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Graduate satisfaction and entry-level training in office skills

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Glossary

ABS:	Australian Bureau of Statistics
ACVETS:	Australian Committee on Vocational Education and Training Statistics
Age:	age in years at the survey reference date, 30 May 1997
ANTA:	Australian National Training Authority
Area of usual residence:	whether the last known mailing address for each TAFE graduate was in a capital city or not
AQF:	Australian Qualifications Framework—a nationally consistent system of educational qualifications being introduced over a five-year period beginning in 1995
AVETMISS:	Australian Vocational Education and Training Management Information Statistical Standard—a consistent standard for the collection and analysis of vocational education and training information throughout Australia. AVETMISS is the source of the classifications used in this report for field of study and qualification
Employed full-time:	usually worked 35 hours or more a week in main job during the reference period(s)
Employed part-time:	usually worked less than 35 hours a week in main job during the reference period(s)
Employed person:	persons who, during the reference period(s): ❖ worked for one hour or more for pay, profit, commission or payment in kind in a job or business or on a farm (including employees, employers and self-employed persons) or ❖ worked for one hour or more without pay in a family business or on a farm (i.e. unpaid family helpers) or ❖ who had a job, business or farm, but were not at work For the six months before, and during final semester of course reference periods, graduates were only asked to report employment which lasted two weeks or more.

Field of study:	a classification describing a course based on the intended major vocational outcome and content. The ACVETS defines and maintains field of study classifications. Courses are classified according to a hierarchical structure as found in *AVETMISS Classifications volume 4* (Release 2.0 May 1996)
Graduate:	a student who satisfactorily completed a course of study at TAFE in Australia in 1996. Students participating in recreational, leisure or self-enrichment courses; courses comprising less than 200 hours teaching time and students who did not have an Australian address were excluded from the survey.
Looking for work:	graduates were asked if they were actively looking for work according to the following criteria: ❖ being registered with the Commonwealth Employment Service ❖ writing, telephoning or applying in person to an employerfor work ❖ advertising for work
Main job:	job in which the graduate usually worked the most hours during the reference period(s)
Multi-field education:	A category within field of study that includes courses for English as a second language, functional literacy and numeracy, pre-vocational/pre-employment courses and general skills development
Non-English-speaking background:	a person classified as having a non-English-speaking background if they answered *yes* to either *Do you speak a language other than English in your home? or Do either of your parents speak a language other than English as their first language?*
Not in the labour force:	persons who identified themselves as not employed and not looking for work during the reference period(s)
Post-school educational qualifications:	qualifications attained after the graduate left school, excluding study done at secondary school and any qualifications that required less than one semester to complete
PRC:	Performance Review Committee—a standing committee established by ANTA to recommend key performance indicators for the VET system
Qualification:	educational attainment for which an award is conferred upon successful completion. The ACVETS defines and maintains the qualification category classifications used in this publication, as found in *AVETMISS Classifications volume 4* (Release 2.0 May 1996)

Ratings of course:	score given by graduates to 12 aspects of their course and a score for the overall quality of their course. The scale was from 1 (very poor) to 10 (excellent)
Reason for doing course:	respondents reported their main reason for doing the course, selecting options from a list, according to their own perception
RPL:	Recognition of prior learning—granting of credit towards the completion of a qualification on the basis of prior study or for assessed skills and experience
Reference periods:	graduates were asked to respond to questions regarding labour force status for two reference periods: ❖ before the course: during the six months before starting the course ❖ current situation: at 31 May, 1997
Unemployed persons:	persons who were not employed during the reference period(s) and who had actively looked for full-time or part-time work during that time
Unemployment in the area:	graduates were allocated the unemployment rate of the postcode of their last known mailing address. Respondents were then classified as from a *high unemployment area* (the 25% of respondents living in the postcodes with the highest unemployment rates); a middle unemployment area (the next 50% of respondents); or a low unemployment area (the next 25% of respondents). Data were derived from the 1996 Census

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Executive summary

This report presents results from the 1997 *TAFE Graduate destination survey* (GDS) and from interviews conducted in 1998 with staff from nine courses in entry-level office skills.

The GDS was a national survey of 60 746 students who completed a course of 200 or more hours at a technical and further education (TAFE) institute in 1996. Among other measures, the survey asked graduates to rate the overall quality of their course as well as 12 particular aspects of their course. These ratings were combined in this report to form an aggregate measure of *graduate satisfaction.* This report then investigated the relationship between graduate satisfaction and the characteristics of the graduates, their courses, the outcomes of their courses and, for entry-level courses in office skills, the provider.

The attitudes of graduates to their courses were very positive. On a scale of 1 to 10, where 1 was *extremely poor* and 10 was *excellent,* more than two-thirds of graduates rated the overall quality of their course at 8 or higher. Most aspects of courses also received high ratings. The major exception was the rating of *the information about careers and jobs available to you,* which was scored at 8 or higher by just over a third of graduates.

The reported outcomes of the courses were also positive for most graduates. Nearly 80% of graduates reported that they had achieved, or partly achieved, their main reason for undertaking the course. There was a net increase in labour market participation of about 15% of all respondents, and of more than 30% for respondents who had undertaken their course in order to obtain employment.

There was some interesting variation in the level of the satisfaction among categories of graduates, types of courses, the outcomes of courses and across TAFE institutes. The amount of variation in satisfaction explained by these characteristics (individually or collectively) was small except for some of the outcome measures. Even for the outcome measures, however, the relationship with satisfaction was at best still not particularly strong, and often quite low. For the graduates of the entry-level training courses who form the focus of this report, the relationship between satisfaction and outcomes was low.

The following categories were associated with slightly higher levels of graduate satisfaction:

Characteristics of graduates

- female
- older and younger graduates (20 to 34-year-olds had lower levels of satisfaction)

- English-speaking-background
- post-school qualification before commencing the course
- non-metropolitan area
- not being in full-time employment before starting the course (but much of this difference is due to other characteristics of these graduates or the type of course in which they enrolled)
- living in a middle or high area of unemployment

Characteristics of courses

- entry-level courses
- the health and the service sector
- at least some workplace delivery

Outcomes

- increase in labour force participation
- achievement of reason for enrolling
- obtained one or more labour market benefits

Entry-level training in office skills

If information on graduate outcomes and satisfaction is to be used to improve the quality of training provision, it needs to be linked to individual courses. The fact that graduate satisfaction varies systematically with the level of qualification and the field of study of the course suggests that comparisons of courses should be made between courses with the same level of qualification and in the same field provided by different TAFE institutes. The report explored such comparisons for 33 courses providing entry-level training in office studies.

It was found that:

- There were substantial differences in the level of graduate satisfaction among the 33 courses. These differences persisted after statistical adjustment for differences in the personal characteristics of graduates, their reasons for enrolling, the mode of instruction and various outcome variables. Such adjustment produced only slight changes in the ranking of courses in terms of graduate satisfaction.
- Differences between courses, however, explained some, but by no means all, of the variation in satisfaction—at most 6.4% of the total variance. Although the relationship between satisfaction and provider was often large compared with the variation explained by other measured characteristics of graduates, their courses and outcomes, it is still at best a modest relationship.
- For the comparison of courses, graduate satisfaction was unrelated (and possibly inversely related) to two important graduate outcomes: whether or not graduates achieved their reason for enrolling and whether or not graduates achieved some labour market benefit from their course. Such

results suggest that satisfaction measures for courses may not be influenced by outcomes.

The interviews

Interviews were sought with staff from the five entry-level office studies courses that were ranked highest on graduate satisfaction and the five that were ranked lowest. Nine interviews were obtained. The interviews were undertaken both to seek information that would explain the differences in graduate satisfaction among courses and to obtain the views of the staff on the nature of their course.

The interviews did not provide satisfactory explanations for the differences in graduate satisfaction among the courses. They did, however, highlight possible problems in using course-level results from the GDS. Because of the articulation of courses, the nature of graduates identified as having obtained a particular qualification can be influenced by the enrolment policies of the TAFE institutes. In one institute, certificate II graduates could be completing the course for which they enrolled, while in another, certificate II graduates could be non-completers of a certificate III course.

Several concerns were raised in the interviews about the provision of entry-level training in office skills:

- The introduction of pass/fail assessment of competency to replace a finer set of gradings had reduced the incentive for students to achieve higher levels of proficiency.
- The pathway from the study of office skills in school to the study of office skills in TAFE was sometimes difficult because students coming from school had not achieved the required level of skill to proceed directly to the next qualification.
- The sometimes low level of literacy and numeracy of entrants to the courses was a barrier to effective skills formation
- Flexible delivery has made teaching more demanding, but there has been little additional support provided to teachers.

Within some colleges there also seemed to be a mismatch between aspects of the national training strategy in relation to flexible delivery and the recognition of prior learning and the incentives created by the funding policies of the institute or the broader TAFE system.

Performance indicators

The development of performance indicators has been closely related to the need for public accountability for the expenditure of public monies. Performance indicators are used as a convenient means of measuring the efficiency of public institutions such as hospitals, police forces, prisons and educational institutions, or of private organisations funded by governments to provide public services.

Accountability may not be restricted to the funding agency, the auditor-general, or Parliament. Consumers of health and educational services can consider that they have a right to know about the quality of the service or product provided by different organisations. The United States legislature, for instance, passed the *Students' right-to-know and campus security act* (1990) which required universities, among other things, to inform prospective students about graduation rates for particular courses (Korb 1992).

Performance indicators are not restricted to the public sector. Private organisations find it useful to have summary measures of their activities in order to know whether the organisation and its component parts are performing adequately. For-profit private sector organisations have a discipline devoted to providing such measures namely, accountancy. The bottom line is a convenient measure of success. Even so (or perhaps as a consequence), the measures used to evaluate performance are often more complex, debt-to-equity ratios, returns on shareholders funds, market share, profit-to-sales ratios and so on. Companies, however, may also include environmental and safety record measures in their strategy plan and in their public reporting.

There is the hope that performance indicators will provide a means for improving organisational efficiency. They may make it possible to determine whether an organisation is performing well, relative to some benchmark and its own previous performance or the performance of comparable organisations. The use of indicators of performance also allows those parts of the organisation performing less well to be identified and subsequently improved or removed. Performance indicators are a management tool.

The problem for publicly funded organisations is that they sometimes do not have very clear goals, there may be multiple goals which are not mutually consistent, and the measurement of the extent to which those goals are achieved may not be straightforward. For instance, educational institutions or systems may have the goals of equity of access, high completion rates and low costs per graduate. Improvements in equity could, however, lead to either lower completion rates or higher costs per graduate, or both. Performance indicators can measure performance poorly (and it may not be possible to improve them).

Performance indicators are a management tool which allows delegation and independence within an organisation. Managers are free to address the task of improving their measured performance in whatever way they feel appropriate within institutional constraints. Unfortunately, the introduction of performance indicators can lead to behaviours designed to improve measured outcomes but which are unintended and undesirable. For instance, the medical status of patients on hospital waiting lists can be changed to meet performance targets (no patient in a *critical* condition had to wait longer than 12 hours for an operation, but only because some have been classified more liberally as only *very serious*). If completion rates in educational institutions become a measure of performance, there may be a temptation to pass students who would otherwise have failed. Thus the quality of graduates declines.

Performance indicators often attract negative media attention. It is difficult to determine whether this is because they are seen as a tool of management (rather than as a means for providing information for the public good or for consumers), or because they can induce undesirable behaviours. Another reason may be because they are inherently unable to capture the complexity of the goals of many public-sector institutions. Nevertheless, performance indicators are used because there is little choice. Decisions often have to be made with imperfect knowledge because the full knowledge required in the decision-making process is unavailable or too costly, or would take too long to collect. Performance indicators perform the humble task of providing prompt, imperfect, summary, cheap, relevant and timely information for decision-makers.

Performance indicators for VET

In a recent report, ANTA's Performance Review Committee (ANTA 1998b) addressed the issue of the need for performance measures for vocational education and training (VET). The committee proposed that the primary purpose of performance measures for VET is public accountability; that is, to answer the question 'Is the public getting value for money in the VET system?' and, to drive improvements in the VET system. The committee suggested that performance measures could also help in making decisions about resource allocation and provision within the VET system, assist in identifying opportunities for continuous improvement, and provide clients and customers with information to help in the choice of providers.

The Performance Review Committee recommended the following seven performance measures (ANTA 1988b, p.i):

1. *skill outputs produced annually within the domain of formally recognised VET*
2. *stocks of VET skills against desired levels*
3. *employers' views on the relevance of skills acquired through VET*
4. *student employment outcomes and prospects before and after participation in VET*
5. *VET participation, outputs and outcomes achieved by client groups*
6. *(Actual) public expenditure per publicly funded output*
7. *(Actual) public expenditure per total recognised output*

The committee was clearly mindful of the problems which can arise in the use of indicators of performance. Both the initial report outlining the performance measures (ANTA 1997) and the subsequent report on the implementation of the performance measures (ANTA 1998b) stress the need for consistent and reliable data which reflect the extent to which the goals of the VET system are being achieved. The reports also draw attention to the need to interpret any values for the measures in the context of geographic, demographic, industrial and socio-economic differences between jurisdictions (ANTA 1997, p.2) and the need to ensure that the performance measures do not result in unintended changes to VET activities (ANTA 1997, p.23).

Performance indicators and the objectives of VET

The performance measures were constructed to reflect progress towards advancing the goals set out in *A bridge to the future: Australia's national training strategy for vocational education and training 1998–2003* (ANTA 1998a). The strategy reiterates the mission statement agreed to by the ANTA ministerial council for vocational education and training in Australia:

> *To ensure that the skills of the Australian workforce are sufficient to support internationally competitive commerce and industry and to provide individuals with opportunities to optimise their potential.* (ANTA 1998a, p.i)

There are five objectives which underpin this mission statement (and to which the performance measures refer):

- equipping Australians for the world of work
- enhancing mobility in the labour market
- achieving equitable outcomes on vocational education and training
- increasing investment in training
- maximising the value of public vocational education and training expenditure

Employment outcomes for graduates

The first objective, 'equipping Australians for the world of work', is of most interest to this report and is measured (in part) by the performance indicator student employment outcomes and prospects before and after participation in vocational education and training.

The Performance Review Committee proposed the following rationale for the measure:

> *For students, VET is important for providing skills to compete in the job market. Consumer research has identified the specific job-related reasons given by individuals as end goals of VET participation as including; to get a job; to hold their current job/to do their job better; to get a transferable job/skill/qualification, to get a better paid/more satisfying job, and to gain a pre-requisite for another course or wanted job.* (ANTA 1997, p.17)

The measure most directly related to whether the employment situation of students has improved as a result of obtaining a VET qualification is simply some comparison of employment status before and after completion of their course. There is, of course, more to employment outcomes than simply obtaining employment:

- There must be some evidence that the employment has been found *because* of the training, rather than that the student is perhaps a year older and has been out of school for an additional year. The extent to which the training is relevant to the skill requirements of the job provides some evidence of a link between training and employment, as do students' perceptions of the extent to which employers value the training.
- The *nature* of employment could change. The hours of employment could increase, tenure could shift from casual to permanent, and the student's job satisfaction could increase.
- The *returns* to employment could improve. Graduates may be paid more, or have received a promotion, or both, as a consequence of the skills they have acquired through their training course.

Entry to another course is at least one step removed from directly affecting employment outcomes, but it is a legitimate outcome from the perspective of students and, given the concentration on the articulation of courses, a legitimate concern of the VET system.

The documents which deal with performance indicators in VET often distinguish between outputs and outcomes, between products and processes and between effectiveness and efficiency. The point of these distinctions is to draw attention to the need to consider the interface of the VET system with employment (or at least external) systems. The VET system for instance, could be very efficient in the production of graduates at a low unit cost, but ineffective in producing graduates with the skills required by industry.

The detailed description of the fourth performance measure, employment outcomes for students, crosses this distinction (ANTA 1998b, p.14). It refers to issues of process, such as students' satisfaction with their instructors' knowledge and teaching methods, the clarity of assessment procedures, and the quality and quantity of course equipment.

Sources of information

The Performance Review Committee proposed that the information required for measures of student employment outcomes be collected through surveys of graduates and students. Surveys of graduates provide an opportunity to measure participants' perceptions of aspects of their course, the quality of the teaching and learning environment, the quality and quantity of equipment available to students, the information provided to students about the course and careers and the overall quality of the course. Surveys of graduates, however, exclude students who do not complete the course and who might be expected to have less positive attitudes to their course. On the other hand, graduates may have a more informed perspective, having completed the course six or so months previously. Regardless, surveys of graduates provide a convenient tool for the measurement of perceptions of course quality.

The analyses presented in this report are derived from the *TAFE graduate destination survey* (TAFE GDS), a national survey of graduates who had completed a TAFE course in 1996 (NCVER 1998). It was conducted in May to September of 1997 and focussed on labour market and educational participation. Much of the information on current labour market outcomes refers to graduates' employment at 30 May 1997, usually some six months or more after graduates had completed their course. Information was collected by mail questionnaire for the overwhelming majority of the sample and by telephone interview for the remainder. There were 60 746 respondents from the target population of 110 409 graduates with a response rate of 55%.

The sample

The survey deals with only a minority of participants in vocational education and training in Australia. It is restricted to:

- *Particular courses:* This survey deals with only those 110 409 students who graduated from a vocational course that required 200 or more hours of teaching. The survey population does not include students who completed endorsements to certificates, statements of attainment or certificates of competency or proficiency. Students who completed leisure or enrichment (stream 1000) courses were also excluded.
- *Graduates rather than students:* The emphasis on flexibility of training has meant that many students enrol in TAFE to complete only one or two modules of a course rather than to complete the entire course. In 1996, 1.22 million students enrolled in courses provided by TAFE and other government providers. (The other government providers category has relatively few enrolments [NCVER 1998]) Of these, 1.10 million were in vocational programs, with the balance in leisure and personal enrichment programs.
- *TAFE rather than VET:* The Australian vocational education and training system consists of TAFE institutes and dual sector (TAFE and higher education) universities, a substantial number of private vocational education providers and many adult community education (ACE) providers. TAFE is, however, by far the largest component of VET.

Outcome measures

The focus of the survey was on outcomes from the TAFE course which the graduate had completed in 1996. Two types of outcomes were measured, objective outcomes and subjective outcomes. Objective outcomes are behavioural: a graduate was employed or not employed, studying or not studying, received a pay increase or did not receive a pay increase. Although these outcomes are all measured through the self-reports of graduates, they are based on objective information. Subjective outcomes, on the other hand, take into account the reasons why the graduate enrolled and the graduate's assessment of the extent to which he or she achieved that goal.

There is the potential for disagreement between these two measures. A graduate may claim that he/she enrolled in their course in order to gain entrance to another course and this goal has been achieved. However, he or she not be enrolled for

further study in 1997. Such discrepancies can usually be explained: the graduate may have gained the necessary qualification to enrol in further study, and intends to enrol later.

Explanations of discrepancies are usually attributable to the fact that the observable behaviour does not tell the whole story. Consideration of subjective outcomes often throws new light on objective outcomes. Failure to find a job, for instance, may not be very important if the main reason for enrolling in the course is for personal development.

