and the necessity of sharing limited resources. Three graduates were also concerned about the currency of some of their teachers; industry knowledge. One graduate commented on the lack of support from his teachers, saying that some didn't listen or didn't care (male diploma graduate, 25-44 age group).

Who and/or what helped you learn?

Students and graduates were asked: 'Who and/or what helps you to learn? How do they/it help you to learn?'

Current students

All interviewees responded to this question, with most giving multiple responses. The most popular response (n = 18) was about learning through group activities and discussions, including reading in class as opposed to at home alone; improving communications and sharing experiences; feeling supported and not worrying about being 'embarrassed to ask questions'; and learning from other students. Eight of these students, plus 7 others (i.e. a total of 15) spoke about the importance of reading in helping them to learn, both on campus and at home. Thirteen students spoke about the important role of the teacher in their learning, largely in terms of their personality. For example:

Polite and calm lecturers – when I ask a question, I don't want to be yelled at or told 'go and ask somebody else'. (Female diploma student, aged 20-24)

You need to have engaging lecturers who are driven to teach. (Female certificate IV student, aged 25-44)

If you work with positive people, you have their attitude and you don't want to get left behind. (Male Certificate III student, aged 25-44)

Most of these comments were about the teacher's personality, their patience, passion and respect, which will be explored more fully later.

Seven students spoke about the importance of self-motivation in their learning, such as this comment from a female certificate III student in the 25-44 age bracket – 'I am doing this course for myself – when I am here these are the only days that I am really happy – I want to put my worries behind me and learn'. Seven students indicated that experiential learning was important to them, including those who believed that on the job training/ volunteering was important; or practical examples and the shared experiences of others to help them put theory into practice. Four students sought support outside of the classroom (such as language and literacy; library support) to aid their learning.

Graduates

All graduates interviewed responded when questioned about what helped them to learn, with most providing more than one answer. The most common response (n = 12) was about ideas of experiential learning, including those who appreciated practical examples to support their learning, as well as excursions and guest speakers. One graduate particularly loved the fact that her course was 80% 'hands-on', saying that 'there is only so much you can be told' (female diploma graduate, 20-24 age group). Like students, graduates acknowledged the importance of teachers in aiding their learning, with 9 indicating that this was a key aspect of their learning. As 1 graduate commented,

for him, having ‘really, really positive teachers’ who were organised and had access to current information was most important (male certificate III graduate, 25-44 age group). Five graduates appreciated the support provided by group learning and camaraderie with their fellow students, while a different 5 relied more on their own self-motivation and self-learning. For example, a male advanced diploma graduate, in the 25-44 age group said that a number of teachers gave students a brief explanation ‘then let us loose on a project’, an approach that helped him understand for himself – the teachers took on a mentoring role. Eight graduates believed that a teacher’s personality was important to their effectiveness. As 1 graduate commented, her teacher was ‘passionate’ and demonstrated that ‘she really wanted to be there’ – ‘she showed that she was somebody who was thriving on what she was doing . . . the students thrived off her passion’ (female diploma graduate, 20-24 age group).

What makes a good teacher?

Students and graduates were asked: ‘Please think about a teacher who you thought was good (it could be a current teacher or a past teacher) and explain why they are good? What did the teacher do that that you thought was good?’

Current students

When asked to think about a good teacher and to explain what made them good, all but 1 interviewee answered this question and the majority (n = 25) offered more than 1 response. The most popular response (n = 20) centred around the concept of ‘respect’ for students. Five of these respondents actually used the word ‘respect’, as follows:

The teacher has a lot of respect and patience. (Female certificate III student, aged 15-19)

The teachers show respect, and have helped me to understand – not told me I was an idiot. (Male certificate IV student, aged 20-24)

They must have respect for you (Female certificate IV student, aged 20-24)

Teachers have to respect the students. (Female advanced diploma student, aged 25-44)

