

# LONGITUDINAL STUDY OF OUTCOMES OF VOCATIONAL EDUCATION AND TRAINING PROGRAMS

**Oanh Phan**

**National Centre for Vocational Education Research**

*The views and opinions expressed in this document are those of the author/project team and do not necessarily reflect the views of the South Australian Department of Education, Training and Employment (SA DETE).*

## ABSTRACT

This report represents the findings of the first phase of the longitudinal study of outcomes of VET programs. During the first phase of this study, TAFE 'graduates' were asked to provide information about themselves, their TAFE course, their past and current employment experience and the relevance of TAFE studies to their employment. This paper reports on the findings collected from 562 'graduates' at six different TAFE Institutes in South Australia.

The future of vocational education students after completing their education and training has always been of interest to Technical and Further Education (TAFE) Institutes. By gaining an in-depth picture of the lives of these graduates, it is possible to evaluate the effectiveness of courses in assisting graduates to meet their VET objectives for choosing to study at TAFE SA. In addition, the information provided by these graduates also enables TAFE SA to re-assess the structure of its courses, so that they are more relevant to industry needs and especially, the needs of their students.

## Background

This longitudinal study of outcomes of Vocational Education and Training (VET) programs continues the series of studies of VET graduates commenced by the National Centre for Vocational Education Research (NCVER). In particular, this study is the sequel to *Issues regarding higher education graduates in vocational education and training* (Werner, 1998), which was in turn the continuation of *Destinations and career pathways of enrollees from selected South Australian TAFE VET programs, 1990-1994* (Werner, 1998). This longitudinal study, designed to track VET graduates at six months and two years after the completion of their training courses, was developed from a suggestion by the South Australian Department of Education, Training and Employment (SA DETE).

It is important to take into account the existence of other ongoing research into the destinations of VET graduates to ensure that the information collected from this longitudinal study does not duplicate other studies. There are a number of studies on vocational education graduates including the *Longitudinal Survey of Australian Youths* and the *Graduate Destination Survey*. The *Longitudinal Survey of Australian Youths* (LSAY) currently conducted by the Australian Council for Education Research (ACER) replaces both the *Youth in transition study* previously carried out by ACER and the Department of Education, Training and Youth Affairs (DETYA) *Australian Youth Survey*. The LSAY picks up waves of 10,000 year 9 students every three years, and follows them for a decade or so. As a result, this study collects information about VET participants as an incidental part of a larger research agenda. In particular, the study gathers valuable information about participation of young people in vocational education and training. Although the information collected from the LSAY provides national trends on participation of young people in VET, the information collected does not provide extensive data on young people from TAFE SA.

The *Graduate Destination Survey* (GDS) recently conducted by the NCVER on behalf of the Australian National Training Authority (ANTA) provided information only about graduates from award courses immediately after they have graduated. Although the data collected from cross-sectional studies such as the GDS provide valuable background information about VET graduates for training providers and Government agencies, they cannot provide in-depth information on what actually happens to individuals over time. To establish more clearly the order in which events actually occur, a longitudinal study is needed. Information collected from longitudinal studies allows a stronger inference of causal relationship and also an evaluation of longer-term outcomes.

Current studies researching the destinations of VET graduates provide valuable information about participation of young people in VET as well as information about immediate VET graduates from award courses. While these studies provide national trends about VET graduates, the data collected are not at a level of detail that is desirable for the vocational education system in South Australia. The primary focus of this longitudinal study is therefore, to provide information which address the specific needs for the VET sector in South Australia.

## Aims

The primary purpose of this project is to develop a longitudinal study of individuals emerging from training courses and employment programs within TAFE SA. These individuals are to be followed at six months and then over one year after completion of VET courses to determine the outcomes of VET programs. As a secondary goal, the project is to develop a cadre of institute staff capable of initiating and managing longitudinal and other studies of institute clients.

## Methodology

While graduates from award courses will be one focus of the study, other individuals who have completed a program, which involves only part of a course (but which meets their immediate or long term needs or the needs of their employer) will also be included.