That said, the satisfaction of the personal goals of graduates is not the only measure by which to assess the outcomes of TAFE. Considerable public monies are provided to TAFE to ensure that a skilled workforce is available for industry. If graduates are consistently unemployed or employed in jobs that have little or no relevance to their course, this might be deemed wasted expenditure.

The questionnaire also collected information on the labour force and employment characteristics of the graduates before they enrolled in their course, during the final semester of their course and after completion of the course. Therefore, changes in these characteristics can be observed, although the absence of a comparison group makes interpretation of these changes difficult.

Levels of performance measurement in VET

The Performance Review Committee identified three levels at which VET performance measures would be required (ANTA 1997, p.5):

The national level

The seven performance measures outlined by the Performance Review Committee, the 'key performance measures', are designed to address issues raised by the national VET strategy plan—the national objectives, policies, priorities and initiatives. Since these are common measures agreed to by all the States, they also have relevance for the individual State systems. Results for these measures are to be included in the annual national report for Australia's VET system.

The State level

Commonwealth–State agreements under the annual national priorities also have reporting requirements in terms of performance measures. There are also intra-State activities which generate a need for performance measures.

Providers

Directors of VET providers have an interest in the demand for the skills of their graduates. Labour markets are sometimes localised and it is important that providers tailor their provision to the needs of graduates to find work locally, and to the needs of local industry to find skilled labour. The localised nature of demand, to a city, region or State, may mean that there is no area of provision in which a particular college has an absolute advantage. There may, however, be areas in

which relative advantages exist and college administrations could seek to maximise the employment opportunities of their graduates by focussing on those areas.

The Performance Review Committee notes that the three levels may require different performance measures. They do suggest, however, that the national reporting framework, and their seven key performance measures in particular, could *cascade* down from the national level to the level of the individual provider. They suggest that their national performance measures would provide a useful framework for other stakeholders in the VET system to use as *required and as appropriate for their needs* (ANTA 1997, p.6).

The next chapter presents results for some of the measures of student employment outcomes in the TAFE GDS at the national level. The subsequent chapter refines these results down to individual entry-level courses in office skills. Further chapters provide selected case studies of provision from these courses.

Graduate satisfaction and employment outcomes

This chapter discusses measures from the *TAFE graduate destination survey* that are associated with the key performance measure of employment outcomes. Since our concern is principally with courses, their teaching, curriculum and resources, we focus initially on the measures of graduates' satisfaction with their courses and then on measures more clearly associated with outcomes; that is, whether graduates achieved their goals or not, whether they found a job, whether the job was relevant to their course, whether they received a promotion or a pay increase, and so on.

The satisfaction of graduates with their courses

Graduates' opinions about their courses are important both educationally and as measures of client satisfaction. Skills formation is facilitated by knowledgeable instructors who are able to clearly communicate their knowledge and adequately assess students. The provision of appropriate facilities is also important. The judgements of graduates are a guide to the extent to which such positive learning environments exist. Policy emphasis on user choice and the creation of competitive markets in the provision of training means that it is increasingly important for managers of TAFE institutes to know whether the needs of their clients are being met. Graduates are well placed to judge the extent to which such needs are met, especially in terms of the interface with the labour market.

The *TAFE graduate destination survey* asked graduates to rate 12 aspects of their course and the overall quality of the course on a scale of 1 to 10. The rating 1 corresponded to the judgement that the aspect of the course was *extremely poor* and 10 corresponded to the judgement that the particular aspect was *excellent*. If a graduate believed that a particular aspect was not relevant to their course, they could indicate that it was *not applicable*.

The wording of each question, together with the corresponding percentage of graduates responding with a rating of 8 or higher, the mean of all graduates' ratings, the standard deviation of the ratings and the percentage of graduates responding *not applicable*, are shown in table 1. The questions are presented in table 1 in the same order as they appeared on the questionnaire.

The responses to these questions are fairly positive and provide some indication of satisfactory outcomes for the system as a whole. Whether these are 'very good' results is difficult to determine because there is no absolute scale. The results should be primarily used in considering changes over time or differences among categories of graduates.

Comparisons among groups of graduates raise the question of whether the characteristics of graduates, their age, sex, educational background and

employment status affect their evaluation of courses independently of the courses themselves. Are older students, for instance, likely to have higher expectations than younger students? There is considerable evidence, largely from the higher education sector, that any influence of student or graduate characteristics on course evaluation is relatively minor (Marsh 1987). This does not mean that, in the aggregate, there will be no difference in course satisfaction among categories of students. Different categories of students are likely to be enrolled in different courses and those courses may have different levels of resourcing, different teaching and learning characteristics, and so on.

The results in table 1 invite comparisons among the ratings of the 12 aspects and the overall quality of the course. The results that stand out are the positive evaluation of the instructor's knowledge with a mean of 8.3, and the much lower rating of the quality of the information provided about the availability of careers and jobs with a mean of 6.2.

Interestingly, the mean rating of the overall quality of the course is higher than any of the 12 aspects, except for the instructor's knowledge of course content. This suggests that, in assessing overall quality, graduates place an exceptionally high value on the instructor's knowledge compared with the other (measured) aspects of their course, or that there are aspects of the course which are important to assessments of overall quality that were not included in the survey, or that graduates did not rate different aspects of the course in the same way. If the latter is the case, then the validity of comparisons among the mean ratings of the different aspects becomes doubtful.

Relationships among ratings

The ratings are all positively related; that is, graduates who rated one aspect of their course highly, were more likely to rank other aspects of their courses highly. This is shown by the correlation co-efficients presented table 2. The table incorporates two types of correlation co-efficient, the standard Pearson's co-efficients in the upper right triangle and polychoric co-efficients in the lower left triangle. The latter co-efficient recognises the ordinal nature of the ratings and the downward bias of Pearson co-efficients (Jöreskog & Sörbom 1993). The pattern of the two sets of co-efficients is similar, although the value of a polychoric correlation is usually slightly higher than that of the corresponding Pearson's co-efficient.

Table 2 indicates that the ratings of the 12 aspects of the course and of the overall course are positively related. The size of these relationships, however, differs. The smallest Pearson's co-efficient is 0.21 for the relationship between *the qualification in terms of being well-regarded by employers and the convenience of both the venue and the class times*. The largest co-efficient is 0.77 between *the quality of the equipment provided for you to practise your skills and having enough equipment for you to practise your skills*.

There is a tendency for the rankings of some aspects to group together. Inspection of table 2 suggests the following groupings:

Teaching and learning

Q1. your instructors' knowledge of course content

Q2. the course content in reflecting industry practice

Q3. the presentation of course material

Q10. the balance between instruction and practice

Q11. making methods of assessment clear to you

Table 1: Mean scores for graduates' ratings of aspects of their course

How would you rate the following aspects of the course shown on the front of this form?
Please write in one number for each aspect using the scale below. If that aspect is irrelevant or not applicable to you, write NA.

Extremely poor								**Excellent**	**Not applicable**	
1	2	3	4	5	6	7	8	9	10	NA
							% 8 or above	Mean	Standard deviation	Missing
Q1	Your instructors' knowledge of course content						75.0	8.3	1.7	(3.3%)
Q2	The course content in reflecting industry practice						56.7	7.5	1.9	(7.4%)
Q3	The presentation of course material						55.0	7.5	1.8	(2.5%)
Q4	The quality of the equipment provided for you to practise your skills						53.8	7.3	2.2	(10.4%)
Q5	Having enough equipment for you to practise your skills						52.8	7.3	2.3	(11.3%)
Q6	The information you received when choosing courses, subjects or modules						50.1	7.1	2.2	(10.8%)
Q7	The information about careers and jobs available to you						35.3	6.2	2.6	(17.0%)
Q8	The usefulness of the course for your job prospects						60.5	7.6	2.5	(8.8%)
Q9	The qualification in terms of being well regarded by employers						52.6	7.2	2.3	(14.1%)
Q10	The balance between instruction and practice						53.6	7.4	1.9	(6.3%)
Q11	Making methods of assessment clear to you						63.8	7.8	1.9	(3.0%)
Q12	The convenience of both the venue and class times						64.9	7.8	2.1	(3.7%)
Q13	The overall quality of the course						67.7	8.0	1.7	(2.2%)

Quality and quantity of equipment

Q4. the quality of the equipment provided for you to practise your skills

Q5. having enough equipment for you to practice your skills

Course and career information

Q6. the information you received when choosing courses, subjects or modules

Q7. the information about careers and jobs available to you

Relevance to employment

Q8. the usefulness of the course for job prospects

Q9. the qualification in terms of being well regarded by employers

Convenience of classes

Q12. the convenience of both the venue and class times

Overall course quality

Q13. the overall quality of the course

Table 2: Correlation matrix of ratings of course

	Rating	1	2	3	4	5	6	7	8	9	10	11	12	13
Questions asked of respondents	1	**1.00**	0.52	0.59	0.41	0.37	0.42	0.36	0.37	0.35	0.49	0.49	0.32	0.62
	2	0.57	**1.00**	0.54	0.40	0.37	0.41	0.41	0.47	0.43	0.52	0.42	0.29	0.60
	3	0.63	0.58	**1.00**	0.51	0.46	0.48	0.42	0.38	0.36	0.54	0.51	0.34	0.66
	4	0.45	0.43	0.54	**1.00**	0.77	0.42	0.37	0.31	0.31	0.45	0.38	0.30	0.51
	5	0.41	0.40	0.48	0.79	**1.00**	0.42	0.35	0.29	0.29	0.45	0.38	0.31	0.48
	6	0.47	0.45	0.52	0.45	0.45	**1.00**	0.56	0.39	0.38	0.45	0.44	0.34	0.52
	7	0.40	0.43	0.44	0.38	0.36	0.57	**1.00**	0.49	0.45	0.43	0.36	0.27	0.47
	8	0.42	0.50	0.42	0.35	0.33	0.43	0.50	**1.00**	0.70	0.46	0.34	0.23	0.51
	9	0.40	0.45	0.40	0.34	0.32	0.40	0.45	0.70	**1.00**	0.48	0.34	0.21	0.49
	10	0.54	0.56	0.57	0.48	0.48	0.49	0.46	0.50	0.51	**1.00**	0.54	0.33	0.61
	11	0.55	0.47	0.56	0.42	0.42	0.49	0.39	0.39	0.38	0.59	**1.00**	0.40	0.56
	12	0.39	0.35	0.40	0.35	0.36	0.39	0.30	0.29	0.27	0.40	0.47	**1.00**	0.43
	13	0.66	0.64	0.70	0.56	0.52	0.57	0.51	0.55	0.52	0.65	0.60	0.50	**1.00**

Notes:
1. Pearson's product-moment correlation co-efficients are above the main diagonal.
2. Polychoric correlation co-efficients (an ordinal measure of association) are below the main diagonal.
3. Pairwise deletion of missing responses was used for Pearson co-efficients: minimum n is 45 820, maximum n is 58 928. Polychoric correlations are based on the 59 358 cases with 6 or fewer missing responses and hot-decked data imputation.
4. Numbering of ratings corresponds to the questions shown in table 1.

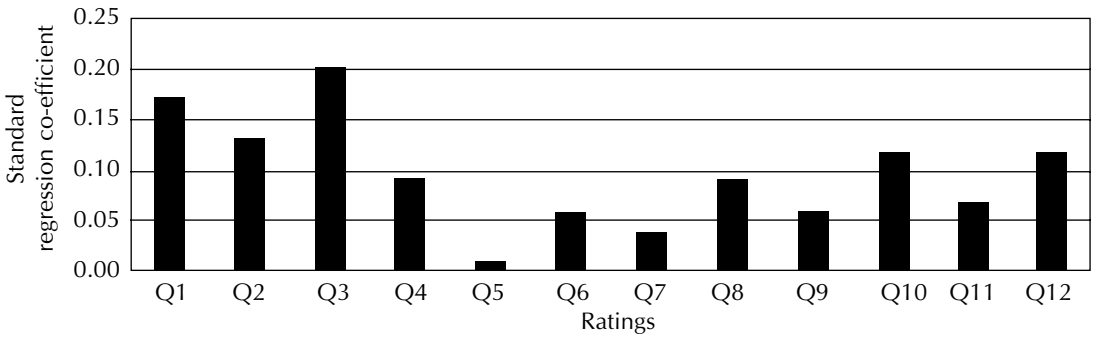
Overall course quality

Graduates' ratings of the overall quality of their course may be more or less related to any of the 12 particular aspects of the course which graduates were asked to rate. Figure 1 shows the values for the standardised regression co-efficients from a weighted least squares equation in which the ratings of those 12 aspects have been used to predict ratings of overall quality. The figure shows the relative importance of the aspects of the course most clearly related to teaching and learning; that is, the presentation of the course material, the knowledge of the instructor, the relevance of content to industry practice, the balance between theory and practice and the clarity of assessment. The relative importance of these aspects individually is all the more impressive because they might be expected to be closely inter-related.

By comparison, and perhaps surprisingly, *having enough equipment for you to practise your skills* was far less important, although this may be in part due to the close empirical relationship with ratings of the quality of equipment which is somewhat more closely related to overall quality. Similarly, ratings of provision of careers advice was not a strong predictor of ratings of overall course quality.

These results are at best indicative. The use of polychoric correlations in the analyses compensates for the ordinal and often highly skewed nature of the ratings (Jöreskog & Sörbom 1993). There may also be concerns about the often high level of inter-relationships among the ratings (multi-collinearity) although a data source of nearly 60 000 responses provides some comfort.

Figure 1: Standardised regression co-efficients for ratings of overall course quality predicted by ratings of various aspects of the course



Note: Numbering of ratings corresponds to the questions shown in table 1.

A single measure

The relationships among the ratings shown in table 2 raises the possibility that there is a single trait, a measure of a graduate's satisfaction with the course, underlying these ratings. Alternatively, given the apparent grouping of the ratings, there may be several quite distinct traits. Indeed, at the extreme, it may be that each aspect has to be considered separately.

Item and factor analysis were employed to examine the structure of ratings. The results are presented in the appendix. The results of item analysis and principal component analysis were consistent with the presence of a single trait underlying the ratings. The results from confirmatory factor analysis also showed that a single factor explained the bulk of the variation among the ratings.

There are, then, reasonable grounds for accepting the hypothesis that there is only one factor underlying the ratings. Item analysis showed that a single summative scale of the 13 ratings has a fairly high reliability. Cronbach's alpha for the Pearson's correlation matrix in table 2 is 0.91, a more-than-acceptable level of reliability for such a scale.

It is possible that the rating of overall quality (the 13th rating) should be excluded from the analyses because it is qualitatively different from the 12 ratings that deal with particular aspects of graduates' experiences of their courses. Analyses were conducted on all 13 ratings and separately with the overall course rating removed. The inclusion of the overall rating made little difference to the results and hence it has been included in the overall measure of the satisfaction of graduates with their course.

Graduates' goals

The *TAFE graduate destination survey* asked graduates about:

- their reasons for enrolling in the course—what they had hoped to achieve
- whether their course had helped them to achieve that goal

Responses to these questions are a measure of the efficacy of the TAFE system from the perspective of graduates. A graduate's inability to find a job may be less important if they had not enrolled in order to find a job.

Graduates could choose one of eight responses to describe their reason for enrolling. These are listed in table 3, together with percentages of respondents who gave each reason. The first five options are vocational. Of these, the first three require getting a new job in one way or another. The third option overlaps with the fourth and fifth in terms of requirements of an existing job and, in some sense, upgrading skills or position within that job. Two options are not directly vocational: *to get into another course of study* could for some be part of a pathway towards a vocational outcome; and *for interest or personal development* may well include skills formation that is also intrinsically of interest to the graduate. The fact that only 2% of graduates indicated the eighth response, *other reason*, suggests that the other options captured the aspirations of the overwhelming majority of graduates. This category may also contain vocational aspects not incorporated in the other options.

The values in table 3 show that 29% of graduates endorsed the reason *to get a job (or own business).* This reason was given by at least twice as many graduates as any other. Broadly equal proportions of graduates (12% to 14%) chose the other six substantive reasons, with the exception of 10% who enrolled because it was a job requirement and 6% who enrolled in their course in order to get into a further course of study.

Table 3: Main reason for doing course and its achievement by percentage

What was your main reason for doing the course?		Did your course help you achieve your main reason for doing the course?			
Main reason	All %	Achieved reason	Partly achieved reason	Don't know yet	Did not achieve reason
1. To get a job (or own business)	29	48	18	18	15
2. To try for a different career	12	48	20	20	12
3. To get a better job or promotion	12	49	22	18	11
4. It was a requirement of my job	10	89	6	2	2
5. To get extra skills for my job	13	76	17	4	2
6. To get into another course of study	6	76	12	8	3
7. For interest or personal development	14	79	15	4	2
8. Other reasons	2	57	22	13	8
All reasons	100	62	17	12	8

The interpretation of the reasons graduates gave for enrolling in their course should recognise that:

- Graduates were asked only for their *main* reason for enrolling. Graduates may have undertaken their course for more than one reason. Any secondary

goals (and the extent to which they were realised) are not captured by the questions in the TAFE GDS

- The reasons for enrolment were provided *retrospectively.* This allows graduates to re-interpret their reasons in terms of the outcomes. This is a caution against too readily interpreting results in terms of reasons *before* the course and outcomes *after* the course

Graduates could select one of four responses to express the extent to which the course had helped to achieved their main reason: yes (the main reason had been achieved), *yes—partly, don't know yet,* and *no* (the reason had not been achieved). Table 3 shows that overall, 62% of graduates achieved their reason, 17% partly achieved their reason, 12% were not in a position to decide yet, and 8% had not achieved their reason. If *don't know* responses are treated as missing information, then about 7 in every 10 graduates achieved their reason; 2 in every 10 partly achieved their reason, and less than 1 in 10 did not. That is, more than 9 out of every 10 graduates achieved some positive outcome from their enrolment in a TAFE course.

There is considerable variation in the extent to which the different reasons were achieved. Table 3 shows that for graduates who gave *it was a requirement of my job* as their reason, 89% said they had achieved that reason. On the other hand, only 48% of graduates who enrolled *in order to get a job (or own business)* achieved their reason. If graduates undertook their course in order to get a job, a different career, or better job, their chances of achieving that reason were much lower than if they had enrolled to upgrade their skills, enter another course of study, or for interest or personal development.

Increased earnings, promotion and new jobs

Graduates who were employed at 30 May 1997 were asked whether they had, as a result of completing their TAFE course, received higher earnings, obtained a promotion, or found a new job. Table 4 shows the results. Twenty-eight per cent reported increased earnings, 20% reported having received a promotion, and 29% said that they had found a new job. Increased earnings, promotion and a new job are not mutually exclusive outcomes and many graduates reported more than one outcome. Table 4 also shows that 43% of graduates reported none of these benefits.

There were large differences in the percentages of graduates reporting increased earnings among the reasons for doing the course. This is partly a consequence of graduates of trade certificate courses both reporting increases in earnings and undertaking the course because it was a requirement of their job. Percentages of graduates reporting increased earnings were usually three or four percentage points higher if only those graduates who had undertaken their course for vocational reasons were considered.