[Not so helpful teacher] Teachers who don’t understand students’ rights or respect their students (Female certificate IV student, aged 25-44)

Others spoke more generally about good teachers ‘treating them like adults’, recognising the students as individuals, drawing out their strengths, treating them fairly, appreciating their differences, not discriminating, and not showing favouritism. For example:

Teachers must know every student's character . . . some students are quiet – need to encourage them to speak more . . . teacher needs to change style to suit students. (Male certificate IV student, aged 25-44)

Teachers need to teach everyone equally and show no favouritism. (Female certificate IV student, aged 25-44)

The next most popular response to this question (n = 15) was that good teachers needed to be clear in their requirements and be able to explain issues easily to students until they understand; and those who believed good teachers are organised and/or structured. Some comments included:

She won't stop until everybody gets it. (Female certificate III student, aged 15-19)

Good teachers need to be organised and structured. They also need to be easy to listen to - because you learn through good listening. (Female certificate III student, aged 45+)

A teacher's personality was seen as another key element in their effectiveness, with 12 interviewees identifying this aspect (7 of this group had also indicated 'respect' as key, suggesting that this was a factor of personality). Those who identified personality as important included those who believed teachers needed to be passionate and charismatic, but also down to earth; also those who believed good teachers take pride in helping students achieve; and that teachers should be well balanced, happy, approachable, patient, caring and good communicators. Some typical comments include:

Could teach everything . . . charismatic, passionate, sweet, down to earth; it was like magic . . . once we learned it, it was never forgotten and all students did well in their exams. (Male advanced diploma student, aged 20-24)

She comes down to our level – then brings herself back up to being a lecturer. Not too authoritarian or rude. Very approachable – explains really well – knows when to draw the line between having fun in class and being a lecturer. (Female certificate IV student, aged 25-44).

Finally, 10 students identified industry currency as an important attribute of a good teacher. This included those who referred to the breadth of their teacher's industry knowledge or the fact that they were still employed within their field as well as teaching. As 1 female certificate III student noted: 'I love the fact that our teacher is really up to date – not old school – she's actually working in an aged care facility as well as teaching so she uses actual examples to explain things – it's great to have that.'

Graduates

For graduates the most frequent responses to thoughts on what makes a good teacher related equally (n = 13) to industry currency and clarity and/or organisation. For example 1 female certificate III graduate in the 25-44 age group appreciated that her

teacher worked to a strict calendar so she knew exactly what is going to happen each lesson. Another commented that teachers did not have to be 'nice' people – they just had to be 'right in what they do and professional' (male certificate III graduate, 20-24 age group).

Like students, graduates gave a lot of credence to teachers respecting their students (Note: unlike students only 1 graduate used the exact word 'respect'), with a total of 12 graduates indicating that this was an important element of good teaching. This included those who believed teachers needed to treat students like adults; understand their differences; teach fairly; support students to achieve their goals; and act as a mentor (although that word wasn't used by graduates). Graduate responses included those who said that good teachers gave them their time and respected and listened to students (male certificate IV graduate, 20-24 age group), or those who didn't treat them like children (female diploma graduate, 20-24 age group and male certificate III graduate, 20-24 age group).

What makes a not so helpful teacher?

Students and graduates were asked: 'Please think about a teacher you who you didn't find helpful (it could be a current teacher or a past teacher) and explain why? What didn't you find helpful?'