During 1997 the main focus of the project was to establish the ground rules for the study and identify TAFE SA participants. In 1998, the development of the questionnaire and recruiting of 1997 graduates was carried out with participants from TAFE SA and NCVET staff.

The study is made up of seven major phases, namely:

### 1. Invitation to participate in the study

In July 1997, invitations to participate in the longitudinal study were issued to TAFE Institutes. During this stage, two participants with an appropriate level of computer expertise as well as personal and institutional commitment were identified from each institute.

### 2. Outlining the scope of the study

A two-day information workshop for staff participants from TAFE Institutes was held at the NCVET. During the workshop, participants were provided with information on the requirements of the project. This was followed by discussion about the scope of the project and the identification of the appropriate target populations for the project.

Participants were asked to identify courses from which 'graduates' will be selected for inclusion. It was decided that for a course to be included in the study, it would be expected to 'graduate' 30 or so individuals. It was decided that each institute would be asked to provide up to 300 'graduates'.

### 3. Development of questionnaire

Staff from the NCVET and participants from TAFE Institutes came together to develop the research questions that would guide the identification of items for the questionnaire. The questionnaires were trialled with 20 students from one of the TAFE Institutes involved in the study. Modifications based on student feedback from the trial were made to the questionnaire.

### 4. Recruitment of students

The recruitment of students was also undertaken in collaboration with Institute staff. This required the development of a registration form, which informed 'graduates' about the purpose of the study and asked them to register their interest to participate in this longitudinal study. 'Graduates' were recruited in three major ways:

Participants from some Institutes recruited 'graduates' in the research program by meeting them briefly during class and explained to them the purpose of the study.

Registration forms were distributed at graduation ceremonies at selected campuses of the Institutes involved.

Lists of names of graduates were provided to NCVET by a number of Institutes and registration forms were sent out to these 'graduates'.

**5. Distribution of the questionnaire**

Once registration forms were received, a database of registrations was developed. This set of registrations became the survey sample. Questionnaires were then sent to these 'graduates' and a follow-up reminder letter was also required to help increase the response rate.

**6. Collation and analysis of data**

Once completed questionnaires were received at NCVET, the coding of open-ended questions took place. Staff from NCVET developed the program for data entry. Data was then analysed using the Simstat for Windows statistical program.

**7. Writing of report**

A three-day workshop involving practical demonstrations and training in data analysis and report writing was held at the NCVET. Participants were distributed with data, pertaining to their own institute, for analysis. They were also provided with a preliminary pro-forma for reporting the results of the study. This was to be used to assist them with their own-specific reports. A report describing the findings for the total group of respondents was prepared by NCVET.

**Results**

A total of 881 questionnaires were sent out to those 'graduates' who registered to participate in the longitudinal study. By the end of September 1998, 562 completed questionnaires were received. This represented a response rate of 63.8% of the total group.

**Respondents**

A greater percentage of females (59.7%) than males (40.3%) responded to the study. Respondents had an average age of 31 (sd = 10.4). Fifty percent were over the age of 19. Respondents came from diverse backgrounds. The majority had completed year 12 or overseas equivalent (N=304, 54.9%) as their highest secondary school level, and more than half had completed some post-secondary qualifications or trade certificates before commencing their TAFE course (N=364, 64.8%).

**Motivation for undertaking TAFE course.**

Respondents reported many reasons for choosing to study at TAFE rather than at another educational institution or provider. The three most frequently identified reasons reported by respondents were:

- to gain extra skills (N=347, 61.7%)
- to gain employment (N=267, 47.5%)
- for personal development (N=239, 42.5%).

Most respondents in the 15 to 25 age group indicated that they had chosen to study at TAFE SA because it helped them to gain employment and extra skills. Many in this age group also indicated that they chose to study at TAFE because they believed that it would help them make their career choice. Some of these respondents also indicated that their jobs required them to study at TAFE. Respondents in the 25 to 60 age range indicated that they had chosen to study at TAFE to gain extra skills. Many had also chosen to study at TAFE for personal and career development reasons. The data are presented in table 1 below.