Table 4: Benefits of completing the course by main reason for doing the course and selected characteristics by percentage

Perceived benefit of course	Increased earnings	Promotion	New job	None
All graduates	28	20	29	43
Main reason for doing course				
To get a job (or own business)	28	11	46	33
To try for a different career	22	12	47	40
To get a better job or promotion	36	38	29	34
It was a requirement of my job	49	29	12	33
To get extra skills for my job	23	24	14	52
To get into another course of study	11	8	18	69
For interest or personal development	14	10	18	65
Other reasons	21	11	20	59

Note: Graduates employed at 30 May 1997

There is a discrepancy between the achievement of reasons for undertaking the course and reporting any of the benefits listed in table 5. Of the graduates who gave a vocational reason for doing their course, 26% also said that they had not had an increase in earnings, a promotion, or a new job. These three outcomes are not an exhaustive list of vocational outcomes. In addition, 11% of graduates who did their course principally *to get into another course of study* reported an increase in income, as did 14% of those whose main reason for enrolment was *for interest or personal development.* Although this is about a third of the rate for graduates who enrolled for vocational reasons, non-vocational reasons do not exclude positive labour market outcomes.

Participation in the labour force

In addition to the reports of graduates about their labour market outcomes, we can observe changes in their level of participation in the labour market. Compared with the reports of increased earnings, promotion or a change of job, such observations have the advantage of including all graduates, rather than only those who were employed after their course. Table 5 shows the changes in the labour force participation of graduates between the start and completion of the course. Three main categories of labour force participation are identified. Graduates are:

- *Employed:* if they work for pay or commission, work in a family business without pay, or have a job but are not at work. Employment *before* the course refers to employment for two or more weeks at any time in the six months preceding the start of the course. Employment *after* the course is employment on the day of 30 May 1997. The measures are therefore not perfectly comparable.

  Graduates are in full-time employment if they usually work for 35 hours or more per week and in part-time employment if they usually work between 1 and 34 hours per week.

- *Unemployed:* if they are not employed but are actively looking for work. An unemployed graduate may be seeking full-time employment or part-time employment.

- *Not in the labour force:* if they report that are not employed and are not actively looking for work.

Table 5: Level of participation in the labour force before and after course

Before course	After course	All %	Males %	Females %
All graduates				
Unchanged		64.0	64.8	63.4
Employed full-time	Employed full-time	30.0	43.1	19.7
Employed part-time	Employed part-time	11.6	5.4	16.4
Not working	Not working	22.5	16.3	27.3
Increased		25.6	26.3	25.0
Employed part-time	Employed full-time	9.4	9.3	9.5
Not working	Employed full-time	10.0	13.6	7.2
Not working	Employed part-time	6.2	3.4	8.3
Decreased		10.4	8.8	11.6
Employed full-time	Employed part-time	2.8	2.2	3.3
Employed full-time	Not working	3.7	4.3	3.2
Employed part-time	Not working	3.9	2.4	5.1
Graduates whose main reason for doing their course was to get a job (or own business)				
Unchanged		50.5	48.6	51.7
Employed full-time	Employed full-time	7.3	12.8	3.5.
Employed part-time	Employed part-time	9.4	6.1	11.6
Not working	Not working	33.9	29.8	36.6
Increased		41.2	42.8	40.1
Employed part-time	Employed full-time	11.7	12.4	11.1
Not working	Employed full-time	18.1	23.9	14.2
Not working	Employed part-time	11.4	6.5	14.7
Decreased		8.3	8.5	8.2
Employed full-time	Employed part-time	1.4	1.7	1.1
Employed full-time	Not working	2.5	3.3	2.0
Employed part-time	Not working	4.4	3.5	5.0

Labour force status before course

Table 5 shows that the labour force participation of 64% of graduates remained unchanged; the labour force participation of 26% of graduates increased, while the labour force participation of 10% declined. The outcome was slightly better for male than female graduates. The change in participation was about three to one in favour of increased participation compared with decreased participation for males and only about five to two for female graduates. The differences are slightly greater when the components of increase and decrease are considered. Male graduates are a little more likely to move into full-time work while female graduates are more likely to move into part-time work.

The values in table 5 are likely to under-estimate increases in labour force participation. Labour force status before the course is measured by the respondent reporting having had a job for a minimum of two weeks at any time in the six months before starting their course. The chances of having a job over a six-month period are higher than the chances of having a job on a particular day, as is required for employment after the course. Hence, graduates will be more likely to report employment before the course than after the course due to differences in definition and measurement alone. This also means that people recorded as unemployed have

been unemployed (or not in the labour force) for at least six months before commencing their course. The need for a job before the course to be of *at least two weeks duration* for it to be recorded as employment will compensate for this to some extent. There is no such minimum requirement for recording employment at 30 May 1997.

Even allowing for these problems of measurement, the values reported here are encouraging. For instance, table 5 shows that 46% of graduates who were unemployed before their course were employed at 30 May 1997. Table 5 shows that there is substantial movement of graduates towards higher levels of labour force participation after they have completed their course.

The values in table 5 show the change in labour force participation of graduates after completing their course. Without being able to compare graduates with a group of similar people who did not complete a TAFE qualification, it is difficult to estimate the importance of this change. In a period of reasonably stable levels of national employment it might be expected that increase and decrease in labour force participation would be more or less in balance. In this context the results in table 5 would look very good. The population of graduates, however, includes a higher proportion of potential labour market entrants (or re-entrants) than the general population. Hence it should be expected that there will be a higher-than-average rate of increase in labour force participation.

The first part of table 5 shows overall changes in the level of participation in the labour force. Some graduates, however, do not enrol primarily in order to get a job. The second part of table 5 is based on only those graduates whose main reason for doing their course was *to get a job (or own business).* For this group, compared with all graduates, the proportion whose labour force participation is unchanged is smaller; relatively more increase their labour force participation, and there is a marginal reduction in the proportion whose labour force participation has decreased. More than 40% of graduates whose reason for enrolling was to get a job had an increase in labour force participation. The ratio of increased participation to decreased participation is about five to one for this group. In the context of the earlier comments relating to the potential for bias in these estimates due to the different ways in which labour force participation is measured before and after the course, the true effect is probably somewhat greater. Again, without the benefit of a similar comparison group who did not complete a TAFE course, it is difficult to evaluate the strength of this effect, but in an environment of relatively high rates of unemployment, the values in table 5 appear impressive.

Goals, their achievement, and employment outcomes

Much of the measurement of the effect of education and training is in terms of labour market outcomes. Considering that people undertake courses for different reasons and consider themselves to have achieved those reasons to a greater or lesser degree allows another approach to examining the effect of education and training. This section briefly considers the congruency of these two approaches.

Table 6 includes two panels that deal with outcomes, *labour force status at 30 May 1997* and enrolled in further study. The latter is clearly relevant to graduates whose main reason for enrolment was *to get into another course of study.* The former is

relevant to graduates who enrolled for any of the vocational reasons. The labour force status categories in table 6 have been expanded to include categories for graduates who claimed, as a consequence of doing their course, an increase in earnings, a promotion, a change in their job, or none of these. Although all measures of outcomes in this survey are necessarily self-reports, these categories differ slightly from measures that ask about current employment because they relate the outcome directly to the course.

The immediate impression from the values on labour force status is one of a reasonable association between labour force status and the achievement of the main reason for enrolment. For graduates who said that they wanted to enrol *to get a job*, 76% of those in full-time employment reported that they had achieved this goal, while only 19% of unemployed graduates reported achieving this goal. These values are certainly in the right direction, but there is considerable discrepancy. Some 24% of those with a full-time job did not claim that their reason for doing the course, to get a job, had been fulfilled. Some of this discrepancy may be attributed to their belief that their course had not helped them to get their job. If this were the case, then they would have correctly claimed that their reason had not been achieved as a result of doing the course. It may also seem anomalous that an unemployed graduate could claim that he or she had achieved their reason of getting a job. Unemployment, however, is measured at 30 May 1997. The graduate may well have found a job and then become unemployed again.

Graduates who enrolled *to try for a different career*, and who claimed to have had a change of job helped by their course, could be expected to have high achievement rates. Some 81% of these graduates reported that they had achieved their goal. Yet 26% of graduates who were unemployed also claimed to have achieved their goal. Given this result, unemployment cannot be taken as a definite indication that graduates have failed to achieve their goal when they first enrolled.

The questions asked of those in employment about whether they had received an increase in earnings, a promotion or a change of job are positively related to the achievement index, but not perfectly. Graduates in all these categories reported substantially higher-than-average achievement rates for the five vocational reasons. There is no reason to expect these rates to be close to 100%. A pay increase does not imply that the main reason for enrolment was achieved if that reason was *to get another job*. Similarly, graduates who reported none of these benefits from their course could still claim that their reason had been achieved. Even vocational reasons apparently closely related to these benefits.

For graduates who said that their main reason for enrolling had been to get into another course, 82.6% said that they had achieved their goal, compared with 49.9% who had not enrolled. The 17.4% of graduates who were enrolled but did not achieve their goal could be enrolled in a 1997 course but not in a course of their choice. There is a very small group who enrolled in their 1996 course in order to get into another course but were not enrolled by May 1997. The 49.9% of this small group who claim to have achieved their goal could simply have postponed enrolment in further study but believing that they have obtained the entry requirements.

The results for achievement of reasons in table 6 for labour market and study outcomes show a general agreement between the subjective and objective outcome

measures for completion of a qualification. The differences, however, highlight the importance of using both types of measures to evaluate outcomes.

Table 6: Achievement of main reason for doing course by selected characteristics by percentage

	To get a job (or own business)	To try for a different career	To get a better job or a promotion	A requirement of my job	To get extra skills for my job	To get into another course of study	For interest/personal development	Other reasons	All reasons
Labour force status at 30 May 1997									
Employed	65	54	50	90	77	74	80	62	69
Full-time	76	57	52	90	77	66	80	66	73
Part-time	49	51	44	81	78	79	80	55	61
Main reason for doing course									
An increase in earnings	89	84	79	94	89	80	91	80	87
Promotion (or inc. work status)	86	79	74	93	90	81	89	84	84
Change of job	81	81	72	90	82	74	87	76	81
None of the above	32	20	15	83	70	74	77	51	52
Unemployed	19	26	33	74	57	71	70	45	35
Looking for full-time work	30	24	35	75	58	68	69	45	33
Looking for part-time work	17	31	27	66	55	73	70	47	41
Not in the labour force	28	38	39	80	74	80	81	51	59
Enrolled in further study									
Yes	40	46	44	89	75	83	79	54	60
No	53	49	52	88	77	50	79	59	64

Correlates of satisfaction

This chapter focusses on measures of course satisfaction. A single measure of course satisfaction is formed from graduates' ratings of 13 separate aspects of their course. If such a measure is to be useful in assessing course quality, it should not be influenced (to any great extent) by the characteristics of the graduates; instead, it should reflect the nature of the course. This chapter also examines whether graduates' ratings of their courses are influenced by their outcomes. This is a problematic issue. Although a high-quality course might be expected to improve the outcomes for a graduate, labour market and other outcomes also reflect a reality that may not be influenced by the quality of course provision. In summary, then, this chapter looks at the effect on a graduate's overall course rating of their personal characteristics, the characteristics of the course, and their outcomes.

Composite measure of satisfaction

In the second chapter results were presented separately for the 12 aspects of their course that graduates were asked to rate and for the measure of the overall quality of the course. It was noted that the inter-relationships of the ratings were consistent with the hypothesis that there was a single variable of overall course satisfaction underlying the responses. The analyses in this chapter use a single composite measure of satisfaction formed by first standardising each rating (subtracting the mean and dividing by the standard deviation) and then taking the mean of the valid responses. Graduates who rated fewer than six of the 13 items listed in table 1 were not included. The resulting value was converted to a standard deviation of 10.

Figure 2: Distribution of composite satisfaction measure

Figure 2 shows the distribution of the composite measure of satisfaction. There are several points to note. First, although the distribution of many of the individual ratings was strongly skewed to the left (most of the ratings were between seven and 10), the distribution of the composite measure is more symmetrical. This facilitates

some forms of statistical analysis. Second, the composite measure is also more finely grained than any of the individual ratings. Each of the individual ratings was restricted to 10 points and the composite measure has a very large number of discrete scores (although these are grouped in figure 2). Third, the meaning of the measure is now a little different: the mean is zero and positive scores are above average, and negative scores are below average. Each unit on the scale corresponds to a 10th of a standard deviation. (A score of +3 is three-tenths of a standard deviation above the mean; a score of -1.5 is fifteen-hundredths of a standard deviation below the mean.) Substantively, a tenth of a standard deviation is about the minimum difference worthy of consideration. Finally, the composite measure has a high correlation (r=0.99) with the first factor in the principal components analysis in the appendix—suggesting that it is tapping a single dimension.

Background characteristics

Tables 7 to 10 show the means for the aggregate satisfaction scale for selected background characteristics, personal characteristics, reasons for enrolment, type of course and course outcomes respectively. The tables have common features that make it useful to discuss them as a group. They show the percentage of the sample in each category and then sets of means with various adjustments. The adjustments are derived from regression equations, involve re-standardising the overall mean to zero in each case, and inserting values for omitted categories using an approach analogous to that outlined in Andrews et al. (1973).

There are five columns of means:

- observed means, which are values without any adjustment
- means adjusted for personal characteristics
- means adjusted for personal characteristics and reasons for enrolling
- means adjusted for personal characteristics, reasons for enrolling, and the type of course
- means adjusted for personal characteristics, reasons for enrolling, type of course and outcomes

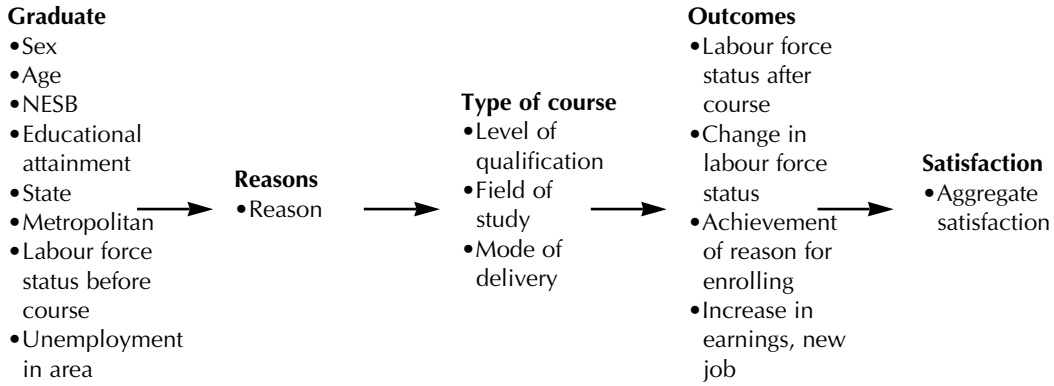
The adjustments are informed by a simple model represented in figure 3. Each column is adjusted successively for more variables. The purpose is to isolate the effect of particular blocks of characteristics on our satisfaction measure. As suggested above, our analysis does not allow for the possibility that the quality of the course (as measured by satisfaction) influences outcomes. Nevertheless, the results for outcome measures are interesting.

Tables 7 to 10 also contain values in italics. These are the percentages of variance in satisfaction explained by the corresponding variable while holding the effects of other variables constant as indicated.

The major feature of tables 7 to 10 is the small size of the effect of most characteristics on aggregate satisfaction (with several important exceptions). Many differences between means are less than a tenth of a standard deviation (which is quite small) and very few variables explain more than one per cent of the variation in aggregate satisfaction (which is also quite small). In total, however, the variables

in these tables explain a modest amount of the variation in aggregate satisfaction. The combination of background characteristics explains 12.6% of the variation in aggregate satisfaction.

Figure 3: Schema of simplified model underlying tables 7 to 10



Personal characteristics

Table 7 sets out the mean aggregate satisfaction scores for eight personal characteristics, together with some adjusted estimates. The row headed by total % variation shows that these characteristics explain a modest 3.3% of the variation in aggregate satisfaction, substantial amounts of which are explained by relationships between personal characteristics and enrolment in particular types of courses. We briefly discuss each of these in turn.

Sex

Females are marginally more satisfied than males. The difference is only about a tenth of a standard deviation and is only slightly reduced by controlling for other factors.

Age

There is a curvilinear relationship between age and satisfaction. Teenage graduates are more satisfied than graduates aged from 25 to 34, but satisfaction is higher for older graduates and peaks with the (very small) group aged 55 or over. Adjustment for other characteristics, however, changes this pattern for the youngest group. This group appears to have other personal characteristics associated with higher satisfaction and enrols in types of courses associated with higher satisfaction. When adjustment is made for these differences, the satisfaction of the youngest group falls to about the level of the overall mean. The higher satisfaction of the groups aged 45 and over, however, is relatively unaffected by these adjustments. Their satisfaction seems genuinely associated with their older age.

Non-English-speaking background

Graduates from non-English-speaking backgrounds were slightly less satisfied with their course than graduates from an English-speaking background. Much of this

difference, however, was explained by the association between non-English-speaking background and other personal characteristics, rather than being attributable to the graduate having a non-English-speaking background per se.

Prior educational attainment

Graduates who already had a post-school qualification before starting their course were more likely to be satisfied with their course than graduates who had not previously completed a post-school qualification, regardless of whether they had completed Year 12 or left school without completing Year 12. Presumably there is an element of self-selection involved. People who return for more study after having already successfully completed a course are more likely to be positively disposed to formal education. Again, however, much of this apparent difference seems to be associated with other personal characteristics and the type of course in which respondents enrol.

State or Territory

There are quite small differences among the States in the aggregate satisfaction of their graduates. The overall percentage of the variation in aggregate satisfaction explained is 0.3% or less.

Area of usual residence

The difference in the level of aggregate satisfaction between graduates from capital cities and other areas is, although still modest, relatively large in the context of other results. The mean level of aggregate satisfaction of graduates from capital cities was nearly a quarter of a standard deviation below the corresponding mean for other graduates. After adjustment the difference is reduced, but persists. Clearly, substantial proportions of the relationship are associated with other characteristics in our model.

Table 7: Mean composite course satisfaction measure by personal characteristics

		Mean composite course satisfaction				
	% of sample	Observed	Adjusted for background	Adjusted for reason+	Adjusted for course+	Adjusted for outcomes
All graduates	100	0	0	0	0	0
Sex		0.3	0.2	0.2	0.2	0.1
Male	44	-0.6	-0.5	-0.5	-0.6	-0.5
Female	56	0.5	0.4	0.4	0.4	0.4
Age (years)		1.0	0.6	0.5	0.5	0.4
15–19	14	1.1	0.4	0.4	-0.1	-0.1
20–24	28	-0.5	-0.2	-0.2	-0.4	-0.5
25–34	23	-1.1	-0.7	-0.7	-0.5	-0.5
35–44	22	-0.1	-0.2	-0.2	0.1	0.2
45–54	11	1.2	1.0	0.9	1.2	1.3
55 and over	3	3.9	3.5	3.4	3.4	3.2

Table 7: Mean composite course satisfaction measure by personal characteristics (cont.)