Current students

When asked to consider a not so helpful teacher, 9 students said that they had not had a bad teacher and therefore could not comment. Of the remaining interviewees, many spoke of the reverse of what made a good teacher. Consequently, 14 students referred to teachers who did not respect them, who treated them like children; who did not listen to them or who discriminated against them or others. Some comments include:

A teacher who treats you like a little kid and doubts you. (Female certificate III student, aged 15-19)

Teachers who pick on you are not good. Some teachers can force you to do things, like stand up in front of the class and make you feel really uncomfortable – that has happened to me. (Female certificate III student, aged 15-19)

Discrimination is a problem – because of my language (English is my second language) – sometimes they think you are stupid and treat you that way. (Female certificate IV student, aged 20-24)

An equally common response (n = 14) made by students was about disinterested teachers, including those who seem to be 'just doing a job', not caring about their students, and failing to provide interesting materials or motivating classes. Comments included:

He would come to class and teach what was on paper and no more. (Male advanced diploma student, aged 20-24)

They are just there to work and don't care about the students. (Male certificate IV student, aged 20-24)

Three students commented on teachers either lacking time or enough preparation to be effective teachers.

Graduates

All graduates responded to this question, but unlike students, the majority (n = 13) gave only a single response. For graduates, the most frequent response was about teachers' disinterest in some form or other, with 16 graduates associating this with a not so helpful teacher. For example, 1 graduate said that one particular teacher treated their work as 'just a job' and gave the students a sense that they 'just want to get you over the line' and move on to the next group of students (female diploma graduate, 20-24 age group). The next most frequent response was about a lack of clarity, organisation, and/or preparation (n = 9), as one graduate said: 'he had very little classroom control – he didn't stick to a topic but went off on a tangent' (male advanced diploma graduate, 25-44 age group).

Given the importance that was placed on concepts of respect, not surprisingly a number of graduates (n = 7) highlighted the lack of such sentiments in identifying a not so helpful teacher. This included those who believed that teachers should not treat their students like children or idiots– thinking that 'you don't know anything' (male certificate III graduate, 25-44 age group); that they should pay attention to their students' needs and listen to them; and not discriminate. One graduate spoke about a teacher humiliating students (female diploma graduate, 25-44 age group); similarly that teachers 'talked down to students' (female diploma graduate, 20-24 age group); and another that some teachers had a poor attitude to students, showing 'childish reactions to student requests' (male certificate III graduate, 20-24 age group).

Four graduates referred to the lack of knowledge or industry of some teachers:

Incompetency (male certificate III graduate, 20-24 age group)

She was learning as she went along, and it didn't inspire much confidence (male certificate III graduate, 20-24 age group)

Some teachers have been out of the trade so long, it's not effective (male certificate III graduate, 25-44 age group)

Some of the newer teachers didn't know the material and were learning with the students (male certificate III graduate, 20-24 age group)

Two graduates said that they had not experienced a not so helpful teacher.

Would you recommend the course?

Students and graduates were asked: 'Would you recommend the course you are doing to your friends? Why or why not?'

Current students

One student said they would not recommend the course, believing it to be too narrow and not broad enough to meet industry needs. Twenty-nine of the interviewed students said that they would recommend the course they were currently doing, although 2 of those said that while they would recommend the course, they would not recommend the institute at which they were studying that course, either because the 'lecturers are discouraging' or because the timelines were too condensed. Reasons for recommending the course included:

Yes – I am encouraging a friend to go to TAFE so she isn't stuck in a dead end job like checkout chick. If you get a trade you are set for life.
(Female certificate III student, 20-24)

Yes – it's fun; you meet a lot of people; it's a really nice environment.
(Female certificate III student, 25-44)

Yes. Nursing is a really good profession – a profession where you help others – and you need to encourage the younger generation to do it.
(Female certificate IV student, aged 25-44)

Six of the 29 students who said they would recommend the course added some sort of proviso, largely relating either to 'knowing yourself' or to feeling a sense of 'vocation'. These comments were:

You need to get some background information on the course if you do not have industry experience. This gives you insight into what to expect. (Female certificate IV student, aged 25-44)

Yes – but they need the right attitude – they want to learn, or the industry will kill you. (Male certificate III student, aged 25-44)

I would recommend this course, but only if you have the right personality . . . unless you have compassion you cannot work with disability. (Female certificate IV student, aged 25-44)