**Table 1: Reasons for choosing to study at TAFE by age.**

	Age 15-19	Age 20-24	Age 25-34	Age 35-44	Age 45-54	Age 55-60	Total
Unable to gain entry to University	1.7	5.5	2.8	0.7	1.9	0.0	2.6
Gain employment	26.0	21.0	11.5	10.5	13.5	9.1	15.0
A requirement of job	11.0	13.6	2.4	4.1	3.4	13.6	6.3
Gain extra skills	18.5	16.3	19.5	22.8	18.7	22.7	19.5

Update knowledge	5.2	5.5	10.5	14.8	12.0	13.6	10.3
Career change	2.9	3.7	12.9	12.8	12.0	0.0	9.6
Get into another course	3.5	3.7	2.8	1.6	1.5	4.5	2.6
Personal development	6.4	7.6	14.3	17.4	17.6	18.2	13.4
Interest/Recreation	5.8	6.3	6.0	4.1	4.9	4.5	5.4
Help make career choice	12.1	11.0	7.8	5.0	6.7	4.5	8.0
Gain promotion	0.6	1.8	9.1	5.0	6.0	4.5	5.2
Required by Government agency	0.6	1.0	0.4	0.5	0.4	0.0	0.6
Other	5.8	2.9	0.0	0.7	1.5	4.5	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Respondents were also asked to indicate reasons for choosing their course rather than any other TAFE courses. The three most frequently identified reasons were:

- to access employment prospects (N=257, 45.7%)
- to build on existing skills (N=202, 35.9%)
- to develop personal interests (N=194, 34.5%).

### Employment background

Respondents were asked to provide detailed information on their involvement in paid work. Of the total number of respondents (554) who reported their employment background, there were only 25 (4.5%) respondents who indicated that they had never had paid work (this also included self-employment). Respondents' employment status prior to, during, and after their 1997 course is shown in table 2.

#### *Prior to commencing TAFE course*

Over two-thirds of respondents reported that they already had paid work twelve months prior to commencing their 1997 course. More than fifty percent of these respondents were working 35 hours or less, and more than three-quarters earned a maximum amount of \$500 a week.

#### *While undertaking TAFE course*

Slightly fewer respondents indicated being involved in paid work during their TAFE course. Just over half of these respondents were working in casual or part-time jobs with over three-quarters reporting earning \$500 or less each week.

#### *Six months after completion of the course*

There was an increase in the number of those involved in paid work. In addition, most of the paid work was more than 35 hours each week. The gross weekly income reported by respondents also increased as there was a larger proportion earning between \$501 and \$1000. A small proportion of respondents was also earning more than \$1000 each week.

**Table 2: A comparison of respondents' employment status - prior to, during and after their course.**

	12 months prior to course		During course (in 1997)		Six months after completion of course (June 1998)	
	No. of respondents	%	No. of respondents	%	No. of respondents	%
<b>Employment status</b>						
Full-time	183	45.3	169	47.6	257	58.5
Part-time	64	15.8	60	16.9	70	15.9
Casual	128	31.7	126	35.5	112	25.5
Unknown	29	7.2	0	0	0	0
Sub-total	404	100.0	355	100.0	439	100.0
<b>Number of hours worked</b>						
1-15 hours	104	25.7	106	29.9	69	15.7
16-35 hours	109	27.0	93	26.2	116	26.4
36 or more hours	176	43.6	141	39.7	241	54.9
Unknown	15	3.7	15	4.2	13	3.0
Sub-total	404	100.0	355	100.0	439	100.0
<b>Gross weekly income</b>						
\$1-\$200	133	32.9	119	33.5	90	20.5
\$201-\$350	105	26.0	98	27.6	106	24.1
\$351-\$500	94	23.3	64	18.0	121	27.6