		Mean composite course satisfaction				
	% of sample	Observed	Adjusted for background	Adjusted for reason+	Adjusted for course+	Adjusted for outcomes
Non-English-speaking background		0.4	0.1	0.1	0.1	0.0
Yes	32	-0.9	-0.4	-0.4	-0.4	-0.3
No	68	0.4	0.2	0.2	0.2	0.2
Prior educational attainment		0.8	0.4	0.4	0.1	0.1
Post-school qualification	24	1.6	1.1	1.1	0.6	0.5
Year 12	27	-0.5	-0.3	-0.3	0.0	-0.1
Pre-Year 12	49	-0.5	-0.4	-0.4	-0.3	-0.2
State or Territory		0.3	0.2	0.2	0.2	0.2
NSW	50	0.1	0.1	0.1	0.2	0.2
Vic	20	-0.3	-0.2	-0.2	-0.1	-0.1
Qld	9	0.8	0.2	0.2	0.2	0.3
SA	8	0.3	0.5	0.6	0.2	0.2
WA	8	-1.2	-1.2	-1.2	-1.1	-1.1
Tas	2	1.0	0.0	-0.1	-0.4	-0.6
NT	1	1.8	1.8	1.7	1.4	1.1
ACT	2	-1.7	-1.1	-1.0	-1.2	-1.2
Area of usual residence		1.4	0.6	0.5	0.4	0.3
Capital city	62	-0.9	-0.7	-0.6	-0.5	-0.5
Other	38	1.5	1.1	1.0	0.9	0.9
Labour force status before course		0.4	0.1	0.1	0.1	0.1
Employed—full-time	37	-0.8	-0.5	-0.5	-0.3	0.1
Employed—part-time	26	0.3	0.2	0.2	0.2	0.0
Unemployed—looking for full-time work	14	0.5	0.4	0.4	0.1	0.1
Unemployed—looking for part-time work	4	0.2	0.1	0.1	0.0	-0.2
Not in the labour force	19	0.6	0.4	0.4	0.4	-0.1
Unemployment in area		0.4	0.1	0.1	0.1	0.1
High	25	0.7	0.2	0.2	0.1	0.2
Middle	50	0.1	0.1	0.1	0.1	0.2
Low	25	-1.0	-0.5	-0.5	-0.4	-0.5
Total % of variation	**-**	**3.3**	**-**	**3.0**	**1.9**	**1.7**

Notes: 1. Values in standard font are means for the composite course satisfaction measure centred at zero and in units of a tenth of a standard deviation.
2. Values in italics are the percentage of variance explained.

Labour force status before course

There is surprisingly little effect of prior labour force status on aggregate satisfaction. There is a tendency for graduates who had been in full-time employment to report lower levels of satisfaction than other graduates. Much, but not all, of this effect declines after we adjust for other background characteristics.

The relatively large adjustments associated with outcome measures may reflect an implicit relationship between some of the outcomes and prior labour force status.

Unemployment in area

Interestingly, graduates from areas with high levels of unemployment were more satisfied with their course than graduates from low levels of unemployment. The difference was 0.18 standard deviations. This difference was reduced by adjustment for other factors in our model, but the direction persisted.

Reason for enrolling

Table 8 shows the means for the aggregate satisfaction of graduates by categories of their reason for enrolment. There are some modest differences among these categories. Graduates who enrolled for intrinsic reasons, interest or personal development, reported the highest level of satisfaction. At the other end of the distribution, graduates who enrolled to get a better job or a promotion reported the lowest levels of satisfaction (along with the small group who enrolled for other reasons). The difference between highest and lowest categories was more than a quarter of a standard deviation. Once we adjust for personal and course characteristics, however, a somewhat different pattern emerges. The differences among categories are generally smaller (except for the *other reasons* category) and those who enrolled in order to obtain additional skills are the most satisfied. The possible resentment attached to the compulsion implicit in *it was a requirement of my job* is apparent; its mean falls to -0.8. Much of the reason for the low mean for those who wanted to get a better job or promotion was the relatively low extent to which this goal was achieved. After adjustment for outcomes, what was observed as the category with the lowest level of satisfaction has a level of satisfaction higher than the overall mean.

Course characteristics

Table 9 shows the mean aggregate satisfaction for categories of three characteristics of the course in which graduates were enrolled: the level of qualification, the field of study, and the mode of course delivery. Collectively these three characteristics explain a little more of the variation in aggregate satisfaction (3.5%) than the eight personal characteristics (3.3%). This should not be surprising given that these variables are a little closer to the object of measurement—satisfaction with a course.

Level of qualification

There is a clear tendency for graduates of higher-end courses (advanced diploma, diploma and associate diploma courses) to be less satisfied with their course than graduates of entry-level courses (trade and non-trade certificates and AQF certificates I and II). Roughly speaking, there is a difference of about 0.3 standard deviations between the low- and high-end courses, a relatively high figure in the context of these data. This pattern persists after adjustment for other characteristics, albeit the differences are somewhat smaller.

Table 8: Mean composite course satisfaction measure by reason for enrolling

		Mean composite course satisfaction				
	% of sample	Observed	Adjusted for background	Adjusted for reason+	Adjusted for course+	Adjusted for outcomes
Reason for enrolling		0.6	0.3		0.2	0.5
To get a job (or own business)	29	0.3	0.1	-	0.2	0.8
To try for a different career	12	-0.2	-0.1	-	0.0	0.5
To get a better job or promotion	12	-1.6	-0.9	-	-0.3	0.2
It was a requirement of my job	11	0.3	0.4	-	-0.8	-1.4
To get extra skills for my job	13	0.4	0.6	-	0.6	0.0
To get into another course of study	6	-0.8	-0.5	-	-0.3	-1.2
For interest or personal development	14	1.0	0.4	-	0.3	-0.4
Other reasons	3	-1.6	-1.8	-	-1.9	-1.6

Notes: 1. Values in standard font are means for the composite course satisfaction measure centred at zero and in units of a tenth of a standard deviation.
2. Values in italics are the percentage of variance explained.

Field of study

There is quite substantial variation in mean aggregate satisfaction among the fields of study. Again, just focussing on the higher and lower scores (and those fields of study with sizeable enrolments), graduates of courses in *health and community services* and *services, hospitality and transportation* reported higher levels of satisfaction. While graduates of courses in *business, administration and economics* and *science* tended to have lower levels of satisfaction. These differences, while still not large, are not trivial and correspond to about 0.3 standard deviations. Again, adjustment reduces the size of the differences, but does not alter the pattern.

Mode of course delivery

Graduates of courses containing some workplace delivery reported higher levels of mean satisfaction than 'traditional' courses delivered at a college or training centre. The difference was nearly a quarter of a standard deviation and at least half of this difference remained after adjustment for other factors.

Course outcomes

Table 10 shows mean composite course satisfaction scores for several possible outcomes of the course. The role of outcomes in our model is somewhat uncertain given that course quality might be expected to influence outcomes as well as assessments of course quality being influenced by outcomes. Extra care is required when interpreting results adjusted by other course outcomes because of the inter-relationships existing between some outcome measures. Nevertheless, the results are suggestive.

Table 9: Mean composite course satisfaction measure by characteristics of course

		Mean composite course satisfaction				
	% of sample	Observed	Adjusted for background	Adjusted for reason+	Adjusted for course+	Adjusted for outcomes
Level of qualification		2.2	1.4	1.3	1.3	1.0
Diploma	1	-3.6	-2.6	-2.7	-2.4	-2.4
Associate diploma	11	-2.1	-1.5	-1.5	-1.3	-1.6
Advanced certificate (post trade)	1	-0.7	0.4	0.4	0.1	-0.1
Advanced certificate (non-trade)	9	-1.8	-1.5	-1.5	-1.6	-1.7
Certificate (trade)	12	1.2	1.8	2.0	1.6	0.9
Certificate (non-trade)	26	1.4	0.9	0.9	0.8	1.0
AQF—advanced diploma	1	-2.2	-1.5	-1.5	-0.7	-1.2
AQF—diploma	4	-1.7	-1.5	-1.5	-1.4	-1.6
AQF—certificate I	4	0.2	0.1	0.1	-0.1	0.3
AQF—certificate II	12	1.4	0.9	0.9	0.8	1.1
AQF—certificate III	10	-0.1	-0.3	-0.4	-0.2	0.0
AQF—certificate IV	8	-1.8	-1.6	-1.6	-1.2	-1.1
Field of study		1.5	1.1	1.0	0.5	0.4
Land & marine resources, animal husbandry	4	1.3	1.0	0.9	0.3	0.1
Architecture, building	6	0.7	1.3	1.2	0.8	0.7
Arts, humanities, social sciences	7	-1.1	-1.2	-1.2	-0.8	-0.8
Business, administration, economics	29	-1.2	-1.2	-1.1	-0.8	-0.5
Education	1	0.5	0.1	0.0	0.8	0.6
Engineering, surveying	14	-0.3	0.3	0.3	-0.1	-0.1
Health, community services	13	1.2	0.8	0.8	0.9	0.5
Law, legal studies	0	-2.0	-1.3	-1.2	-0.8	-0.2
Science	4	-2.4	-2.0	-2.0	-1.5	-1.3
Veterinary science, animal care	0	1.4	1.0	0.8	0.5	0.2
Services, hospitality, transportation	13	1.9	1.4	1.4	1.1	1.2
Multi-field education	8	0.8	0.5	0.7	0.3	0.1
Mode of course delivery		0.6	0.5	0.5	0.2	0.2
Classes at college/centre	81	-0.4	-0.3	-0.3	-0.2	-0.2
At least some workplace delivery	15	1.9	1.7	1.7	1.1	1.0
External studies or other mode	4	0.4	0.1	0.1	0.1	0.0
Total % of variation	-	3.5	2.2	2.2	-	1.9

Notes: Values in standard font are means for the composite course satisfaction measure centred at zero and in units of a tenth of a standard deviation.
Values in italics are the percentage of variance explained.

Table 10: Mean composite course satisfaction measure by course outcomes

		Mean composite course satisfaction				
	% of sample	Observed	Adjusted for background	Adjusted for reason+	Adjusted for course+	Adjusted for outcomes
Labour force status after course	0.1	0.1	0.1	0.1	0.1	
Employed—full-time	50	-0.2	0.2	0.2	0.2	-0.8
Employed—part-time	21	0.4	0.0	0.0	0.0	0.1
Unemployed—looking for full-time work	11	-0.5	-0.9	-0.9	-0.9	1.3
Unemployed—looking for part-time work	5	-0.2	-0.8	-0.7	-0.8	1.1
Not in the labour force	14	0.7	0.1	0.2	0.1	1.3
Change in labour force participation		0.2	0.1	0.1	0.1	0.1
Increased	26	0.8	0.6	0.6	0.6	0.3
Unchanged	64	-0.2	-0.2	-0.2	-0.2	0.0
Decreased	10	-0.4	-0.3	-0.3	-0.3	-0.5
Achievement of reason for enrolling		6.4	6.4	6.4	6.4	5.2
Yes	63	1.8	1.8	1.9	1.9	1.8
Partly	17	-3.2	-3.1	-3.2	-3.1	-3.0
Don't know yet	12	-1.0	-1.0	-1.3	-1.1	-0.9
No	8	-5.6	-6.0	-6.4	-6.4	-6.1
Inc. earnings, promotion, new job		1.0	1.4	1.4	1.4	0.3
Yes	38	1.3	1.6	1.7	1.6	1.0
No	62	-0.8	-1.0	-1.0	-1.0	-0.6
Further study		0.0	0.0	0.0	0.0	0.0
Yes	39	-0.1	0.0	0.0	0.2	0.2
No	61	0.1	0.0	0.0	-0.1	-0.1
Total % of variation	-	7.5	7.0	7.1	6.9	-

Notes: Values in standard font are means for the composite course satisfaction measure centred at zero and in units of a tenth of a standard deviation.
Values in italics are the percentage of variance explained.

Labour force status after course

The differences among categories are relatively slight. After adjustment for background factors, there is some indication that unemployment is associated with lower levels of satisfaction and full-time employment with higher levels of satisfaction. The final adjustment, however, produces some quite large changes and in fact reverses this pattern -- full-time employment is associated with lower levels of satisfaction and unemployment with higher levels of satisfaction. This quite unexpected change possibly reflects the close relationship of current labour force status with variables such as *change in labour force status* (graduates currently in full-time employment cannot have reduced their participation) and *increased earnings, promotion or new job*. (Only graduates currently employed could have these positive outcomes.)

Change in labour force status

Graduates who increased their labour force participation after their course were slightly more satisfied with their course than graduates whose labour force participation was either unchanged or declined. The observed difference was at most modest (0.12 standard deviations) and after adjustment declined to less than a tenth of a standard deviation.

Achievement of reason for enrolling

The extent to which graduates had achieved their reason for enrolling was strongly related to their satisfaction with their course. The differences among the categories are consistently greater than a half of a standard deviation, regardless of any adjustment.

Increased earnings, promotion or new job

Mean composite satisfaction scores are associated with whether a graduate obtained an increase in earnings, a promotion or a new job. The difference between the two categories is consistently about a quarter of a standard deviation until adjustments are made for other labour market outcomes. (Achievement of goal correlates with this measure.) Our use of this measure understates its true relationship with satisfaction. The questions were asked only of persons who were employed after their course. The no category includes graduates who were not employed; that is, those who were not asked the question.

Further study

It might be expected that graduates who were more satisfied with their course would be more likely to enrol in subsequent courses. The results in table 10 provide little indication that this is the case. There is no relationship between course satisfaction and participation in further study in the subsequent year.

Summary

A measure of course satisfaction should not be influenced by the personal characteristics of the graduates or their reasons for enrolling in the course. We have found indications that relationships between the personal characteristics of graduates and their satisfaction with the course are indicated but such effects are modest. It is to be expected that characteristics of the course will be associated with course satisfaction, and this is what we have found. The sometimes strong relationship between course satisfaction and outcome measures may reflect little more than that quality courses have better outcomes, although there is the possibility that internal and external performance measures may be conflated.

The major focus of a measure of course quality should be the individual course. So far, we have only examined course satisfaction in broad terms. In the next chapter, we focus on scores for individual courses.

Graduate satisfaction and courses in office skills

Information about graduate satisfaction must be linked to program delivery if it is to be an instrument for the improvement of the VET system. Previous chapters have provided an overview of the outcome measures. In this chapter we focus on the differences in graduate satisfaction among entry-level training courses in office skills.

Entry-level training courses in office skills

The third chapter showed that the level of satisfaction reported by graduates varied with the level of qualification and the field of study of the course in which they were enrolled. Such results indicate that comparison of courses within institutions may be inappropriate. Instead the focus should be on comparisons between providers of courses leading to similar qualifications and dealing with similar subject matter. In short, we should compare like with like.

We have chosen to focus on entry-level courses in office skills. Office skills courses are the natural successors to courses in secretarial studies. The focus on keyboarding skills continues but changes in office technology have altered the content of the course over the last two decades. Shorthand has all but disappeared and the study of computer applications is now central. Elements of book-keeping, filing and associated office procedures are also included. This knowledge and skills are taught through four articulated courses, certificates I to IV, based on national training packages.

The choice of courses on office skills was dictated by pragmatism. There were both many graduates in these courses and many courses to compare. The courses we selected for comparison are essentially similar. Some courses with the same field of study code were excluded because their title suggested that they focussed more on word processing and information technology. The courses selected are similar in focus (generic office skills) but often differ in the level of qualification. There are certificate I, certificate II, certificate III and pre-AQF certificate courses. Where graduates were enrolled on different campuses of the same institute, they were treated as different courses. Only courses with responses from 10 or more graduates were included. In keeping with the entry-level focus of the study, only observations for graduates aged 24 or younger at the time of the survey are included in our analyses.

Thirty-three courses fulfilled these requirements. The mean composite satisfaction score of the 519 graduates from these courses was +0.3, only very slightly above the overall mean.

Ranking of courses

Table 11 shows the means and rankings of the three performance measures for the entry-level courses in office skills. The courses are labelled A to Z and then 1 to 7. We use these labels to avoid identifying particular providers or courses. In table 11 the courses are sorted in descending order, by mean composite course satisfaction score.

We have presented these results in figure 4 as a histogram with the labels of the courses embedded in the corresponding column. So, for instance, there are four courses (U, V, W, X and Y) with a mean composite satisfaction score of -1 (between -1.5 and -0.5). This score is -0.1 standard deviations below the overall mean.

In figure 4 there are nearly one-and-a-half standard deviations between the mean score of the course with the highest composite satisfaction score and the corresponding mean for the course with the lowest score. The composite satisfaction measure appears to discriminate between some courses.