This would depend on the individual – you need to be sure about your own choices. (Female certificate IV student, aged 20-24)

I would recommend that before you do the course, you work as a volunteer for a while to understand what you are getting into – it's a bit of a shock for some and I think some people in the course will be shocked when they go into their placement. We do discuss the

difficulties in class . . . You either have it or you don't. (Female certificate III student, aged 25-44)

Yes if you have a strong reason to come except the economic reason of getting Centrelink payment. (Female certificate IV student, aged 45+)

Graduates

Seventeen graduates said they would recommend their course and 6 that they would not. Two graduates were not sure, 1 because he said the course was both too easy and not comprehensive enough, yet it gave him some useful knowledge (male certificate IV graduate, 20-24 age group); the other said that he would recommend the trade school he went to (a group training company), but not the institute where he did his pre-apprenticeship (male certificate III graduate, 20-24 age group).

What is the best way to succeed in the course?

As part of the question that asked students and graduates whether they would recommend their course to their friends, they were also asked: 'If you were talking to a friend about the best way to succeed in this course, what would you tell them to do? What would you tell them was a waste of time?'

Current students

Students were asked what advice they might give to help others succeed in their course. Twenty-nine of the 32 students interviewed responded to this question, again, frequently providing multiple responses. The most popular of these (n = 19) related to ensuring that they completed their work, including all homework (whether you think it's relevant or not) and reading. Comments included:

If you're not putting in the work, you'll stuff up. Do the work – do all your homework – don't fall behind – don't miss a day at TAFE. A lot of apprentices slack off . . . sort out your week – create a plan. (Male certificate III student in the 25-44 age group)

Don't worry about 'boring' subjects – you just have to do it . . . it may be really important so don't give up. (Female diploma student, 20-24 age group)

Kiss goodbye to your social life! If you're really interested in what you're doing, you're willing to give it up for a while. (Female certificate III student, 20-24 age group)

Eleven of those students who identified working hard as important also spoke about paying attention, as did 5 others (i.e. total of 16). Paying attention included regular attendance at class, listening to the teachers, concentrating, and not distracting others.

Eight students spoke of the importance of networking in some capacity, whether this meant sharing experiences/problems with classmates, or making connections in your industry. As one student said:

Network – take every opportunity to meet as many people as you can .
.. it is often who you know as well as what you know. (Female certificate III student, 20-24 age group)

Others (n = 5) identified some sense of self-knowledge as important to success. This included those who believed that you need to be sure about what you want to do; make sure the course 'fits'; do some research; get some insight – 'know that this is really what you want to do. The teacher prepared us for what to expect because of her own work experience'. (Female certificate III student, 15-19 age group). It also includes those who talked about being motivated and being aware of their own needs; enjoy the course etc.

Finally, 4 students spoke about the need to be organised, allowing time for study, additional reading and research.

Not many students or graduates identified anything that was a waste of time because they mostly focused on the attributes that were necessary to succeed in the course.

Appendix F: summary of employers' responses to the project's questionnaire

What kinds of qualities and attributes do you want students/ apprentices/ trainees to have?

Employers were asked: 'Given that you are an employer of a VET student/ apprentice/ trainee or recent VET graduate, could you please tell us what kinds of qualities and attributes you want them to have? To what extent do you think that the students/ apprentices/ trainees or graduates you have employed have these qualities and attributes?'

When questioned about the qualities and attributes that they expected of apprentices/students/ trainees, employers provided multiple responses. The most common responses (n = 11) was that trainees should have a sense of responsibility, enthusiasm, commitment and/or good work ethic. Some comments included:

Decent work ethic. Willing to learn and follow instructions. Reliable.

Two things – key attributes – passion and attitude - That can't be trained.

Most kids . . . can learn what to do, it is more their willingness to work and attitude.

They don't have to be 'A' students but they have to do the best they can. Good attitude – willingness to do the work. To take responsibility and to get good marks.

