

Developing student agency through VET in schools: the role of structured work placements

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Abstract

Using a sample of 446 secondary students who had participated in a vocational education and training in school (VETiS) program, this study compares the experiences and perceptions of students who had undertaken a work placement with those who had not. The study shows that students who had participated in work placement enjoyed the VETiS experience more than those who had not, and that the work placement had assisted them in their decision whether to stay at school or not. A factor analysis of results showed a factor associated with self-confidence about employability, and a factor associated with assistance in achieving specific post-school employment. Students who had completed a work placement were significantly higher on both these factors than students who had not.

These results are consistent with other research in the field, and it is argued that the work placement experience plays a considerable part in developing student agency in the decisions and the journey that they make in their transition from school to work.

Introduction

As Malley et al (2001) have observed, the approach to the vocational education and training in schools (VETiS) program in Australia has been based on what they have called 'connecting vocational models'. That model comprises expanding general school-level education by incorporating into it significant opportunities for students to engage in vocational learning as part of their secondary school experience, using the same national qualifications and training frameworks derived through the post-school sector, and that are available to adult learners post-school. Malley et al observe that some of the strengths of the program include the involvement of students in structured workplace learning, and a combination of school attendance with workplace experience.

In a research program conducted in five Australian States and focussing on the experience of school students in workplaces, Misko (1998) observed that the majority of students involved in structured work placements found it to have definite benefits in terms of the experience that it had afforded and in their preparation for the world of work.

Misko's findings in relation to the student perception of their work placement are also evidenced by Velde and Cooper (2000) in their research on students participating in the New Apprenticeship Scheme while still at school in Queensland. Students in their study were drawn from business, horticulture and construction. Their findings show that

students valued the workplace experience and saw it as an opportunity for hands-on experience, as part of preparation for work, developing a broader knowledge of work, and increasing their options for employment. Similarly, in a longitudinal study of 58 students who engaged in work placements in an engineering environment while still at secondary school Smith, Henry and Munro (2002) reported that the placements had been successful in the development of 'dispositional workplace knowledge that increases employability; development of informed choice about career pathways; transition into apprenticeships and further study' (p.287). The Smith, Henry and Munro study generated both qualitative and quantitative data, and concluded that students involved in the work placements had broadly benefited in terms of propositional, procedural and dispositional workplace knowledge. In their study with students undertaking work placement in an engineering environment, Smith, Henry and Munro (2002) were able to report that 71 percent of the 58 respondents in their research had been successful in gaining an apprenticeship in the twelve months following the program, another 10 percent had achieved other forms of full or part-time employment; and 17 percent had gone into further study.

Other writers (Bloomer & Hodkinson, 2000; Evans & Furlong, 1997; Raffe, 2003) have pointed to the dangers involved in assuming that young people's transitions from school to work are somehow rather neat and linear. They provide argument that this linear experience is less common than policy-makers may believe, with large numbers of young people experiencing choppy and fractured transitions characterised variously by changing direction, by dropping out, by periods of unemployment and so on. There is also argument (Raffe, 2003) that transitional pathways need to recognise diversities among young people and their circumstances and need to provide experiences that form signposts that assist navigation. In those ways the agency of young people in their decision making can be enhanced. The opportunity to experience vocational studies at a secondary school level, in parallel with more academic experiences serves to increase those signposts through experience, and the opportunity to engage in work placement extends that experience further.

As Evans (2002) has suggested in her review of studies on youth transitions across a number of countries, there is a converging recognition that 'structural influences and the sense of agency and control displayed by young people as they move into adulthood' are crucially important considerations. Wyn and Dwyer (1999) have observed that young people are becoming more pro-active in making the choices they need to make to develop and secure their futures in a world that provides considerably less certainty, and in which structural influences play an important part.

The notion of agency as it is used in this paper is drawn from Evans (2002) and Emirbayer and Mische (1998) who conceptualise it as a process of social engagement which draws upon past habits and routines and where future opportunities and possibilities are developed in a context of opportunities presented at the time. Coupled with the notion of agency, Evans (2002) suggests that control is an important component in the exercising of envisaged opportunities. These control conceptualisations are strongly related in Evans' analysis to perceptions of one's own competence and capabilities that will serve to assist in the desired outcomes. In thinking about these

competencies and perceived capabilities it is useful to invoke New's (1995) model of three levels of competency. That model suggests that important competencies for successful engagement in workplaces include job specific competencies, general management competencies which are those enabling successful interaction with others in the workplace, and corporate competencies which relate to an understanding of and ability to work with the culture of a workplace.