Table 11: Means for course satisfaction, achievement of reason, and labour market outcomes by course: Entry-level office skills courses

Course	No. of responses	Mean composite satisfaction	Mean achieved reason	Labour market benefit %	Increased labour force participation %	Decreased labour force participation %
A	10	6.7	72	62	50	0
B	24	4.4	76	68	54	8
C	10	4.4	55	50	40	30
D	18	3.4	75	60	17	17
E	12	3.4	94	100	67	17
F	16	3.1	62	73	56	6
G	10	2.7	85	88	60	10
H	34	2.6	64	61	35	18
I	16	2.5	58	78	44	0
J	11	2.5	73	62	54	9
K	20	2.3	62	33	45	15
L	11	1.9	80	89	64	0
M	10	1.8	62	75	40	10
N	18	1.2	60	75	33	28
O	24	1.2	79	88	58	17
P	11	0.6	73	50	54	9
Q	14	0.3	61	64	79	7
R	16	-0.1	86	77	50	6
S	31	-0.2	72	69	19	10
T	27	-0.2	92	80	59	7
U	14	-0.5	71	54	50	7
V	17	-0.6	84	50	29	6
W	12	-0.9	58	62	33	8
X	11	-0.9	77	44	54	18
Y	11	-1.3	70	62	27	18
Z	13	-1.6	50	40	31	0
1	16	-1.6	81	100	69	12
2	12	-2.5	88	91	75	8
3	20	-3.0	79	75	55	5
4	18	-5.2	74	73	33	17
5	15	-6.1	70	80	33	0
6	11	-7.8	84	78	45	9
7	10	-8.0	78	78	40	0

Figure 4: Mean composite course satisfaction scores for entry-level office skills courses: No adjustment

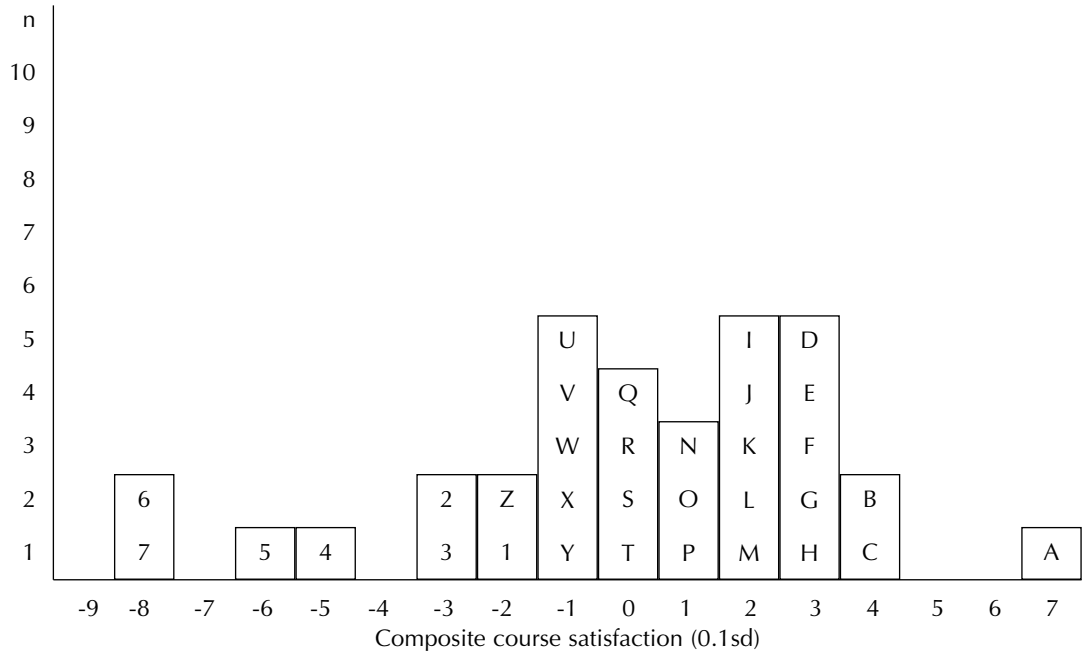


Figure 5: Mean composite course satisfaction scores for entry-level office skills courses: Adjusted for personal characteristics

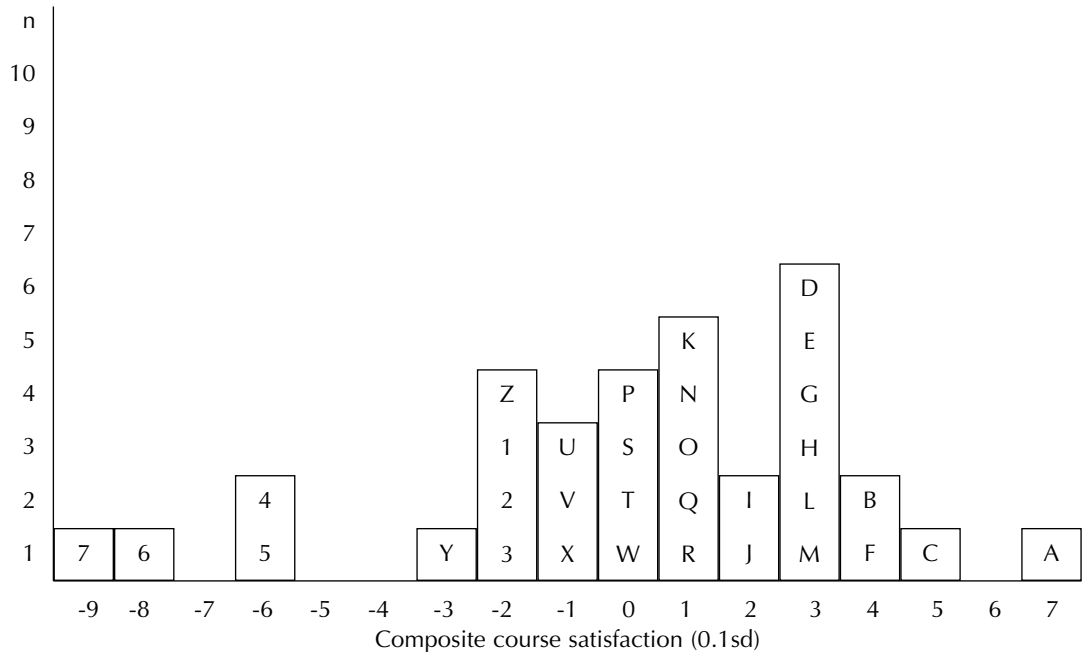


Figure 6: Mean composite course satisfaction scores for entry-level office skills courses: Adjusted for personal characteristics and reasons

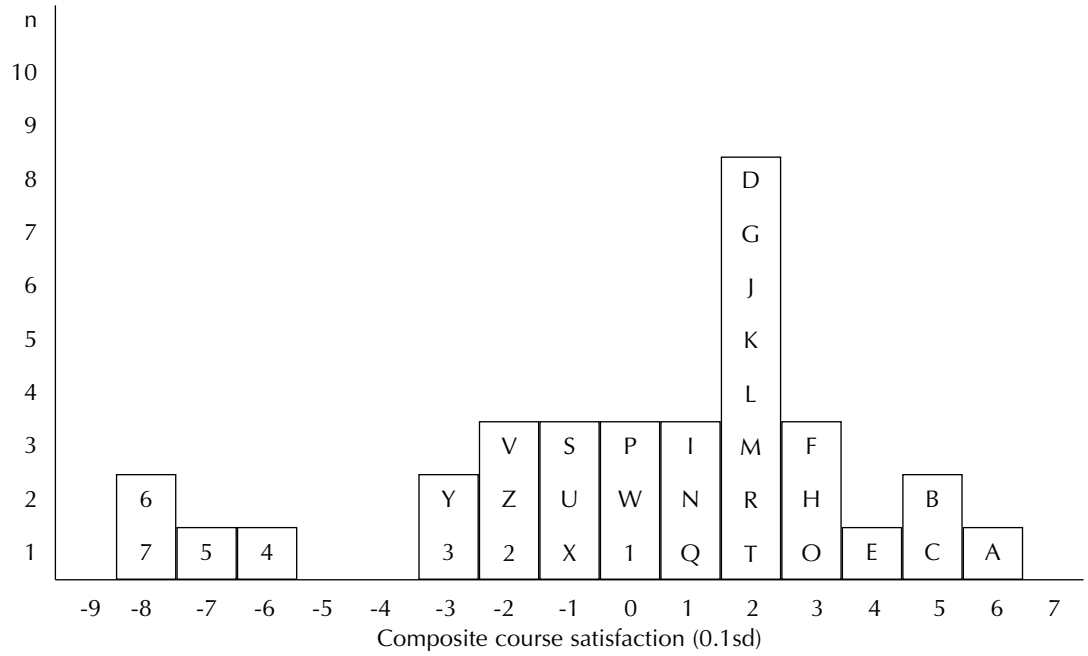


Figure 7: Mean composite course satisfaction scores for entry-level office skills courses: Adjusted for personal characteristics, reasons and mode of delivery

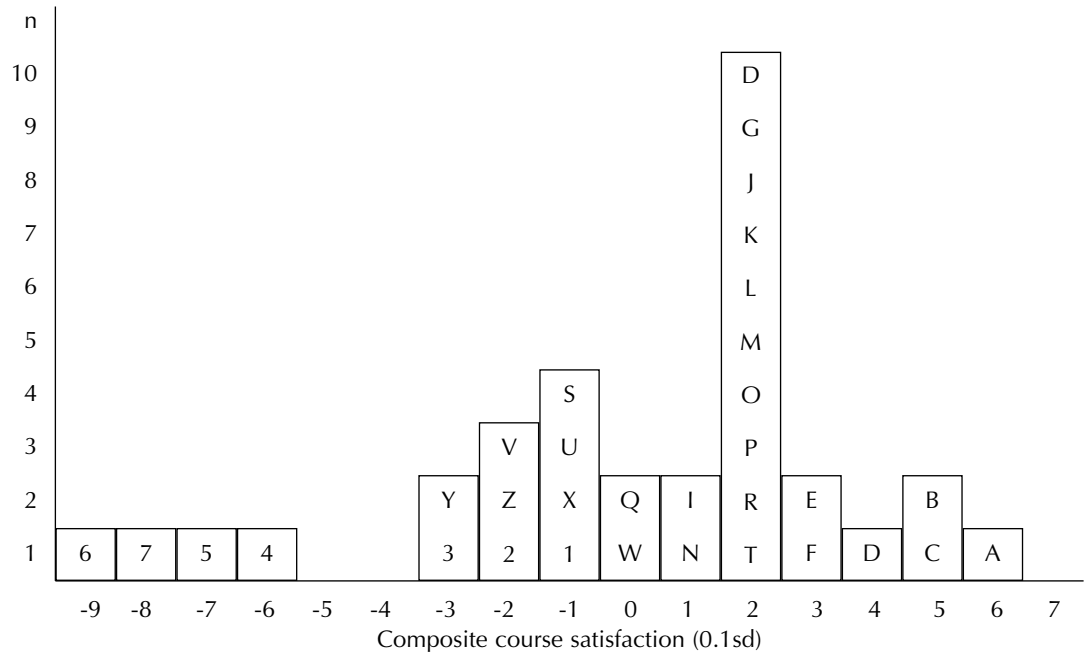
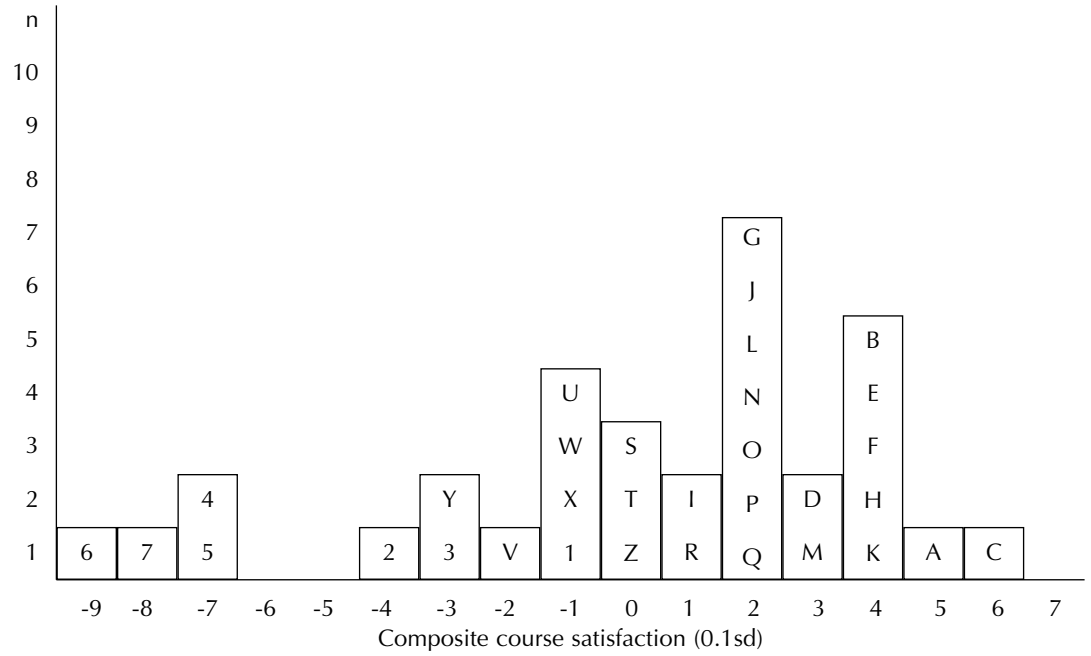


Figure 8: Mean composite course satisfaction scores for entry-level office skills courses: Adjusted for personal characteristics, reasons, mode of delivery and course outcomes



The second feature of figure 4 is its approximately normal shape: the majority of the courses are grouped in the middle and there is little to discriminate them. It is the outliers (either high or low) that the satisfaction measure discriminates. This is perhaps what we would have expected *apriori.*

Adjusted course rankings

Following the analyses presented in the previous chapter, the observed means can be adjusted for various background characteristics. Such adjustments are made in order to identify 'true' course differences; that is, differences not dependent on the particular types of students enrolled in the course, their reasons for undertaking their course, or their outcomes.

The adjusted means for the 33 courses are presented in figures 5 to 8 where we adjust first for the personal characteristics of graduates. (State differences were omitted and age was truncated.) This was followed by adjustment for personal characteristics and reason for enrolment, followed by personal characteristics, reason for enrolment, mode of enrolment (field of study and qualification were omitted) and finally all the background characteristics including course outcomes.

We can map the effect of such adjustments by focussing on one or two particular courses, beginning with course A. This course is clearly a positive outlier. Adjustment for the personal characteristics of graduates makes no difference (within the limits of rounding) to the satisfaction score for this course. It was neither advantaged nor disadvantaged in terms of the personal characteristics of its graduates. Figure 6, however, shows that further adjustment for *reasons for enrolment,* however, shifts the mean for course A down to +6. Graduates who had enrolled in this course did so for reasons that were more likely to be associated with higher satisfaction scores. Once we remove this effect, the mean for course A

declines. Adjustment for the mode of delivery makes no difference, but in figure 8, adjustment for positive outcomes from the course reduces the mean composite course satisfaction to +5. Graduates from this course experience better outcomes, and when we remove this difference, the mean declines. Again, however, we note the caveat that both positive outcomes and higher satisfaction could result from higher course quality and hence it may be inappropriate to adjust for outcomes.

The adjustments of the mean score of course K have a somewhat different result. The observed mean for course K is +2, only slightly above average. The personal characteristics of graduates from this course must be favourable for higher satisfaction scores, because when we remove their effect in figure 5, the course mean declines to +1. Adjustment for *reasons for enrolment*, however, returns the mean to +2, and further adjustment for *mode of instruction* produces no further change. For whatever reason, however, the outcomes of this course must be relatively poor, because when we control for differences in outcomes, the mean for course K increases to +4 in figure 8.

Comparison of the mean scores in figure 4 with any of those in figures 5 to 8 suggests that adjustment for extraneous course differences has some, but not much, effect on course means. Just comparing figure 4 with figure 8, for instance, the mean for most courses changes by 0.1 standard deviations or less. Some courses change by 0.2 standard deviations, but that is about it. These changes, of course, affect the relative ordering a little more, particularly at the upper end of the distribution. The lower end, however, where graduates express least satisfaction, is almost unchanged. The four lowest ranked courses were still the lowest ranked courses after the full range of adjustment.

Percentage variation explained

Differences among the mean composite satisfaction scores of entry-level training courses in office skills tell only half the story. The further issue is the extent to which satisfaction scores vary *within* courses rather than *between* courses. Our measure of satisfaction is meant to say something about the course rather than about the individual variation of graduates, whether associated with measured or unmeasured characteristics.

Figure 9: Percentage of variation in mean composite course satisfaction scores explained by course and background differences: Entry-level office skills courses

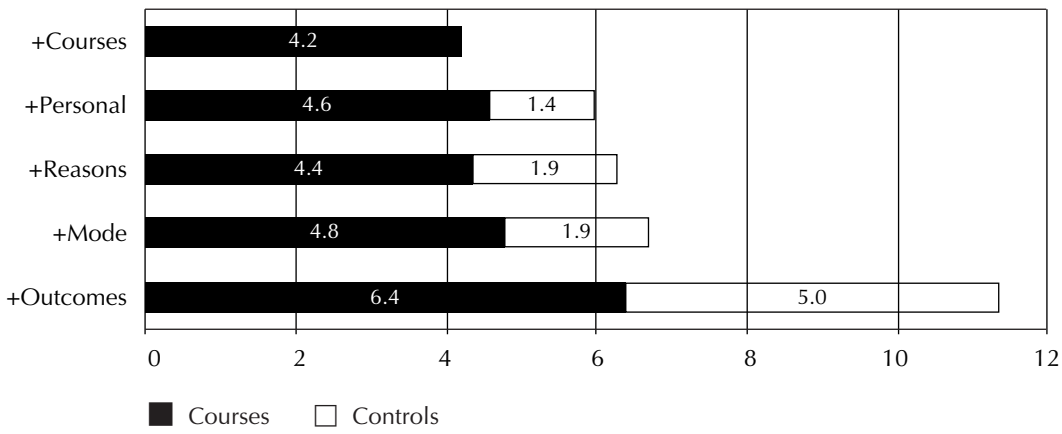


Figure 9 shows the percentage of variation in mean composite satisfaction scores explained by course differences and by other variables. Consistent with the results presented in the previous chapter, the explanatory power of most of the background characteristics is quite modest, even when the outcome variables are considered. Compared with the small percentage of variation in satisfaction scores explained by background factors, the variation explained by course differences was large. For instance, course differences explain more than three times as much variation as background factors (4.6% compared with 1.4%). This is a slightly more impressive result when it is noted that the values for courses in figure 9 are partial values, that is, controlled for various combinations of background characteristics. Nevertheless, the absolute size of the variation in satisfaction explained by course differences is modest—at most 6.4%. This implies that 95.6% of the variation in responses is between individuals within courses. At most, 5 percentage points of this variation is explained by measured individual differences (personal, reasons, mode of instruction and outcomes) leaving 90.6% of the variation explained. Even in the context of survey research, which rarely explains more than 40% of the variation in any dependent variable, these results are very modest.

Correlates with outcomes

One of the interesting features of figure 9 is the fact that the variation in satisfaction explained by between-course differences *increases* when we control for outcome measures (from 4.8% to 6.4%). Such a result implies that at least some of the positive outcome measures are *inversely* related to satisfaction *at the level of courses.*

Table 12: Matrix of correlation co-efficients among course outcome measures: Entry-level office skills courses (n=33)

	Satisfaction	Achieved goals	Labour market benefits	Increased labour force participation	Decreased labour force participation
Satisfaction	1.00	-0.20	-0.16	0.13	0.23
Achieved goal		1.00	0.55	0.48	-0.11
Labour market benefits			1.00	0.43	-0.13
Increased labour force participation			1.00	-0.16	
Decreased labour force participation				1.00	

The means for several outcome measures are presented in table 11; that is, the extent to which goals were achieved, the percentage of graduates who reported either increased earnings, promotion, or having found a new job as the result of completing their course (labour market benefits) and the percentages of graduates in each course whose participation in the labour force either increased or decreased.

Some of these outcomes are measured slightly differently from the way in which they were in the third chapter. For instance, achievement is scored 100 for a *yes, I achieved my reason for enrolling*, 50 for *I don't know yet*, 25 *for partly,* and 0 *for no labour market benefits* are measured only for graduates who were employed after their course. These were the only graduates asked about these benefits. Increased and

decreased labour market participation are simply comparisons with the level of labour market participation before and after the course.

It is certainly not immediately obvious from table 11 whether these outcomes are positively or negatively related to satisfaction. The results in table 12, however, do show the size and direction of the relationships. Perhaps surprisingly, *at the level of differences between courses*, there is a negative relationship between satisfaction and achievement of reason and labour market benefits. Courses that had relatively higher levels of course satisfaction had proportionately fewer students reporting that they had achieved their goal through the course. Similarly, courses with higher levels of satisfaction reported lower levels of positive labour market outcomes. The correlation co-efficients are small (-0.20 and -0.16 respectively) given the small sample size. Even so, they are certainly not consistent with the proposition that mean satisfaction scores for courses reflect little more than positive labour market outcomes for which training providers might not be held accountable.

The measures for changes in labour market participation are positively related to satisfaction. Courses with higher proportions of graduates who either increased or decreased their labour market participation had higher levels of satisfaction. It was those courses with higher proportions of graduates who did not change their level of participation who had lower levels of satisfaction.

Summary

This chapter focussed on comparisons between the satisfaction of graduates of entry-level training courses in office skills from different TAFE institutes. The differences between satisfaction levels in different fields of study and different levels of qualification suggest that comparisons of similar courses *between* institutes are more appropriate than comparisons of dissimilar courses *within* institutes.