Honest; up-front; willing to learn and listen and try.

Nine employers said that they expected competence and skills and an understanding of business requirements, with remarks including:

When the apprentices are out of their time, they should have skills up with the other tradesmen they have there now.

A well-rounded knowledge of the industry.

Academic ability – their qualifications are at Cert IV level but they need to have a 75% pass rate in order to meet international standards.

Employers gave equal prominence to some level of initiative and adaptability (n = 4) and good manners and presentation (n = 4). Comments included:

Want apprentices who are adaptable – who can apply modern techniques to suit the old buildings and materials.

Ability for them to think for themselves. Problem solving.

Need trouble shooting ability.

Initiative, to be flexible in learning. Do stuff outside of an institute.
Need to adapt their learning.

Good manners, polite and punctual.

Neatness with speed are always good attributes.

They have to show respect to everybody. Courtesy, manners and respect.

Want them to be neat and tidy.

Of the 13 employers who responded, when asked to what extent they thought their apprentices/ trainees had these attributes and qualities, no employer provided an outright 'no'; while 10 employers said that they did have these qualities to some degree or other. Two gave a mixed response, saying that some apprentices did, some didn't; and some had some of the required attributes, but not all that they might expect (e.g. good hand-skills but poor literacy).

To what extent do you think VET teaching and training focuses on these qualities and attributes?

Employers were asked: 'To what extent do you think VET teaching and training focuses on these qualities and attributes?' Of the 15 employers who answered this question, 7 indicated that they thought, in general, that VET teaching focuses on the required qualities and attributes. Comments included:

Apprentices have benefitted from the time they spend at TAFE. TAFE has improved in the last decade or so – it has become more practical at showing people how to put the theory into practice, more so than 15 or 20 years ago but there is always room for improvement.

TAFE helps with the skill set – it reinforces what they learn on the job and the theory side of things.

Most of the TAFE teaches taught the other tradesmen employed at the factory –they have been there a long time. He's been there for 25 years. TAFE improves their attitude – they grow up a bit – through meeting the teachers and other people.

They have used a training organisation with extremely good credentials which has collaborated with them to produce the training they need.

Thinks VET is very good at doing this – through structured service delivery; responsiveness to industry.

Five employers gave a mixed response believing that VET focuses on instilling some of the qualities and attributes but not all; that VET relied too much on industry to instil these qualities; or that VET varied too much from state to state. Three employees indicated that they did not believe that VET teaching and training focussed on these qualities, arguing:

Although providers were marking people as competent, they did not have the resources to train and assess them – how are they deeming them competent?

They try to instil these qualities in the kids but get so little time to interact with them.

They don't learn this in the VET system – 'it does not encompass the whole sphere of plumbing work'. VET is becoming more specialised – apprentices become 'licensed plumbers' but they don't get the full range of training they need – they can't do some of the older stuff [i.e. fix older systems].

What aspects of the training are good and why are they good?

Employers with apprentices or trainees were asked: 'Could you please tell us about the aspects of the training you think are good and why they are good?' When asked about the aspects of training that were good, 11 employers focussed on delivery and content, arguing that good training recognised prior learning; balanced theory and practice; provided innovative approaches to training; flexible delivery and elective choices; contextualised courses; currency of subject matter; and experiential learning. Some comments included:

They don't waste time on teaching the apprentice something if they can see he is adept at it and competent in certain things – he can get credit for what he knows. They learn the ability to appreciate the employer's perspective – that materials are expensive and that they need to be productive.

Thinks it is good that they are learning different ways to do something.

They do core subjects and then can choose the electives that are suitable for their specific workplace.

They work on real projects. TAFE budget allows them to have well-equipped machine shops, and good quality and new high tech machinery

Tailored service delivery; 'This is generations beyond the clinical model' and is attractive from the industry end. Flexibility and contextualisation – not straying from the essential aspects.