\$501-\$1000	68	16.8	65	18.3	101	23.0
\$1000 or more	4	1.0	3	0.8	13	3.0
Unknown	0	0	6	1.7	8	1.8
Sub-total	404	100.0	355	100.0	439	100.0

Of those respondents who were in paid work at six months after completion of their TAFE course, approximately three-quarters (N=332, 75.6%) indicated that their paid work was related to their TAFE course. Furthermore, almost all (N=424, 96.6%) reported that the course was very useful or of some use to their paid work. Respondents reported many factors that assisted them to get their paid work. Some of these factors included the increased skills gained from their TAFE course (N=112, 28.0%), work experience undertaken (N=86, 21.5%) and TAFE qualifications obtained (N=64, 16.0%).

In June 1998, there were 123 respondents who were identified as not being in paid work. Of these respondents, there were 25 who did not report their activities since completing TAFE course. Of those who did report their activities, nearly half (N=45, 45.9%) indicated that they were seeking paid work. Almost a third of respondents reported that they were not seeking paid work because of their involvement in full-time study (N=30, 30.6%). In addition, a small number of respondents (N=23, 23.5%) reported that they were not seeking paid work because of their other commitments.

### Evaluation of TAFE course

#### *Effectiveness of course in preparing individuals for getting a job*

Respondents who started a new job six months after completion of their course (N=279, 63.6%) were asked to rate how well the course had prepared them to get paid work. Approximately, forty percent of respondents thought that their course had prepared them to get a job. The course had more than adequately prepared them to get a job by providing them with opportunities for:

- work experience
- contact with employers
- resume writing activities
- writing job applications
- improving interview techniques

In addition, a quarter of respondents rated these course activities as being merely adequate in helping them to get a job. However, more than 32 percent of respondents thought that these course activities had not been very effective in helping them to get paid work. Respondents were then asked to suggest ways in which the course could have prepared them to be better prepared to find or start work. Suggestions were given by a very small number of respondents, namely:

- work experience
- practice with interview techniques
- liaison with employers.

#### *Effectiveness of course in preparing individuals for the workplace*

Those respondents who started a new job six months after completion of their course were also asked to rate how well the course had prepared them for the workplace. The majority thought that they were either well or adequately prepared for the workplace, in terms of working with others; awareness of occupational health and safety requirements and dealing with customers. A substantial number of respondents also believed that the course had not adequately prepared them for the level of wages they were to receive and the length of hours they were expected to work. Respondents' evaluation of the effectiveness of the course in preparing them for the workplace is shown in table 3.

**Table 3: Respondents' evaluation of the effectiveness of the course in preparing them for the workplace**

	Very Well %	Well %	Adequately %	Poorly %	Not at all %	Total %	No. of respondents
Health and safety on the job	33.0	32.3	24.4	2.9	7.5	100.0	279
Punctuality	31.8	27.7	24.5	2.9	13.1	100.0	274
Appropriate dress requirements	29.7	31.5	22.8	3.3	12.7	100.0	276
Length of working hours	19.9	29.7	32.2	4.0	14.1	100.0	276
Level of wages	13.4	26.4	31.4	10.1	18.8	100.0	277
Dealing with customers	30.2	28.4	25.5	5.1	10.9	100.0	275
Working with other people	39.6	33.5	21.2	2.2	3.6	100.0	278
Equal opportunity issues	27.9	33.0	23.9	4.3	10.9	100.0	276

### Effectiveness of course in developing Key Competencies

Key competencies have been identified as the foundation for a more effective workplace. They include the ability to work effectively as a team and with others, communicating ideas and information, problem solving, mathematics and activity management. Just over two-thirds of respondents reported a gain in their ability to use all key competencies except for the ability to use mathematical ideas and techniques. Less than fifty percent of respondents indicated that there was a gain in their ability to use this skill. The ability to use mathematical ideas and techniques remained unchanged for a high proportion of respondents (Table 4).