There were substantial differences among the mean composite satisfaction scores for entry-level training courses in office skills. The difference between the highest and the lowest means was more than 1.5 standard deviations, a relatively large difference. We explored the effect of adjusting course means by a series of background variables: the personal characteristics of graduates, their reasons for enrolling, the mode of instruction and various outcome variables. There were at most, modest changes in the ordering of courses in terms of their mean composite satisfaction scores.

Differences between courses, however, explained only a relatively small amount of the variation in graduate satisfaction, at most, 6.4% of the total variance. Although this was greater than the variation explained by other measured characteristics of graduates, its small absolute size raises some doubts about whether the differences among the courses are meaningful.

Intriguingly, at the level of the comparison of courses, graduate satisfaction appears unrelated (and possibly inversely related) to two important graduate outcomes; that is, whether or not graduates achieved their reason for enrolling and whether or not graduates achieved some labour market benefit from their course. Such results suggest that satisfaction measures for courses may not be influenced by outcomes.

There are several important aspects of between-course analyses that were not addressed in this chapter. The first is the possible effect of differences in response rates between courses. Without data, we can only speculate on the likely effect of response rates; that is, Whether high or low response rates will lead to higher estimates of satisfaction or whether the level of response has no effect. Regardless, it is a possibly potent influence on estimates.

Second, our data are for graduates with presumably differing proportions of initial enrolments. While we might expect attrition to be higher in courses with lower mean satisfaction among graduates, we have no data with which to explore this hypothesis.

Third, we have little idea of the stability of our estimates for individual courses. In several cases the estimates for courses are based on responses from as few as 10 graduates. Because these do not represent a random sample of the graduates for a particular course, the usual formulas are not necessarily appropriate. If they were, however, estimates of the means would have a quite substantial confidence interval of plus or minus about 0.6 standard deviations. Inclusion of a finite population correction for any standard errors, however, might substantially reduce the size of this interval.

Case studies of office skills courses

This chapter reports the results of structured interviews with staff involved with teaching nine entry-level courses in office skills. The selection of courses is based on the results presented in the previous chapter. We chose to conduct case studies with the five courses with the highest mean satisfaction scores (courses A, B, C, D and E in table 11) and the five courses with the lowest mean satisfaction scores (courses 3, 4 5, 6 and 7 in table 11). Unfortunately we were unable to conduct interviews with staff in course B.

We had two purposes in conducting the case studies. First, following from the selection, we wanted to determine whether there were any readily identifiable differences between courses with high levels of graduate satisfaction and courses with low levels of graduate satisfaction. Second, we wished to explore common issues facing teachers and organisers of entry-level training courses in office skills.

The interviews were all held in November–December 1998, the year after the *TAFE graduate destination* survey was conducted and two years after the year of the course the graduates were describing. Hence there is some possibility of change between the courses as offered in 1996 and the courses as taught in 1998. We explored this possibility in our interviews. A summary of the interview schedule is provided in the next two pages.

The interview situation varied substantially between courses. For some interviews we had access only to the 'head of the course', the person who had day-to-day responsibility for administering and running the course. These people either taught in the course or had recently taught in the course. In other cases, we conducted group interviews that included as many as seven staff who were involved in teaching the course. The interviews/discussions varied from about an hour-and-a-half to two-and-a-half hours.

There are (at least) two ways in which we can present the results of our interviews. The first, is to present the results for each course separately, an approach consistent with our focus on difference between courses. The second is to discuss responses to each of the questions in our structured interviews. We will do a little of both. We will begin by briefly describing the location and content of each of the ten courses and then present some of the themes common across interviews.

The courses

Ten courses were identified as of interest for our project and interviews were conducted with staff from nine of these courses. The courses were all provided by TAFE institutes and led to a certificate II in office studies (or a similar qualification focussed on office studies). The certificate II is essentially a one-semester course that

focusses on low-level clerical skills. Keyboarding skills, use of word processing and spreadsheets, some book-keeping and office procedures form the core of the course. Two of the courses were traineeships and were organised around work placements.

The interview schedule

Introduction

The course we are interested in is …

a. In what ways have you been involved in this course?
b. Is the course still being offered at this campus/college?
c. Is it still running in the same way now as it was in 1996?
d. In what ways has it changed?

I now want to ask you about a number of features of the course at this campus/college:

1. How many students are enrolled in the course?
   a. Is the enrolment growing, stable or decreasing? Has this changed since 1996?
   b. Do you enrol all the students who apply? How many do you reject?
   c. How do you select students? Has this changed since 1996?
2. Students
   a. How would you describe the typical student in your course? Has this changed since 1996?
   b. Are there any special groups? (e.g. unemployed, CES, etc.)
   c. Has the introduction of the Youth Allowance made any difference to the type of student enrolled in your course?
   d. Why do you think students enrol in your course? Has this changed since 1996?
3. Timetable
   a. What is the timetable of a typical student (attends how long and how often per week for how many weeks?) Has this changed since 1996?
4. Articulation
   a. What are students typically doing before they start this course?
   b. Do you provide any RPL (recognition of prior learning) for students entering your course?
   c. Has any of this changed since 1996? What was it like in 1996?
   d. How does this course relate to other courses in your department?
   e. Has any of this changed since 1996?
5. Fees
   a. Do students pay fees for this course? How much? Has this changed since 1996?

6. How many staff are involved in the course at this campus/college?
   a. In equivalent full-time terms? Has this changed since 1996?
   b. Are staff spread across a number of courses or campuses? Has this changed since 1996?
   c. What is the distribution of sessional, contract and permanent staff? Has this changed since 1996?
   d. How many staff are involved in the course full-time; that is, teaching the course is their sole or principal task? Has this changed since 1996?
   e. Do you think staff are adequately trained to teach the course? In which areas do they need training? Has this changed since 1996? Why?
   f. Do you have any difficulty attracting skilled staff?

7. Facilities
   a. What facilities do you have? Has this situation changed since 1996?
   b. re there any facilities you need?
   c. Any facilities you have that other courses do not?
   d. Any facilities other courses have that you do not?

8. Teaching
   a. How would a teacher typically organise instruction?
   b. What would a typical lesson (period) be like for a student?
   c. Has this changed since 1996? What was it like in 1996?

9. Content
   a. Is there a core set of modules for your course? What are they?
   b. Has this changed since 1996? What was it like in 1996?
   c. Are there electives available for your course?
   d. Has the number or nature of these electives changed since 1996? What was it like in 1996?
   e. Are there parts of this course more useful to students than others? Which are more useful?

10. Assessment
   a. How do you assess students in this course? Has this changed since 1996? What was it like in 1996?

11. Quality control
   a. What do you think students get out of the course? Has this changed since 1996?
   b. Is there any means of student feedback or comment about the course?
   c. What are they? Has this changed since 1996?
   d. What proportion of students complete the course? Has this changed since 1996?
   e. Do you think the course is useful for the students who do complete the course? Has this changed since 1996?

f. Is there any systematic attempt to find out what students do after the course? Has this changed since 1996?

g. Is there any systematic attempt to find out how useful the course was to students? Has this changed since 1996?

h. Why do you think students don't complete the course? Has this changed since 1996?

12. Conclusion

a. If you had the chance, what would you do to improve this course for the students who enrol in it?

b. Is there anything else you would like to tell us about the course?

The nomenclature below follows that used in table 11 and Figures 4 to 8:

Course A was provided by a TAFE institute located in a large urban centre. It was an outlier at the upper end of the distribution of graduate satisfaction. Subsequent adjustments for background characteristics modified this position somewhat, but it remained clearly at the upper end of the distribution.

Enrolments in 1998 were relatively large. The institute encouraged students enrolling at the start of the year to enrol in a certificate III. At the start of the year they had five classes of about 75 students in all. Of these, only about 20 were enrolled in the certificate II course, but they were not necessarily in classes separate from students enrolled in certificate III. There was a further enrolment of students in second semester directly into the certificate II course. All were enrolled full-time, which generally required attendance for four days a week.

The situation was similar in 1996, so respondents to the graduate destination survey consist of three groups. Students who enrolled in the certificate II course at the start of the year and completed that course, students who enrolled in the certificate III course, but dropped out in June, and students who enrolled in the certificate II course in July and successfully completed that course.

The students are predominantly female and school leavers, although many had been out of school for a year or so. There has been a trend away from entrants who left school at the end of Year 10 to entrants who have completed Year 11 or Year 12. There has also been a shift towards greater entry by males, although overall numbers remain low. There were cases of university graduates enrolling, as well as university students who were dissatisfied with their course. The trend toward entry by increasing numbers of mature-age students is expected to be reversed by changes to eligibility for the Youth Allowance, changes that require young recipients to be participating in an approved form of education or training.

There were usually more applicants than positions available. Students were selected on the basis of their English skills as demonstrated in their application form. There was some erosion of student numbers in the first few weeks of the course, due to acceptance of second round offers from universities. Classes were filled from the waiting list. Even so, given resources, the institute could easily fill one or more classes each year. Others on the waiting list were offered places in related courses or positions in particular groups of modules, so that only a very small number missed out altogether, even if all applicants didn’t get their first preference.

Course B was provided by a TAFE institute, located in a regional centre located some distance from a capital city. We were not able to conduct interviews with staff from this course.

Course C was provided by a TAFE institute located in a regional centre fairly close to urban areas. Our analysis showed that graduates had relatively high levels of satisfaction despite relatively poor labour market outcomes. Indeed, once adjustments were made for outcomes, this course had the highest level of graduate satisfaction.

The institute does not run a certificate II level course. All students are enrolled in certificate III. Those students who leave the course in June and have completed the requirements for certificate II receive the certificate II. In 1996, however, the institute enrolled students in second semester in a certificate II course. It has not done so since.

Enrolments have been relatively constant at around 60 per year since before 1996. The students are predominantly female school leavers who have completed Year 10. There is a trend towards enrolling more applicants who have completed Years 11 or 12.

The institute enrols all applicants, but does little advertising of the course. Typically there is some loss of students to university second-round offers at the start of the year. About 80% of entrants who stay beyond four weeks complete the course, although this could be explained by the fact that there's not much work around for them. Most non-completers leave because they've got jobs along the way; very few drop out because they have not liked the course.

Course D was provided by a TAFE institute located in the centre of a capital city. Although this course is not an outlier, it was still at the upper end of the distribution of mean scores for graduate satisfaction. Adjustment for background characteristics, however, moved its position further towards the middle of the distribution.

The enrolment of 45 students in certificate II is relatively small, but this offering is made within a context of substantial additional enrolments in certificate III and certificate IV. Enrolments are hindered by rigid allocation of funding between the various levels of the courses and a failure of even short-term planning by the administration of the institute. Potential students are refused a place and subsequently additional funding is made available, but the applicants have moved on. Enrolments for the course have been affected by increased competition from universities. At the very start of their course, applicants leave to take up late offers from universities. On the other hand, students who find their university courses unsatisfactory apply for entry to the course, particularly in second semester.

The institute claims to have a very high completion rate. It prides itself on a dedicated flexible delivery centre that allows students who find jobs or fail a module to complete any outstanding modules in their own time at their own pace. Substantial effort and resources were required to create the centre and write the curriculum material. The operation of such a centre seems contingent on the existence of a large department.

Course E was provided by a TAFE institute located in the suburbs of a capital city. Its outcome measures were very strong. Unlike the majority of other courses reported earlier, the course offered by this institute was a traineeship.

In 1996, the trainees attended college two days a week. There were two groups, each with 15 trainees in first or second semester. The course changed considerably during the next few years. At the end of 1996 individual placement traineeships started and the trainees came to college as they started work (rather than as semester enrolments). At the beginning of 1997 the trainees went into mainstream classes. With the rapid increase in the number of trainees, they were put in classes of their own with self-paced flexible delivery. Because the number of trainees then declined, in 1998 mainstream certificate II students were again combined with the trainees.

The course was originally designed to allow trainees two days a week at TAFE, but many employers only allowed trainees to attend one day a week. The trainees had to make up the additional work in their own time. For some trainees, workplace assessment enabled attendance at TAFE to cease altogether and this is the current trend.

Enrolment of trainees is declining, but enrolment in the parallel mainstream certificate II has been fairly constant for several years—at about 45. The majority of entrants are recent school leavers who have completed Year 10. There has been a substantial increase in the number of applicants from non-English-speaking backgrounds and the sometimes poor level of English literacy has posed a problem for staff.

Mainstream students are enrolled in first semester, either in certificate II or certificate III, depending on whether the student is confident about completing a 6-month or 12-month course. If there is any doubt, students are encouraged to enrol in the certificate II course. Trainees have shifted away from certificate II to the certificate III traineeships, possibly because of the greater financial rewards for employers. Students with few skills are expected to undertake a 24-hour-per-week course of a year's duration while only attending 6 hours a week.

Course 3 was provided by a TAFE institute located in a lower socio-economic status area of a capital city. Adjustment left its position more or less unchanged towards the lower end of the distribution of graduate satisfaction.

Enrolments in certificate II were large: 75 in first semester and 75 in second semester. During the past five years, there has been a clear shift towards entrants who had completed Year 12 and, although school leavers were still a majority, to mature-age entrants.

Demand for the course was high, with more than 25 students on a stand by list. Staff talked of turning hundreds of applicants away and referring them to other colleges. In second semester 1998, for the first time in recent years, a diagnostic or placement test was used to allocate students between the certificate and other, possibly remedial, courses. Staff saw this change as very positive and to have improved the learning environment in classrooms.

Completion rates were also alleged to be high (in which case response rates to the TAFE GDS are quite low). Students fail to complete for a variety of reasons. Some

obtained jobs, others had family difficulties, and others just didn't like it. Special arrangements were made for students who encountered difficulties.

Course 4 was provided by a TAFE institute located in a lower socio-economic status area of a capital city. It is at the lower end of the distribution of graduate satisfaction, and adjustment for background characteristics only accentuates this position.

Student intakes in Certificate II were relatively small: 35 students in first semester, 35 in second semester, and then an accelerated group of 35 in September. Enrolments in certificate III were also about 35 in first semester. Again, graduates of certificate II could elect to transfer to certificate III at the end of first semester and students who wished to leave their certificate III course at the end of first semester could obtain a certificate II.

A very low percentage of students complete their certificate II—about 1 in 4. The accelerated group that consisted principally of mature-age students, however, had a 100% completion rate. Staff felt that there were severe problems of motivation among their school leaver population.

Course 5 was provided by a TAFE institute located in a large urban center and was among those courses with lower mean scores for graduate satisfaction. Adjustment does not alter this position.

The number of students enrolled in certificate II courses is relatively small: 30 in first semester and 30 in second semester. Most students are enrolled straight into certificate III at the start of the year. The certificate II population differs markedly from entrants to the certificate III course. They are more likely to be mature-age students seeking qualifications to re-enter the workforce or school leavers who have completed Year 10. School leavers who have completed Year 12 are more likely to enrol in the certificate III. Young students are overwhelmingly from lower socio-economic backgrounds.

Non-completion appeared to be a problem, but largely because students obtained jobs. In 1998 assessment was offered in the evening to allow students near the end of their courses to complete and staff were investigating the possibility of using on-the-job assessment to allow students to complete their course.

Course 6 was provided by a TAFE institute located in an upper socio-economic status area of a capital city. Together with course 7, this course is at the lower end of the distribution of mean graduate course satisfaction scores.

Enrolments in certificate II are small: 20 students in first semester and 20 in second semester. The students are predominantly young females who have completed Year 12, although the second semester intake normally contains a larger number of mature-age students. Most of the attrition takes place in the first few weeks. In all, 13 or 14 students from each group would obtain certificates.

Course 7 was provided by a TAFE institute located in a regional centre fairly close to urban areas. With course 6, this course was clearly an outlier at the lower end of the distribution. Statistical adjustment for background differences altered its position only marginally. It remained nearly a standard deviation below the mean.

The course was a traineeship similar to that of course E. Since 1996 enrolments in the course have declined substantially and in 1998 the college only had eight

trainees. The trainees were now included in classes with the mainstream certificate II students. Enrolment was shifting away from certificate II to certificate III, prompted by employer incentives, and there was also a progressive shift away from off-the-job to on-the-job assessment.

As the previous chapter explained, it is important to note that, at the level of courses, graduate satisfaction does not appear to be strongly related to labour market or other outcomes. Hence courses with relatively low levels of graduate satisfaction can have outcomes that are at least as good as those with relatively higher levels of graduate satisfaction.

Staffing

Interviewees were aware of a shift towards the employment of proportionately more part-time casual staff at the expense of full-time staff. Overall, the change was regretted because of the greater administrative burden it placed on the remaining full-time staff. Some interviewees, however, acknowledged the need for, and usefulness of, part-time or contract staff, even if they were concerned that the relative proportions of full- and part-time staff might not be correct:

> *We've lost a lot of full-time staff. Anybody who goes off on a redundancy, retirement etc. they're not replacing them, so our part-time contingent is growing and our full-time contingent is dropping. The effect is quite dramatic. It's a load on head teachers too, because work has got to be done. If its not done by the teachers it's got to be done by the head teacher.* (A)

> *The whole idea of part-time staff was to bring in people with current industry experience but it becomes another part-time job for them really.* (C)

> *All our part-time staff, or most of our part-time staff, are currently working in industry, so we've got that expertise available.* (3)

> *When a staff member leaves, they're not replaced. We haven't had any teacher replacement. Full-time staff are down from 18 to 14 over the last 3 years. That's just in this section.* (5)

> *We did have another full-time person who retired last year, who wasn't replaced. I'm sure they'd love to replace us all with part-time teachers, or contract teachers. I know there's been very little recruitment of full-time staff in the last few years.* (6)

> *It's very bad for full-time teachers. They have not put them on. But I can see the good and the bad. I think we could have contract staff but I think they've got to support us with administration workers. Because a lot of us are being paid good money to do filing, to answer enquiries and things.* (7)

Assessment

There was near universal concern about the effect of the introduction of pass/fail assessment as part of the move towards competency-based training (CBT). Interviewees believed that grading was a source of motivation for students and provided important information for employers. Occasionally other criticisms of CBT-based assessments were made:

It's a strain for the students who are really good because you'd just love to give them a distinction rather than a pass. But you can't. You only give a fail for anybody who isn't there. The students don't like it. If they're working at a high level, they like to be recognised. I think we'd have better attendance if we had grades. Because a lot of the good ones don't bother to come, and why would they? OK, they think they don't need to come to every lesson, they'll just turn up whenever they have to, and they're still often doing better stuff than the little strugglers who are there every lesson. (A)

Students were given a credit, distinction or whatever. And they had something to aim for. Now with the modules, there's nothing like that at all. It's pass or fail, so you can have someone who will work her guts out, do marvelous work. Some will put a minimum in, just to pass. So the incentive isn't there and the students know this. I know what CBT is about, but it's taken the competition away from students and we wish we could introduce grades to give a bit of incentive. Any teacher will say the same thing. (C)

Employers will ring up and say, look, give us your best kid. We don't want to find they're just competent. Give us your best one. So my feeling is that there will be a drift back to grading. (C)

With competency-based assessment they're entitled to more than one go at it. The student hands in work, we make the corrections and give it back to them. They make those corrections, complete them and give it back to us. If it's still not right they can have another go. They don't bother because they know we're going to look for all the mistakes, and we're going to check it and give it back to them, so they can hand in anything they like. We'll do the work. It's a motivational problem. (6)

It does definitely disadvantage the better students. So from a student's point of view, you do the minimum of work you have to do to pass. You know what I mean. If it's pass or fail, you jump through the hoop, but you don't do a triple somersault. You don't have to. (7)

Recognition of prior learning

Recognition of prior learning (RPL) has been emphasised in the vocational education and training sector for very good reasons. It means that students don't have to repeat work that they have already done. The expansion of VET is schools in particular has led to an increased need for RPL in entry-level training courses in office skills.