Five employers spoke about the need for using a variety of tools and resources in the training, and particularly ensuring that they were current resources. Four employers recognised the important role of teachers, particularly those who were able to instil responsibility and values in their students; had industry currency and were able to instil knowledge through real-life examples. Comments included:

Instilling valuable lessons in the kids and convincing them that all the things they are being taught are absolutely necessary.

Instructors are from industry – they know the industry quality and standards i.e. accuracy and following a step-by-step process and set procedures. Their examples are all from industry.

What aspects of the training do you think need improvement?

Employers with apprentices or trainees were asked: 'Could you please tell us about the aspects of the training that you think need to be improved, why they need to be improved and the kinds of improvements would you like to see?'. Sixteen employers responded to this question, with only 3 providing more than 1 response. Three employers could not identify any specific area for improvement. The most common response (n = 8) was currency and industry knowledge. This included those who believed that apprentices needed to have a greater understanding of industry context; that training was sometimes too theoretical and not practical enough for work; that training was sometimes not up to date (i.e. new legislation etc.); that instructors were sometimes not current; and/or that there should be greater collaboration between trainers and industry. Such as:

Could be even more practical. Orientate the apprentices to the idea behind the business – to achieve something, to create and to provide a service.

To produce a better apprentice for me – so many just don't have a picture of why a company has employed them, an idea that the company has to make a profit, they are not thinking past Thursday pay day. Industry groups could come along to TAFE and give a presentation on just one of the training day so the apprentices get the bigger picture of the industry.

Some aspects could be updated so that they learn about current building strategies and techniques. It is good to show them how it used to be done but not as useful as learning about current stuff.

Three employers believed that the level of support was inadequate – that apprentices needed to be mentored and supported more, to help them with responsibility and time management. Comments also included those who believed employers needed to be supported more with feedback from the vocational institutions. Another 3 argued that delivery options needed to be improved, with more flexibility in the way and times that subjects were delivered to meet industry needs; that timeframes for completion need to be flexible (some that the subjects need to be longer, more in-depth; others that they were too long and cost industry money). One suggested that

Possibly after the first 4 years, they should have a refresher course to do in their own time – they have to pass it and this is a way of strengthening what they have learned.

Two employers were concerned about the quality of training being sacrificed because of cost: ‘All training is primarily based around money and the quality of training is a secondary issue. Maybe that is life today’.

What kind of training do you think is most effective and why is it effective?

All employers (and not just those who employed apprentices) were asked: ‘What kind of training do you think is most effective and why is it effective?’ Of the 15 employers who answered this question, only 1 said that the best training should be done only on the job. The remaining 14 spoke of a combination of practical and theoretical training; one-on-one class-based training; and a mixture of industry and VET delivery - Training which works hand-in-hand with TAFE – TAFE provides the theory and this is backed up on site. Learning from a good tradesperson – understanding the ‘what and the why’ so that they understand the process, the big picture.

Have you tried to get information about VET or organise training for your enterprise or employees?

Twelve employers responded to this question and all said that they had tried to get information about vocational education and training. Of those most said that they were satisfied with the information they had received. Comments to this effect included:

People he deals with are very approachable, friendly, sensible, and not arrogant. He deals with them over the phone, face to face sometimes, through emails and texts.

His dealings have been good. TAFE is approachable and available to give him information about the modules the boys are doing.

His offsider does it – and she doesn’t seem to have any problems. They have good rapport with the TAFE and Skill Tech people. He’s been involved with advising them about what should be in the training package.

He has had long exposure to TAFEs and has a sensational relationship with TAFEs. He feels that any employer can do this - build up a great relationship – as TAFEs welcome involvement from employers.

Get good access to information about training.

Gets information about courses through the Master Plumbers Association, not through the TAFE. He thinks this is the best way [i.e. through his association].