The current research is based on a view that the work placement component available to students through some VET in Schools programs affords an opportunity for participants to develop competencies at each of New's three levels, and also provides opportunity to test those competencies. VET in Schools also provides a potential development of agency through the opportunity of work placement and a stronger sense of competency development and affirmation among participants.

The research project came through an opportunity to make some direct quantitatively based comparisons between the experiences and perceptions of VETiS students who had undertaken a work placement as part of their secondary school studies, and those who had not. The Enterprise and Career Education Foundation in Australia was conducting an Australia-wide survey of student work placement experiences, and the current researchers were able to ask questions additional to those in the national survey, and apply the enhanced questionnaire to VETiS student participants in a large regional city in the south-eastern State of Victoria. Students who had undertaken work placements as part of their VETiS experience were surveyed, along with students who had not undertaken a work placement.

Method

Students who were still at school and enrolled in VETiS in 2001 were surveyed, along with students of VETiS who had left school the previous year. 1228 students were sent the survey questionnaire through the mail, together with a reply paid envelope. There were 446 returns, representing a return rate of 36.3 percent.

The survey questions subject to analysis in this paper appear below in Table 1.

Table 1: Questions and forms of response used in the survey

Question	Form of response
1. Gender	Male/female
2. Age	In years at last birthday
3. School	Name of school attended for VETiS program
4. Year level in school	Year level during which VETiS program was undertaken
5. Do you enjoy school?	Yes/no
6. Name the VET program you undertook	Name of program
7. Did you enjoy VET?	Yes/no

8. Did your VET program help you to decide to stay at school?	Yes/no
9. What do you think about VET programs: 9a. Helped me decide on the industry where I want to work 9b. Assisted me to develop specific skills and experience for future employment 9c. Were not of any use to me 9d. Provided me with a better understanding of what employers want from me 9e. Were useful in getting me a job 9d. Were useful in getting me an apprenticeship 9g. Helped me prepare for university 9h. Helped improve my self-esteem	1 to 5 Likert scale: 1=Strongly agree 2=Agree 3=Uncertain 4=Disagree 5=Strongly disagree

Sample characteristics

Table 2: Sex and age characteristics of the sample

	Work Placement		No Work Placement	
	Male	Female	Male	Female
Number	158	118	111	57
Mean age	17.35	17.29	17.43	17.32

The age range of the sample was 15 to 19 years. At the time of the survey (2002) 132 students had left school in the previous year, and 313 were still at school. Two respondents didn't answer that question.

Students had undertaken their VETiS programs in twenty secondary schools across the region within which the research was undertaken. Enrolments were in twenty different VETiS areas, with the largest numbers being in engineering/automotive, business, construction, hospitality, information technology and sport and recreation.

For those undertaking work placements the majority were for 5, 10 or 15 days with a mean for males of 13.17 days, and for females 7.24 days.

Results

Comparisons were made between the two groups using a combination of non-parametric methods, such as Chi-square, and parametric methods such as MANOVA, as the data

allowed. A factor analysis was also completed for questions 9a to 9h, and factor score comparisons made using MANOVA.

Enjoyment of school

Whether or not students had completed a work placement had no impact on their enjoyment of school (Chi-square=1.24, df=1, NS). That result was true for both genders.

Enjoyment of VETiS

Students of both genders who undertook a work placement were significantly more likely to enjoy their VETiS program (Chi-square=5.30, df=1, p<0.05).

Decision to stay at school

Doing a work placement assisted participants in their decision on whether to stay at school or not (Chi-square=4.36, df=1, p<0.05). At the same time, students who had undertaken a work placement were just as likely to stay at school (or to leave school) as students who had not undertaken a work placement (Chi-square=0.109, df=1, NS).

What participants thought about VET programs

Differences between the groups on questions 9a through 9h were analysed through two-way MANOVAs since the data were in the form of Likert responses, and there was a likelihood of correlations between the responses to the different questions. The independent variables used in these analyses were sex and work placement or not. Table 3 shows the means for the responses to all eight questions. Recall here that a low score represents agreement with the question. Table 4 shows the MANOVA results for the four questions which yielded significant results.