It is, however, a problem for teaching staff in TAFE institutes. First, there is the simple problem of authenticating any claim. Second, there is the time required to process the RPL, time that can be unrecognised for funding purposes. Third, in courses arranged around 'classes' or groups of students, it can create gaps in some classes (because the student is deemed to have already achieved the required competencies). Where funding is dependent on class contact hours, the result can be loss of funding to the course. So individual departments can lose out at both ends—more unfunded work and lower funding per class.

The response of the teachers is interesting:

> *RPLing was only just starting in 1996. We didn't insist they sat through keyboarding, or whatever —we just gave them exit tests and they could sit there and do it, and that was sufficient. But it wasn't official recognition like we do now.* (A)

> *RPL a big part of what we do now. The school students bring their files in and we recognise them. The schools will be moving into level II certificates and that means that students can actually do a level II certificate at school. But not only school students. We have a lot of people who've done part-time courses who come in to do full-time and they get RPLed for what they've done.* (A)

> *It's not making our jobs very easy. Because the assumption is that they've got the skills and they haven't necessarily been trained in the same way that we would train them. The students who have been RPLed are still entitled to the class. They see what our students are doing, and most of them do the course. It's their choice though. We don't force it. They don't need a pass/fail. The only thing is I think that they are disadvantaged if they don't come to the classes because the next module relies heavily on the previous one.* (A)

> *Well we're supposed to sit down and counsel each student, but when we have about 100 students on the one day we just haven't the facilities. We tell them what's in the course, and we give them the opportunity within the first few weeks to come and talk to any of the senior staff about RPL. Quite often we find that if they've done this course at school, they're not really as proficient as they should be. They say, 'I've done that'. And you put them in front of a computer and they type with two fingers and they don't know the database at all. So we say to them, well if you want to, you've already passed, but you're better off to come to the class and do the work again, but you won't have to do the test but after all you find they want to anyway. Very few of them RPL.* (C)

> *If they're training at school we can't guarantee that they're well trained. Some have probably got 25 words a minute. You get students that come from private providers who say 'Oh, I've done it', and you look at the paper and you have to give them RPL. That's where the headaches start. If we have doubts, we actually require them to do some type of assessment. We tell them, 'No one else will take that spot. And I prefer you to come to your lesson and pick up your speed'. The hours we put into all of that, and then you've got nothing for it. Those students are not enrolled in that module, and you don't get paid for doing the RPL.* (D)

> *Possibly one thing that's changed over those 2 or 3 years is our flexibility and the way we actually address and satisfy the students' needs. Because I think that we bend over backwards to support them, to give them the RPL that they need, but without really any payback.* (D)

> *A lot of the students have done VET programs at school and that might mean an exemption from keyboarding, computer operations, data retrieval, maybe cash control. Some of them have done word processing for operators in joint schools. So there are a few modules that they could be exempted from straight away. On a direct credit basis.* (E)

> *Sometimes we will suggest that they go back and do the keyboard again, because they've only ever done keyboarding techniques, a lot of them, and their technique and their speed is not very good, so it's for their benefit to actually go back and do that*

module again. Not for the test or anything, but actually spend the same time again, doing the keyboard again, and perhaps doing a bit of speed and doing a bit of word processing in the meantime, but not necessarily do another module at that level. And some will do extra modules instead. (E)

If the school students have done their course here with us, we don't have the difficulty that we have if they're coming from a private school or they have taught themselves. There are private providers who will give the kids a competency but when we get them into the classroom they can't type. When a student has an equivalence, we suggest they come to the class. It's their choice. They can sit outside if they want. And of course then down the track, when they're moving on to where they really need their speed, they're the students who struggle. (3)

Practice firms

The story of practice firms in office skills is one of enthusiasm and success. Practice firms are a form of office simulation in which mock companies are established in institutes in order to trade with mock companies from other institutes, nationally and internationally. The simulation is co-ordinated through a central agency in Canberra. It is distinct from the office simulation that forms part of the requirements for certificate III and which is internal to the course and is a much smaller operation. Practice firms allow students to take on the roles of receptionist, mail clerk, file clerk, payroll clerk, marketing officer, accounts payable clerk, accounts receivable clerk, and so on.

Although the practice firm is intended to be a virtual firm in existence for say three hours a week, there were examples of the 'firms' undertaking real tasks, usually (but not always) for the institute itself. Opportunities for 'real' work were clearly greatest for firms that had been established in the industries of printing or secretarial services.

Only one of the courses we have examined had a practice firm in place in 1996 and several had only implemented trial runs prior to registering their firms. It is rare for students in certificate II courses to participate, although nearly all institutes hoped to expand the concept to certificate II in the next year. We mention the concept of practice firms here because it appears to be a major innovation in teaching in this area.

Practice firms have two major benefits so far as teachers are concerned. First, they allow students to use their knowledge in an applied setting, and second, they engage students.

The idea of the practice firm is building, it is growing. No one disagrees with the concept of a practice firm. It's the money involved in setting it up and continuing it that's a problem, because we will have to register with Canberra. They're the central office. And you pay $2000 a year to join it. And they send out electricity bills. They pay wages, and all that type of thing. Give you cheque books and so on, and they do all the reconciling of accounts. And you model your firm on the real office. (E)

I don't have to chase them about handing in their homework. Or chase them, 'Where were you yesterday. Why weren't you in class', because they were always here, and that's with communication subjects as well as Office innovation because we are

integrating them. Because the students were in charge of it, they were much tougher on themselves in terms of production, quality, maintaining standards than I would have been. (3)

Well the practice firm has been going around for quite some time. Initially the staff weren't very enthusiastic. They didn't really have a good understanding of what it was about. But now they just absolutely love it. They worked all through the July holidays to get it up and going. It's been excellent, the students absolutely love it. They say they love that learning style. To be able to learn in that way. They would like their whole course to be like that because they really enjoy it, and I don't think there'd ever be any going back now. (5)

What would you change?

Interviewees were asked what, given the opportunity, they would change about their courses. A summary of their responses follows.

Assessment and the re-introduction of grading

The re-introduction of grading was the most frequent response (5 institutes). Interviewees repeated many of the arguments about the use of pass/fail grades mentioned earlier in the interview. The major concern was the effect of pass/fail grading on the motivation of students.

None of us is happy about pass/fail. It doesn't give people incentive to work. Bright students don't have to do much to pass. (C)

I think the pass/fail demotivated better students. If they had got through an exam and it is 100% perfect they get exactly the same piece of paper as someone who might have sat 3 or 4 times to get that competency. (E)

Interviewees also argued that grading was in the interests of employees.

The employer is not going to know that they're the better person, because when they take their certificate, it just says that they have passed or failed. It doesn't say that they are an absolutely outstanding student who got great marks. (3)

There was also a feeling that the use of the pass/fail grade devalued the kind of skills and knowledge taught at TAFE and in courses in office skills in particular.

[Students] are graded at university. They're graded in the school … Well this is as important as any other industry. (C)

Concern over assessment extended beyond the issue of grading. The requirement for 100% competency was questioned:

… in book keeping, if a person doesn't get everything perfect, they fail. You've got to get it all perfect. Now where in life is everything perfect? And yet for that assessment, they receive a fail. (D)

On the other hand, there were concerns that the requirement for mastery was not being enforced in some (other) institutes and that the packages did not lead to the implementation of a common standard:

Some of the modules are pretty easy, whereas all the financial ones are 100% accuracy. And [students] don't like that, because they have to get 100% and I would

have no doubt that there are some colleges who are not enforcing 100% accuracy. So there's no standard in assessment across TAFE … whereas we used to have end-of-subject exams that were State-wide, and they got a mark, and they could fail. This time it's wishy-washy. Oh will I fail or will I pass her? Yeah, I think she meets the module purpose, so we'll pass her. But is that really competent? And we're sending out people saying they're competent in something and I'm waiting for the day when there's someone saying, 'Well she's not competent, you said she was, so we'll sue you'. If it was in America, you probably would be sued. So we're not happy about that part of the assessment. We would have liked to see a bit more of a standard come back into it. (E)

Interviewees also expressed concern about aspects of assessment with particular modules. Assessment in keyboard and computation skills were cited.

They can type at five words a minute, but as long as they can type five words a minute, with 98% accuracy, they pass. (3)

In business calc. there is a part that's manual. And if you fail that you fail business calc. Now how do you measure that? Students go to school at five with a calculator. They're born with a computer in their hand almost now. So how can you fail a student because the manual component is a fail? You cannot say they're not competent because manually they can't calculate something. Because that's not society today. Because someone can't work out 4.6 grams at 65 cents a gram. Who cares? (D)

The length of the course

A recurrent theme was that the course was too short, and this was expressed in a variety of ways. To begin with, the limited time available effects the style of assessment.

It's too short … keyboarding is 20 hours now. No one really can learn and consolidate their keyboarding skills in 20 hours. You used to have those sort of modules for 2 hours a week for 5 weeks. You used to have 10 hours a week, full on for a whole year. Now you're giving it 9 hours for 18 weeks … They're trying to get this 18-week course and the same sorts of qualifications that would have normally taken you the whole 36 weeks. (5)

We have comments like, we feel as though we're teaching to assessments. Students are saying … 'we learn something then the next week we're assessed. We don't really know it. We haven't practised it enough.' It's not reinforced like it was. (5)

There is, however, a wider concern about the amount of material to be covered in the time available.

The trouble is, we don't have enough hours. Years ago we had so many hours for shorthand and typing. We only had about 3 or 4 different little areas. Now it's so complex. There's all these computer courses and subjects and there's so much to try and cram into the course. I'd say if the students would go the distance, there should be a diploma level, over 2 years. (C)

The difficulty seems to be that the nature of office work has changed and the training reflects that change—a greater emphasis on computer skills. In order to

accommodate the change in the skills required by office workers, more has been added to the course, but less has been dropped, leading to an imbalance between curriculum and the time required to teach it.

It could be that this was a problem restricted to certificate II courses and interviewees acknowledged that the longer certificate III course had better outcomes:

> *I think that certificate III makes them much more employable than certificate II.* (3)

This does not resolve the dilemma of time and content, however. The certificate II course is embedded within the longer course that itself has more content.

Improved literacy and numeracy skills of students

Interviewees lamented what they saw as the poor literacy and numeracy skills of students. This issue was not restricted to those courses with low levels of graduate satisfaction. It was repeated across the range of courses and invariably raised the issue of available time. The course assumes that students have obtained adequate literacy and numeracy skills before entering. The pool of available applicants for entry-level training courses in office skills does not appear to have these skills. Although the teachers see the need to include more instruction in basic skills, they acknowledge that there is no time available given the present course structure. If the duration and content of the course cannot be altered, the only solution is to improve the literacy and numeracy skills of students before they enter the course.

> *Some of the modules should have more emphasis on the English and spelling areas … We shouldn't have to, but when they come out of school that's where they're at … In our old course structure there was a lot more time, a lot more emphasis on their communication. And even maths skills—all the basic percentages, just really elementary stuff. But it's not in the modules any more. The expectation is that they come in with those skills, and we no longer have the time to teach them.* (A)

> *The students are coming from school here to do our courses with English and mathematical skills that are really low and they are not capable of coping with our courses. We're not talking about non-English-speaking … we're talking about people who have been educated in the country for all their secondary school and they don't know anything about fractions. They don't know how to do problem solving. Some of them write in all capital letters … That really impacts on what we can do with them. Because we can't teach them basic skills.* (4)

> *The students should be coming to the college better equipped in the first place. I think … they're not getting the literacy skills in the school. They come here and we have to spend a lot of time trying to bring them up to spelling and grammar … To make our course better you need to go back to the school system. Improve it there. So they come in here and you can start teaching them good skills. Either that, or make it a bit longer.* (C)

> *I believe that [certificate II] lacks an English component. I'm not sure that we can fix it, but there are so many people who were saying they want to work and their spelling and English and grammar are appalling and remembering that most bosses would expect the secretaries to be able to correct their errors. We used to have English 1. What about the duration of the course?* (3)

The quality of prior training

The relationship between schools and TAFE was raised during many of the interviews. As we have already seen, interviewees returned to the issue in their comments about literacy and numeracy standards. It was not only literacy and numeracy standards that provoked comment, however, TAFE teachers in office skills were also concerned about the impact of VET in schools on TAFE.

> *If the training doesn't get better at level 1 in school, we have to untrain them, and get them into good habits. Our outcomes are not going to be as good as we used to have when we taught them. But we're finding that their keyboarding techniques are shocking. They think they can keyboard, but they're not touch typing correctly. That means they get a plateau at speed. They can't get any higher, because they're not doing it well … It takes so long to unlearn the bad learning.* (A)

> *I think we'll have to go to schools. I do worry about school teachers teaching keyboarding skills, but the only other alternative is TAFE teachers going.* (A)

> *We don't have a certificate I. I think it's bad that certificate I has been taken away from us.* (D)

In some cases TAFE delivers part of the VET-in-Schools programs for schools. One interviewee suggested that such arrangements might be a poor advertisement for TAFE.

> *The schools are choosing what modules we teach them, which are very dry and I don't think that they give the students a good impression of TAFE. Those modules don't seem all that attractive for them. So the schools are pulling out the interesting bits for themselves and leaving TAFE with the less pleasant parts.* (4)

Motivation

Improving student motivation was a recurrent theme.

> *But we need to try to somehow motivate them more.* (4)

Apart from the effects of ungraded assessments on motivation, interviewees raised a variety of strategies for capturing the attention of students. Several interviewees mentioned the importance of work experience:

> *Work experience is not compulsory, and I think it's even been taken out of the new level 2 Because that would be something that we would like to see back. I think it motivates them.* (3)

> *I think it really would be the icing on the cake if they could do some work experience. They're trying to keep their office running and you send in a little junior for the week who is going to get under their feet. So it's a difficult situation, but I think that would be good.* (A)

Others focussed on the style of teaching and the simulation of work experience through the use of the practice firm.

> *Well I like the idea of making work more realistic. That's the attraction with the practice firm, where you're doing real tasks. If you could bring that sort of thing in it's very good. Seeing them perform in a real situation. A sort of holistic approach.* (6)

> *I think we're trying to improve the course by the introduction of the practice firm to make things more practical, more interesting. I think the days are gone of students sitting there listening. Doing things out of a textbook … If we can make it more interesting, then that's the idea.* (E)

And the training package was viewed as offering teachers greater opportunity because of the focus on learning outcomes.

> *Whilst we're restricted by modules, we're not in other ways because we can pull it all apart and just work on learning outcomes and as long as we tick the right boxes at the end, to say they've passed … then that's fine. How we teach it is our business. So it's up to the teachers, and the colleges, to make it more interesting.* (E)

Confusion about course structure and requirements was also identified as sapping student motivation.

> *I think courses nowadays are a bit too confusing—asking them to do 26 modules. Hardly anybody has a clear idea of their enrolment. They really don't. Whereas before when there were five or six subjects, you knew exactly what you were doing.* (4)

Staff at one institute identified enrolment in order to obtain Austudy (now incorporated in the Youth Allowance) as a problem for motivation. Tying Austudy to performance in the course might, on the other hand, have provided an incentive for students to study. From this perspective, the introduction of the Youth Allowance will be an incentive to enrol in entry-level training, but may do little for outcomes. The view that Austudy delivers unmotivated students may be somewhat problematic, given that employment in part-time work and the willingness of parents to support their children for extended periods were also listed as disincentives for students to apply themselves to their courses.

Resources

Improvement of *physical* resources was rarely seen as a priority. The tone was generally, 'You could always improve the equipment, I suppose'. Although such responses were usually given first, they had the appearance of buying time while the interviewees thought about the question a little more. Frequently there was the addendum, 'We really can't complain'.

The adequacy of *human* resources was rarely explicitly identified as a problem at the conclusion of the interview, but was central to the picture that many interviewees drew of the changes to their work. The emphasis on the recognition of prior learning and flexible delivery have imposed additional demands upon staff while at the same time there has been a decline in full-time staff and a shift to more part-time casual staff. There are echoes of the earlier concerns about there not being sufficient time to teach, time has become a commodity that is in short supply.

> *You're with the students and teaching them for 2 hours. If you've got several students doing a variety of modules, you're just running around that room for 2 hours. Helping this one do spreadsheets, and that one do word processing and whatever else. It's very exhausting. It's just changed so much over the last five years. Your teaching role has changed considerably.* (5)

I can really see the advantages of being able to fast-track, or pick up just the modules that you need. We try to do that, and I think that's where we're heading, but again you have to have good resources available for that to work properly, because not all students are going to be able to cope with that. Some students can work on their own and others can't. You've still got to have some traditional teaching. (7)

For the teachers to come to terms with the teaching quite a variety of modules in the classroom at one time, and students wanting to be assessed … Some of the teachers just want structured classes. Some of them just don't want to take it on and they're going to have to change, and that's where they need staff development and help. And coping strategies. (5)

We used to have adequate staff development, but that stopped when we were told we had to make up our teaching time if we went to a staff development activity. It's too difficult to teach and make up time and go and attend 8-hour-day staff development. If you teach for 6 hours in that day, how do you think you make up the time? It's really tricky. So staff pull back from attending staff development when they have to do that. If we ask for computer training they send a video over or something like that. (5)

The course changed every 3 years. We've had 3 courses in 3 years. It's changing again next year. It's being restructured again. (C)

We have to keep running. All the time. I mean, programs change, computer programs change, the assessments change, modules change … When you read all of these things, they sound terrific. In theory it's a wonderful idea, but when you get down to the practicalities in colleges, it's not the same. (6)

Some students want to fasttrack. Particularly word processing, they want to get through those modules and instead of saying to them at the end, 'look you finished that', the teacher should be saying, 'now would you like to do an enrichment module?' but the teacher's not going to ask that because it's too hard. It's another thing they've got to do in the classroom and that's the shame of it, because the student misses out. (5)

Over the last few years it's become a lot more stressful for the teachers, there's a far greater workload. I don't know if the students are requiring any more skills as a result. (6)

We're not given any time to be imaginative. We're not given a month to set up the practice firm. No teacher, just go in there and do it for a month and then you can start and use it. It's all extras. There's only so much staff can do because they wear out. (5)

Evaluation of the course

It would be misleading to conclude this summary of the interviews with a set of problems. Despite the difficulties perceived by the staff of these courses, they remain very positive about the role of their courses. The following comments capture that spirit:

I notice a big change from the day they walk in … Not just skills, but general demeanour. They mature. (A)

They develop within themselves—not just communication skills. It improves their confidence. (A)

Students use the equipment. They don't get told about the equipment, and I look at pictures of it and write things about it, but now they use everything. And that means when they go to work, they can be quite productive on the first day. (A)

I think most of them can tell you what was taught them. They can apply it in the real world. (C)

Competence, motivation, growth. Not just growth in their skills but growth as people. Even in six months, it's incredible how much an individual can grow and develop. There are other final higher order skills. Their ability to problem solve, to use initiative, to work as a member of a team. (D)

They've got the learning, they've got the skills but they're too young to recognise that. I think we do a good job. (D)

They get a lot of confidence out of it. They get a lot of skills out of it. (E)

For school leavers, it's an opportunity to learn skills that are going to make them employable in an office—as a junior. Remembering that they're generally only talking about entry level. And some of them have some skills, so they're consolidating the knowledge and the skills that they've brought from school, and I think modelling the professional behaviour by staff. We try to instil in them from day one, if you're going to be away, this is how it works. You must let your employer know. So we expect them to leave a message on our voice-mail that they're going to be away. So it's a business environment from day one: so I think that's a policy for them, so that when they go to work it's not such a shock. (3)

The students develop within themselves I think, quite a lot of . . . not just communication skills, I think for most of them. It improves their confidence. (5)

I think the students get a lot of skills. It's a very good course. (6)

I think we're all doing really well under fairly difficult circumstances. I think the course itself is great and I think the students are coming out with really good experience. (7)

Summary

This chapter presented material from structured interviews with staff involved in the provision of nine TAFE courses in entry-level training in office skills. The courses were selected because they represented the upper and lower ends of the distribution of graduate satisfaction.