Five employers indicated that they were less than satisfied with their obtaining information about vocational education – indeed 4 spoke of the need for greater collaboration between vocational education and industry when questioned about how vocational education could better meet their needs (see later section). Remarks included:

One issue in XXX state is that there are two TAFEs in training in a particularly specialised field but they don't recognise each other's training. He is not impressed with this – he moved an apprentice from one college to the other and it took 5 months for him to get a response about the training this apprentice could do. "Some colleges in this state do not have a customer service focus. The response is "Oh, did you want me to answer your email?"

Websites could be improved [and] email is not very good.

Not so bad to get information – she has built network. But if you were new it wouldn't be easy.

How accessible is VET training? [What about] information about courses - How are VET courses promoted – this especially important for smaller industries.

Do you have direct contact with VET/TAFE teachers or trainers? If you do, what is the nature of this contact?

Of the 13 employers who responded to this question 4 said that they did not have direct contact with vocational teachers or trainers. One of these indicated that he would like to have more direct contact, while two said that they had indirect contact through industry associations (e.g. Master Plumbers).

The 9 employers who said that they did have direct contact provided a range of responses about the nature of that contact, including:

He gets on well with the teachers. They have a good rapport with the teachers – they contact them and give them on update on how their apprentices are going.

He talks to the teachers - “the sensible ones” – rather than the bean counters.

She gets fairly involved with the teachers about what the kids are doing and whether it suits her industry ... he keeps an eye on her kids and lets her know if one needs some extra help.

Yes – his company assists in supplying materials to TAFE at ‘preferred rates’ so the teachers phone him up when they need materials.

Yes, training area is separate to the university.

Yes, has had direct contact with all the trainers who have run courses.

Do you have any views on the quality of VET teaching or training, and if so, can you please outline them?

All employers were asked: ‘Do you have any views on the quality of VET teaching or training, and if so, can you please outline them?’ Twelve offered views on quality, and only 1 had little confidence in the quality of VET. Four indicated that they were happy with the quality of VET teaching, the quality of delivery and the quality of apprentices. The remaining 7 provided mixed responses about quality including those who thought the quality of teachers was good, but the nature of resources, or duplication of material was poor; or that teachers had too limited time. Some also argued that quality varied across colleges and between teachers. Some comments included:

I believe the teachers do a great job but the bureaucratic paperwork is over the top and inefficient. All TAFEs work to the same list of competencies but every TAFE develops its own teaching materials. This is a waste when you have 30 or 40 TAFEs duplicating the same work. Now it is based around money – the job used to be to teach

The quality of teaching is higher at some colleges – there are differences between colleges.

What makes a good teacher/ trainer?

All employers were asked: ‘Please think about a teacher/trainer who you thought was good; could you please explain why they are good? What did they do that you thought was good? Sixteen employers answered this question and the majority (n = 10) provided more than 1 response. The most common remarks were that teachers needed to have industry currency and qualifications and the knowledge to teach best practice. Comments included:

If they have been in the trade they ‘have been there, done that’. They have the practical experience and can convey it to the kids. They need to be able to teach the theory and the practice to the students.

Expect understanding of, and worked in industry – not always the case. Would like to give teachers work placements – to teach they need to understand industry or it becomes very text-book.

Currency of knowledge and experience.

Interestingly, some employers responded similarly to students and graduates: 7 employers said that good teachers need to treat their students/apprentices like adults, respect them; listen to them; and understand their differences. For example:

Teachers seem to have better control over the kids and respect from them. The kids seem to want to work and impress their teachers. The teachers are willing to work with the kids and the employers. ‘There wasn’t the personal contact in the past.’

Has to listen to the students and the students have to listen to them. From what the apprentices say back to him, they seem to have respect for their teachers.

They need to assess the student and teach the student any holes that they see in the student’s training or knowledge.

Clarity and organisation were highlighted by 5 employers, including those who believed a good teacher needs to be clear; instil knowledge effectively; and/or be organised and structured. Two of these employers, plus 3 others also saw the importance of personality in making a good teacher, such as:

Passionate; personality – easy-going, approachable; conversational style of teaching; knows, lives, breathes and shares her knowledge.