Table 3: Mean responses to questions 9a to 9h by work placement by sex.

Question	Work Placement		No Work Placement	
	Male	Female	Male	Female
9a	2.02	2.11	2.13	2.24
9b	1.65	1.61	1.94	1.67
9c	4.37	4.40	4.14	4.31
9d	1.99	1.98	2.30	2.29
9e	2.10	1.99	2.45	2.42
9f	2.19	2.67	2.81	2.78
9g	3.15	2.73	2.77	2.73
9h	2.58	2.49	2.68	2.51

Table 4: Summary of MANOVA F-ratios for questions 9b, 9d, 9e and 9f

Question	Effect		
	Work Placement	Sex	Interaction
9b	5.13*	4.04*	2.04, NS
9d	14.12***	0.01, NS	0.00, NS
9e	12.79***	0.39, NS	0.12, NS
9f	9.99**	3.78, NS	4.78*

* p<0.05, ** p<0.01, *** p<0.001

The results of the MANOVAs shown in Table 4 indicate that:

- ?? Question 9b - Students who had undertaken a work placement were significantly more likely to agree that their VETiS program had assisted them in developing specific skills and experience for future employment. The significant sex effect in the MANOVA also indicates that boys were more likely to agree with that than were girls;
- ?? Question 9d - Students who had undertaken a work placement were significantly more likely to agree that their VETiS program had assisted them in developing a better understanding of what employers would require of them;
- ?? Question 9e - Students who had undertaken a work placement were significantly more likely to agree that their VETiS program would be useful in getting them a job;
- ?? Question 9f - Students who had undertaken a work placement were significantly more likely to agree that their VETiS program would be useful in getting them an apprenticeship. The significant interaction on question 9f indicated that females did not see that work placement was useful in helping them to get an apprenticeship, while males believed the work placement had a significant effect.

Factor analysis

The factor analysis was conducted on questions 9a through 9h. It was important that we establish the factorability of the data yielded by the survey. Coakes and Steed (1997) suggest a minimum of five subjects per variable, which has been handsomely achieved in this study. As also suggested by Coakes and Steed, we examined the factorability through an inspection of the correlation matrix, and through conducting the Kaiser-Meyer-Olkin Measure of sampling Adequacy and Bartlett's test of sphericity. A sizeable number (17) of the correlations in the matrix were larger than 0.3. The KMO test yielded a measure of 0.82, and Coakes and Steed recommend that this measure should exceed 0.6 to proceed with factoring. Bartlett's test of sphericity was significant well beyond the 0.001 level.

The model of factor analysis we chose was a principal components analysis with varimax rotation. We adopted a factor loading criterion of 0.40 for inclusion of the item in the interpretation, more stringent than Tabachnik and Fidell (1996), who suggest 0.32, and

consistent with Comrey and Lee (1992) who suggest the criterion should be set a little higher than 0.32.

The factor analysis yielded two factors, accounting for 56.09 percent of the variance. The factor matrix appears as Table 5.

Table 5: Factor loadings greater than 0.40 for questions 9a through 9h

	Factor 1	Factor 2
Eigenvalue	3.41	1.08
Percent of variance	42.6	13.49
Question		
9a	.72	
9b	.80	
9c	-.77	
9d	.56	
9e		.82
9f		.83
9g		.57
9h	.56	

We have interpreted Factor 1 as ‘Self-confidence about employability’ and Factor 2 as ‘Specific post-school outcomes’.

Using the regression method we also calculated factor scores for each respondent on each factor and conducted a two way (work placement by sex) MANOVA to identify any differences between the groups on the two factors. For Factor 1 students who had undertaken a work placement were significantly more likely to perceive it to have increased their confidence about employment ($F=4.01, p<0.05$); and there was no effect for sex, nor any interaction. For Factor 2 students who had undertaken a work placement believed it had enhanced their specific post-school outcomes ($F=5.41, p<0.05$); again, there was no sex effect nor any interaction.