One of the purposes in conducting the interviews was to determine whether there were any readily identifiable differences between courses in which graduates reported higher levels of satisfaction and courses in which graduates reported lower levels of satisfaction. There was one course in which teaching staff reported that there were serious problems of motivation, attendance and completion among their students, and this was one of the courses with low levels of graduate satisfaction. Even for this course, however, there was little to distinguish it from the other courses in terms of staffing, resourcing or organisation.

The second purpose in conducting the interviews was to explore common issues faced by staff teaching and organising courses in entry-level office skills. There were several themes:

- The staffing profile had shifted towards the employment of more part-time and casual staff. There was a recognition that part-time staff could contribute current industrial experience to the course, but a feeling that instead a class of ongoing part-time casual teachers had been created. Meanwhile, the core workforce required for implementing system-level changes in the classroom and workplace was increasingly required to undertake routine administrative work.
- Competency-based training that reduced grading to a pass/fail assessment was perceived as having negative consequences for student motivation.
- Recognition of prior learning has been central to the training reforms introduced in the last decade. It promised greater efficiency in training by removing duplication and by opening pathways between different training providers, especially between school and TAFE. Interviewees, however, were often critical of the quality of training provided by schools and private providers, and described a system that penalised their courses financially for providing RPL.
- Practice firms were viewed as a positive innovation in teaching and staff were interested in either introducing practice firms or in expanding their role in their courses.
- When asked about possible changes to their courses, staff nominated:
  - the re-introduction of graded assessment
  - improved literacy, numeracy and prior training of entrants
  - more time to teach the required skills to an adequate level
  - more time for preparation and professional development
- Staff were overwhelmingly positive about the value of their courses to the students who graduated.

Conclusions

There are two themes in this report:

- the role of the *TAFE graduate destination survey* as a source of information for key performance indicators for the TAFE system
- the comments of staff teaching courses in entry-level office skills about their courses

These two themes are linked because courses were selected using responses to the *Graduate destination survey.* The courses were rated on average either very positively or very negatively by their graduates compared with other entry-level training courses in office skills. The interviews, however, cast little light on the characteristics of courses producing high or low graduate satisfaction. This may in part reflect a time lag between data collection and further investigation. Our 1998 interviews were selected on the basis of a 1997 survey about courses completed in 1996. It may also reflect the quality of the measurement obtained about the satisfaction of graduates by the *Graduate destination survey* as well as the ability to evaluate a course during a one-and-half-hour interview.

Graduate surveys and key performance indicators

The value of key performance indicators (KPIs) lies in their ability to identify poor and good performance and to provide the basis for changes that result in improved performance. In the case of the VET system, this means being able to identify some courses as 'poor' and some as 'good' and implementing effective intervention programs. Hence it is important to be able to refine indicators down to individual courses rather than being content with system-wide monitoring.

As part of a program to collect information for key performance indicators in the VET system, the 1997 *Graduate destination survey* asked graduates to rate 12 aspects of their course as well as the overall quality of their course. Analysis of the responses suggested that there was some justification for combining the responses into a single measure that we labelled *graduate satisfaction.*

It was found that graduate satisfaction was only slightly influenced by a set of personal characteristics, such as age, gender and education. On the other hand, the characteristics of the course (the field of study and the level of the qualification) were more strongly associated with course satisfaction, a finding that suggests that any comparisons based on data from the *Graduate destination survey* would be better made between TAFE institutes for courses in the same field of study offering the same qualification, rather than between courses in different fields of study offering different qualifications in the same TAFE institute.

Accordingly, we examined the mean satisfaction of graduates for courses in entry-level office skills from 33 TAFE institutes. There was substantial variation among the means of the 33 institutes. Much of this variation remained after adjusting the results for differences in the backgrounds of graduates and outcome measures. Hence the graduate satisfaction measure can (to some extent) discriminate between courses.

Interestingly, however, *at the level of courses,* there was a *negative* relationship between graduate satisfaction and whether graduates reported achieving their goals or some labour market benefit (finding a new or different job, promotion or increased earnings) as a result of the course; that is, courses with higher levels of graduate satisfaction were (slightly) more likely to have lower outcome measures. Viewed positively, this finding suggests that graduate satisfaction, as a KPI is not contaminated by outcomes. If we were more interested in outcomes than process, however, we might ask whether the interest in graduate satisfaction has any relevance to the outcomes of the system.

There are, of course, reasons inherent in the enterprise of graduate satisfaction surveys that lead to a suspicion that the responses tell only half the story. Importantly, surveys of graduates fail to elicit the views of entrants who do not graduate—persons whom we suspect might have very different views about the course. Further, graduate surveys usually struggle to obtain responses from more than two-thirds of the graduates. Our interviews, however, pointed to a further complication.

The articulation of courses, and the embedding of one within another (certificate II as the first semester of certificate III) mean that graduates of a course in one institute, may be very different from graduates in another, depending on the way in which enrolments are organised and how courses are articulated. Graduates of a certificate II course in one institute may be dropouts from a certificate III course, while in another institute they may be graduates of the course they always intended to complete. Hence comparison of like with like becomes more problematic. Given the increasing roles of the recognition of prior learning and of flexible learning, it is reasonable to suppose that this difficulty is not restricted to entry-level courses in office skills.

Interviews

Several themes that relate to broader policy issues recurred during the interviews, seemingly independent of the level of graduate satisfaction with the course (perhaps because the issues related to broader policy concerns):

- The restriction of assessment to a competent/not-competent had removed the incentives implicit in an assessment system able to make finer distinctions. There were negative consequences for student morale and the quality of skills formation. The desire of employers to hire the best graduates was not met by a system based on ungraded competency assessment.
- The funding system within some TAFE institutes appeared to provide financial penalties for the provision of RPL. Students granted RPL in some modules created 'holes' in classes. Since the practice was often to enrol classes of say 15 students, RPL meant that there might be only 12 students

enrolled in some modules. If funding was based on student contact hours, the department within the TAFE institute received less funding, without any real decline in the need for resources. On the other hand, RPL itself often imposed substantial demands on staff for which additional funding may not be provided.

- The lack of consistency between the funding system and the encouragement of RPL sometimes led staff to react in ways not consistent with the intentions of RPL. For instance, students might be encouraged to enrol in modules for which they were eligible for RPL in order to update their skills or to undertake alternative modules to broaden their skills. Neither of these strategies necessarily detracts from skill formation, but nor are these solutions to funding problems aligned with the removal of redundancy or duplication in the study for qualifications. The design of funding formulae in TAFE systems and institutes needs to take these issues into account.
- Funding systems can have other unintended consequences. Students described as non-starters were also a potential loss of revenue for departments in some cases. Students who leave a course early (and cannot be replaced) might not start certain modules at all and therefore not attract any funding, but have left a 'hole' in the class. A rational strategy from the perspective of a TAFE department is to offer generic classes in the first week or so of the course. Such classes are designed to embody elements of as many modules as possible. The student is then deemed to have commenced the module and there is no loss of funding if the student subsequently leaves the course. Such strategies have clear implications for statistics on module completion rates.
- The articulation of skills between school and TAFE (and between private providers and TAFE) was often problematic. Teachers in TAFE institutes found that entrants who had been certified as competent in some modules did not have adequate skills (or the correct foundations) to proceed seamlessly to courses that presupposed those prior skills. The quality of provision of office skills in schools is of particular concern because there are substantial enrolments in these subjects in schools. The drive to provide seamless pathways from school to TAFE with RPL, accelerated skills formation and the efficient granting of qualifications is undermined if the quality of provision in schools is not adequate.
- The level of the generic skills in literacy and numeracy of course entrants was also viewed with concern by some TAFE teachers. Although this is a traditional inter-generational complaint, literacy and numeracy levels of entrants into entry-level courses in office skills may have declined. This may not be due to any change in the quality of instruction in schools, but might instead reflect the expansion of enrolments in the university sector and a consequent change in the academic profile of TAFE entrants. On the other hand, many courses appeared to be experiencing a shift towards entry after the completion of Year 12, a situation that should enhance the literacy and numeracy skills of potential entrants. Design of entry-level courses in office skills (and other areas) may need to take account of possible changes in the entrant population.

- TAFE institutes, like many other organisations, have experienced a casualisation of their workforce during the last decade, principally in response to the need to reduce costs because of funding constraints and a more competitive training environment. Similarly, the responsibility for professional development of teachers has become less an institutional and more a personal responsibility. At the same time, a shift towards flexible teaching, with self-paced learning, RPL, and multiple modules has made teaching a more complex activity. Thought needs to be given to mechanisms that will support teachers in this more challenging task.

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Appendix

Item and factor analyses of course ratings

The *TAFE graduate destination survey* contained 13 items that measured aspects of graduates' satisfaction with their course. The wording of the items is presented in the second chapter. The items are combined into a single measure for the analyses in the fourth chapter. The choice of case studies was based on the means of this measure.

This appendix examines the issue of the extent to which there is evidence of more than one factor underlying the analyses. It presents results from item, principal component, and confirmatory factor analyses. In summary, item analysis suggests that graduates' ratings of 13 aspects of their course tap a common dimension, principal component. Analysis suggests that there may be a second factor, but that any second factor is difficult to interpret. The results from confirmatory factor analysis suggest a single factor explains the bulk of the covariance structure of the rankings tolerably well.

The three forms of analysis that underlie the results presented in this chapter provide different approaches to a similar issue—whether responses to different items can be combined into a single measure or not. They can be combined if they are measuring essentially the same thing. Item analysis is often used initially to determine whether there is prima facie evidence that one or more items do not tap a single trait. Principal component analysis is the approach used commonly to determine the number and structure of factors that provide a best fit to the observed responses. Confirmatory factor analysis postulates various underlying factor structures and tests them for improved fit to the responses.

Table A1: Item analysis of graduates' ratings of aspects of their course

Aspect of the course	Unstandardised		Standardised	
	Correlation with total	Alpha	Correlation with total	Alpha
1 Your instructors' knowledge of course content	0.64	0.90	0.65	0.91
2 The course content in reflecting industry practice	0.65	0.90	0.66	0.91
3 The presentation of course material	0.70	0.90	0.71	0.91
4 The quality of the equipment provided for you	0.62	0.90	0.63	0.91
5 Having enough equipment for you to practise	0.60	0.90	0.60	0.91
6 The information you received when choosing courses	0.64	0.90	0.63	0.91
7 The information about careers and jobs available	0.61	0.90	0.60	0.91
8 The usefulness of the course for your job prospects	0.61	0.90	0.61	0.91
9 The qualification … being well regarded by employers	0.59	0.90	0.59	0.91
10 The balance between instruction and practice	0.70	0.90	0.71	0.90
11. Making methods of assessment clear to you	0.63	0.90	0.64	0.91
12. The convenience of both the venue and class times	0.46	0.91	0.46	0.91
13. The overall quality of the course	0.79	0.90	0.80	0.90
All 13 items		0.91		0.91

Item analysis

Item analysis correlates each item against a measure formed by summing the responses to a set of items (the total score). If the items form a single measure, the correlations of the items should be positive and high. The alpha co-efficient is used to summarise the inter-correlation among the items. This summary measure should be high and should not increase if the item is removed from the common measure.

Table A1 shows the results of an item analysis of graduates' ratings of 13 aspects of their course. Results are shown for both observed and standardised responses and there is little difference. The results presented in table A1 are consistent with there being a single measure underlying the responses to all 13 items, something we perhaps might label *graduate satisfaction* with the course. The value of alpha for the set of 13 responses is 0.91 which would usually be considered high. (The maximum value of alpha is 1.0.) The alpha value next to each of the items shows the value of alpha if that item were removed from the set of items. In no case can removing any of the items increase the value of alpha. Item 12, *the convenience of the venue and time*, has the lowest correlation with the overall measure, but the value of 0.46 is still satisfactory and the alpha value if it is removed is still 0.91.

Principal component analysis

Principal component analysis is the workhorse of much of multivariate analysis of attitudinal data. It examines the effect of fitting progressively more factors to explain the pattern of responses and the way in which individual items relate to those factors. Given that there are 13 ratings, a maximum of 13 factors can be fitted. A simple average of the percentage of variation explained by each factor would be 100/13 = 7.69%.

Table A2: Principal component analysis of graduates' ratings of aspects of their course

Principal component	Eigenvalue	Difference	Proportion	Cumulative
1	5.39	4.20	0.41	0.41
2	1.19	0.22	0.09	0.51
3	0.97	0.15	0.07	0.58
4	0.82	0.16	0.06	0.64
5	0.77	0.13	0.06	0.70
6	0.64	0.07	0.05	0.75
7	0.57	0.06	0.04	0.80
8	0.51	0.01	0.04	0.84
9	0.50	0.01	0.04	0.87
10	0.49	0.08	0.04	0.91
11	0.41	0.01	0.03	0.94
12	0.40	0.06	0.03	0.97
13	0.33	.	0.03	1.00

Table A3: Factor loadings of graduates' ratings of aspects of their course

Aspect	Factor #1	Factor #2
1. Your instructors' knowledge of course content	0.29	-0.06
2. The course content in reflecting industry practice	0.28	0.11
3. The presentation of course material	0.31	-0.13
4. The quality of the equipment provided for you	0.27	-0.43
5. Having enough equipment for you to practise	0.26	-0.45
6. The information you received when choosing courses	0.28	0.00
7. The information about careers and jobs available	0.25	0.23
8. The usefulness of the course for your job prospects	0.26	0.49
9. The qualification … being well regarded by employers	0.25	0.49
10. The balance between instruction and practice	0.30	0.05
11. Making methods of assessment clear to you	0.28	-0.10
12. The convenience of both the venue and class times	0.22	-0.18
13. The overall quality of the course	0.34	-0.01

Table A2 shows that the first factor explains 41% of the variation and hence the eigenvalue is 41/7.69 = 5.39. This translates into a theta value of 0.88, a quite acceptable level of reliability for a survey-based scale (Greene & Carmines 1979). A common criterion used to determine the number of factors that 'best explains' a set of responses is to accept factors up until the eigenvalue falls below one (that is, until the additional percentage of variation explained by a further factor is below the expected value). If this criterion is used, then the eigenvalues in table A2 suggest that two factors underlie the responses to the 13 items. These two factors jointly explain 51% of the variation in responses that would be explained by fitting 13 factors.

Table A3 shows the way in which the 13 ratings 'weight' on the two factors. The major feature of the first factor is that all ratings are related to it more or less to the same extent and in the same direction. We could reasonably label this factor *Graduate satisfaction.* The scores of this factor based on data with hot-decked missing data imputation correlated 0.99 with the composite satisfaction measure used in the text.

The second factor, however, is more difficult to interpret. Four items load on this factor strongly, numbers 4 and 5, which relate to equipment, and numbers 8 and 9,

which relate to job prospects and employers' attitudes to the course. The awkward aspect of the results in table A3 is that the equipment and employment items are related to the second factor in opposite directions. Higher ratings of equipment lead to higher scores on this factor, but high ratings of employment relevance lead to lower scores on this factor. Given the difficulty in interpreting this pattern (that is, finding a meaningful name for the factor), the results from the principal component analysis are consistent with a single factor solution.

Table A4: Confirmatory factor analyses of graduates' ratings of aspects of their course

Model	GFI, adj	RMSE	Chi-square	p increment
null			188 033.0 (78)	
1	0.96	0.080	24 536.0 (65)	0.00
2	0.98	0.062	14 899.1 (64)	0.00
3	0.98	0.052	9892.1 (62)	0.00
4	0.99	0.037	6474.3 (59)	0.00

Notes: GFI = goodness-of-fit index
RMSE = root mean square error

Confirmatory factor analysis

Instead of working from the responses to an underlying factor structure (as in principal component analysis), it is possible to first postulate a factor structure and then determine how well it fits the responses (confirmatory factor analysis). The latter approach is generally considered more sophisticated. We undertook only a fairly cursory investigation of the factor structure of the ratings, but sufficient to suggest that one factor is able to reproduce the covariance structure of the rankings by the graduates tolerably well.

We investigated four (nested) models:

- *Model 1:* a single factor underlying all 13 ratings
- *Model 2:* a single factor underlying 11 ratings, but that ratings 4 and 5 (the equipment ratings) were associated with a separate factor
- *Model 3:* for mode 2, but with a third factor underlying ratings 8 and 9 (the employment relevance ratings)
- *Model 4:* for model 3, but with a fourth factor underlying ratings 6 and 7 (the information ratings)

The factors were not constrained to be independent. Table A4 contains several summary statistics from these analyses: the goodness-of-fit index (GFI), adjusted for degrees of freedom, the root mean square error (RMSE), the chi-square with degrees of freedom in parentheses, and the probability of the difference in chi-squares between models. Without expanding too much on the meaning of these indices, the adjusted GFI tends to 1 as fit improves, the RMSE tends to zero as fit improves, and the chi-square should be both significant in itself, and significantly different from the simpler model.

We begin with the first model. The adjusted GFI is satisfactory at 0.96 and the RMSE is a little high at 0.080. (There are no hard and fast rules for interpretation of these indices.) For the second model, the values for both indices improves, but the RMSE is still a little low. The difference between the first and second model is

statistically significant. Given the sample size of nearly 60 000, almost any change will be statistically significant. The third model shows some further improvement in the RMSE, which at 0.052 is nearly satisfactory. The fourth model, however, shows a further modest improvement in both indices.

The four models do not provide an exhaustive investigation of the factor structure underlying the ratings, but they nevertheless point to two conclusions. First, there is a core initial factor that seems to explain much of the variation in responses. Second, the addition of further factors produces only very modest improvements in fit.

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