**Table 4: Changes in ability to use key competencies reported by respondents (%).**

	Major loss	Slight loss	No change	Slight gain	Significant gain	Total	No. of respondents
Collecting, analysing & organising information	3.3	4.0	24.0	38.4	30.2	100.0	549
Solving problems	3.0	4.2	21.4	28.2	43.2	100.0	542
Using technology	3.5	3.9	24.3	35.3	33.1	100.0	544
Using mathematical ideas & techniques	2.0	4.6	45.7	13.6	34.1	100.0	543
Working with others & in teams	5.3	2.7	25.0	34.7	32.2	100.0	547
Communicating ideas & information	4.2	3.5	17.5	40.3	34.5	100.0	548
Planning & organising activities	4.0	3.1	23.6	41.3	28.0	100.0	547

Less than a tenth of respondents also reported deterioration in their abilities to use some of these key competencies. Not all of these respondents gave comments for the loss of skills. Of those who did, the most frequently identified reason given was the lack of opportunity to utilise their skills.

### Evaluating TAFE SA

Respondents were then asked to evaluate TAFE's services and training programs. Respondents predominantly agreed that TAFE was good value for money. TAFE assisted students to build on work and life skills and increase their earning potential. The majority of the respondents also agreed that TAFE provided students with the appropriate environment to return to study and to achieve their potential (Table 5).

**Table 5: Respondents evaluations of TAFE (%)**

	Strongly agree	Slightly agree	Neutral	Slightly disagree	Strongly disagree	No. of respondents	No. of respondents
TAFE assists students to build skills for life	47.1	36.8	13.4	1.8	9.0	100.0	554
Going to TAFE increases job opportunities	54.0	33.9	7.9	2.5	1.6	100.0	554
Completing a TAFE course increases earning potential	36.2	39.1	17.6	4.7	2.4	100.0	550
TAFE courses provide a good start to University	36.5	28.4	30.9	3.3	0.9	100.0	550
TAFE assist students to build appropriate skills for work	50.5	39.4	7.4	2.0	0.7	100.0	554
TAFE provides the environment to achieve your potential	35.9	42.6	15.4	4.2	1.8	100.0	551
TAFE courses provide value for money	42.3	34.4	17.5	3.6	2.2	100.0	549
TAFE is a good re-introduction to study	57.1	29.7	11.1	1.6	0.5	100.0	552

## Discussion

'An opportunity to access employment' was thought to be the most important reason for choosing to study at TAFE by many respondents in the 15 to 24 age group. This was followed by 'a chance to gain extra skills'. Many also indicated that an opportunity to help them make their career choice was also important. Most respondents in the 25 to 60 age group also regarded the gaining of extra skills as an important factor in their choosing to study at TAFE. Many also indicated that they chose to study at TAFE because they wanted to change their career, to up-date their knowledge and to obtain personal development. Young people had different intentions for choosing to study at TAFE. They were more inclined to study at TAFE because they believed that TAFE would assist them in finding employment

and in making career choices. Responses given by those in the 25 to 60 year age group indicated that older individuals had chosen to study at TAFE to update their knowledge and improve their opportunities for personal development and making career changes.

Respondents' perspectives on how effective the course was in terms of preparing them for obtaining a job and for the workplace were obtained, to determine whether the course had actually fulfilled respondents' desire to gain employment. Of those who started their paid work six months after completion of their course, less than fifty percent rated the course activities in helping them to get a job either well or very well. This finding suggested that more emphasis on course activities in helping respondents to get paid work is necessary. For example, there should be more opportunity to do work experience so that respondents can gain as many practical skills as possible and have a better understanding of the workplace. More opportunities to develop resumes, write job applications and practice interviewing techniques should also be provided to build respondents' confidence in applying for positions. More contacts with employers are also required to help students and their teachers to find out what the market/industry wants so that courses can be structured in ways that are relevant to industry needs.