Degree of motivation; real interest in teaching. He has been to some colleges where students are asleep in class, where teachers let students do what they want – ‘this is not acceptable’.

Teachers have to be passionate – must have right attitude – lose students quickly – super organised and well prepared.

What makes an ineffective teacher/ trainer?

All employers were asked: ‘Please think about a teacher/trainer who you thought was not effective; could you please explain why they were not effective? What did they do that you thought was not effective? Of the 14 employers who responded to this question, 1 said that they had never known a bad teacher and another said that while their trainers were good, their effectiveness was often impacted by the amount of paperwork they had to do and the consequent lack of time. For the remaining 12, the most common concerns were teachers’ indifference. Employers spoke of teachers who didn’t care about their students, who were arrogant; and/or were ‘just doing the job’ - a ‘tick and flick’.

Concerns about a lack of industry knowledge and currency formed the second most popular response (n = 5). Some comments included:

‘Some are interested in what is happening in industry but others see TAFE teaching as one step before retirement.’

People who don’t have industry experience in last 20 years . . .
Arrogance. He remembered a TAFE teacher who was a self-promoter.

Three employers commented on the lack of preparation of some teachers and the inability to communicate and deliver material well.

How can VET improve so that it is more effective in meeting your needs?

All employers were asked: ‘How can VET improve so that it is more effective in meeting your needs?’ Fifteen employers responded to this question, the majority (n = 11) giving only 1 response. The most common response was ensuring flexibility. This included those who spoke of more flexibility in delivery over different timeframes; dedicating more time to training; different delivery options for greater accessibility (e.g. virtual classrooms, online, instead of travelling distance to TAFE etc.); and recognition of prior learning.

TAFE needs to be done as part of the apprenticeship – it could be better if it (the training) was spread out over a longer time so as not to lose the apprentice from the workplace for too long.

Instead of trying to push people through training system and not give them enough time and get work experience. Spend more time with student getting them up to speed before they enter the workforce would be better for everyone. Thrown in the deep end.

Don’t try to reduce the time needed to train a plumber. It takes time and training to become a plumber. ‘They [the colleges] do what the government wants – they push people through’ rather than tell them about the reality of what they have to do for their certificate.

The issue of flexibility also related to industry currency, which was an issue highlighted by 4 employers. For example, TAFE needs to be flexible to cope with changes and trends in industry – such as the use of new materials. TAFE needs to keep doing this, to keep up to date with changes and to continue to consult with employers.

Collaboration was considered by 5 employers as important for improving the effectiveness of VET. This included those who believed that VET needs to seek more input and consult with industry more. Some example included:

Stay in touch with industry – be aware of trends, gain insight into where industry is heading in the next 2 to 5 years. XXX is in touch with them and are receptive to feedback. Maybe trainers and managers

should spend time in industry – trainers for delivery and managers to aid planning courses and understanding industry needs.

Industry and TAFE have to develop partnerships to meet future needs; they can't work in isolation from one another; they need to come up with a better way of training. Do we need so many training facilities? Funding should be co-ordinated federally. They could think about having a couple of Centres of Excellence – but he knows this would be too expensive for smaller operators with apprentices in remote locations.

Quality was an issue for 4 employers, including those who talked about VET being too focussed on money and changing for the purposes of funding rather than industry needs, or the needs of apprentice - consider the training first and the money second. Training organisations jump from one project and training program to the next all based on how to access the latest Government budget allocation, vote winning training proposal or cuts to funding for existing systems. Some also thought there needed to be more scrutiny of trainers to achieve higher standards and professionalism. There are lots of loopholes. For example, when teachers do professional development, if they have mates in industry they can sign you off; and there is a total lack of monitoring of the system to ensure that what was being said was being done.

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