A high proportion of respondents thought that the course had prepared them for the workplace, especially in terms of working with other people and understanding health and safety issues and appropriate dress requirements. Respondents also believed that they were well prepared for equal opportunity issues at work and how to deal efficiently with customers. However, the mixed feelings given by respondents about the effectiveness of some course activities aimed at preparing them for the workplace implies that other issues such as level of wages or the length of hours were not fully understood by the majority of respondents. This suggested that course activities aimed at preparing respondents for the workplace could be improved. In particular, respondents could be made more aware of the exact level of wages to expect and the number of hours they will be expected to work.

Over three-quarters of respondents who were working six months after the completion of their course indicated that their paid work was related to their TAFE course. Furthermore, almost all of these respondents also believed that the course was very useful or of some use to their paid work. These findings suggested that the expected outcomes from doing the course at TAFE were achieved by many respondents. This is also supported by the factors that helped these respondents to obtain their paid work. Although, various reasons were reported by respondents, the most frequently identified factors were increased skills and work experience gained from doing TAFE course and a TAFE qualification.

The increase in ability to collect, analyse and organise information as well as to solve problems and use technology indicated by over sixty percent of respondents suggested that the course was efficient in helping respondents to gain extra skills. The efficiency of the course was also supported by the fact that a high proportion of respondents also reported improvements in their ability to work with others and in teams, and in the ability to communicate ideas and information. Since undertaking a TAFE course, most respondents also indicated that they were better at planning and organising activities. These findings, however, were not consistent with the reported ability to use mathematical ideas and techniques. Less than fifty percent of respondents thought that their ability to use mathematical ideas and techniques improved as a result of their TAFE course. This suggested that the course was perhaps inadequate at helping all respondents to gain the ability to use this skill. However, a similar proportion of respondents who reported improvement in the ability to use mathematical skills and techniques also reported that there was no change in their ability to use this skill. One explanation for this finding could be that once the basic mathematical skills and techniques are learnt, there is a high chance that these would not change over time and therefore it is to be expected that there would be no change in this ability. It could also be argued that no change in the ability to use mathematical ideas and techniques was attributed to the fact that respondents were enrolled in courses that did not require them to use this skill. Because there were fewer than thirty respondents in each course, it was difficult to develop meaningful analysis of the data at the course level. It is anticipated that more graduates will be recruited in the next phases of the study. This will make it possible to analyse the data at this course level to provide better explanations of why there was no change in the ability to use mathematical ideas and techniques for a larger number of respondents.

Overall, the majority of TAFE respondents predominantly agreed that TAFE assisted students to build on their work and life skills. It provided the environment to achieve maximum potential and was a good place for re-introduction to study. TAFE was also considered to provide a good start to University, increase job opportunities and improve earning potential. Altogether, students predominantly agreed that TAFE provided value for money.

The findings to date have shown what happened to TAFE 'graduates' six months after completion of their TAFE course. At this stage, 'graduates' in this study believed that their TAFE course was relevant to their goals. In addition, the majority of respondents also believed that the course was effective in preparing them for the workplace and for getting a job. Most importantly, however, they believed that their desires to gain employment and gain extra skills had been fulfilled. If the findings from this study are true for all TAFE graduates, then TAFE Institutes are providing students with the appropriate training which allows them to gain extra skills and find employment.

## Conclusion

An in-depth picture of the lives of TAFE graduates after they complete their education and training at TAFE Institutes provide valuable information about the outcomes of VET programs. The information collected allows the evaluation of the effectiveness of TAFE courses in assisting graduates to meet their objectives. In addition, the information provided also enables TAFE Institutes to re-assess the structure of their courses so that they are more relevant to industry needs and especially, the needs of TAFE graduates.

This report represents the findings of the first phase of this longitudinal study of VET outcomes. The findings from this first phase of the study describe and speculate the whereabouts of a small sample of TAFE 'graduates' at six months after completion of their TAFE courses. Hence, it is very difficult to make any definitive conclusions about the outcomes of VET programs.

It is anticipated that the findings from the next two phases of this study will provide more information about the outcomes of VET programs. During these phases, information on the training and labour market mobility of TAFE graduates will continue to be collected. This information will consequently improve our understanding of TAFE courses and their effectiveness in meeting students' needs.

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