Discussion

Taken together the results from this study show that students believe that work placement as part of their VETiS program has some clear positive influences. First, the results indicate that their enjoyment of the VETiS program was positively influenced by their work placement experience. At the same time, their enjoyment of school was not influenced by whether they had engaged in a work placement or not, indicating quite clearly that they distinguished between the influence of work placement on the VETiS program and their broader school experience. Those results are congruent with the previous research by Velde and Cooper (2000) which also showed that secondary students valued their work experience; and Misko’s (1998) study which showed that students had valued their work placements within a VETiS program. It is interesting that the enhanced enjoyment of VETiS had no ‘halo’ effect into the broader enjoyment of

school, which is probably due to the fact that the VETiS program is only a minority part of the school experience.

Work placement has also assisted students involved in it with their decision whether or not to remain at school. The most likely reason for that result is that the work placement gave them different insights into the area of work that they hoped to go into on leaving school. The influence of those insights formed from the work placement may have been to introduce them in a meaningful way to work that they had not engaged in before such that the experience gave them completely new information on which to base their decision; or it may be that the work placement served to confirm or disconfirm for them how much they were attracted to the particular form of work. The companion result that involvement in a work placement didn't influence the decision of whether or not to stay at school is particularly interesting here. The two results together indicate that the work placement experience formed an important component of student decision making, but didn't act as either encouragement or discouragement in staying at school. Interpreting this finding in a context of Raffe's (2003) concept that transitional pathways form signposts that assist navigation, it is possible that work placement provides an information base, or a navigational signpost, for students to place into a broader decision making process about the value of staying at school. This is likely to be through the provision of more detailed insights into the particular work they experienced, as well as the broader insights afforded into the world of work in general. This finding takes the research data available somewhat beyond the previous work by Misko (1998), Velde and Cooper (2000) and Smith, Henry and Munro (2002) in that it indicates that work placement doesn't just provide valuable skills for employment, and further insight into life in employment, but also provides valuable decision making information which may help to convince a participant that work in the chosen area is what they want, or that the work is not what they want. The influence of work placement on student agency and control in determining a component of their transitional journey seems present here.

The results of the questions answered on a Likert scale are also of interest in developing greater understanding of the influences of VETiS and work placement on students. It is noteworthy that the means for question 9c, which tested whether or not students felt the VETiS program had been useful to them, indicate that students were very positive about the program whether they had engaged in work placement or not. But additional to that finding, it is clear that boys felt that the work placement had been significantly effective in developing specific skills and experience for employment. At the same time, girls were not so convinced that work placement had had the same positive effect. While previous work by Misko (1998) and Velde and Cooper (2000) had shown the same perceived advantages of a work placement, that research had not shown a difference between the genders. There are a couple of possibilities here. First, the mean number of days that boys were in work placements was nearly twice as high as for girls, and that may explain why the experience for boys was so much more effective in their view. A second explanation may be that the sorts of work placements that girls were involved in were less likely to be those that they saw as being their eventual career, such that the skills they developed and the experience that they had were less useful. While that is a useful possible explanation, the data from the current study are not able to provide any

further analysis of that and further research on that possibility would have to be undertaken.

For both genders students who had undertaken a work placement were significantly more likely to view the VETiS program as useful in getting them a job, as has been shown in the previous research by Misko (1998), Velde and Cooper (2000), and Smith, Henry and Munro (2002). It is likely that the increased opportunities that they saw in getting a job were associated with specific skills that they had learned, along with the dispositional skills they had developed in a more general sense (New, 1995; Smith, Henry & Munro, 2002). It is likely that the development of workplace contacts during the placement would also have added a degree of confidence to them. Boys who had undertaken a work placement were also more likely to see that this would help them in gaining an apprenticeship, although for girls there was no such effect.

The results of the factor analysis are useful to discuss at this point. That analysis showed two very clear factors. The first was associated with self-confidence about their employability, while the second factor was associated with the achievement of specific employment outcomes. It is interesting that the factor analysis shows that participants in the research were grouping together the items associated with a general building of self-confidence about employability while, at the same time, quite distinctively grouping together those items that were related to how useful they felt their VETiS program had been in helping them to achieve specific post-school goals such as getting a job, an apprenticeship, or preparing for university. The distinguishing between these two broad outcomes of VETiS is an interesting result, and has resonance with previous research which has differentiated between dispositional outcomes such as confidence building, and utility outcomes such as occupational outcomes (Misko, 1998; Velde & Cooper, 2000). The factor analysis also serves to provide greater insight into the nature of student agency and control. It can be suggested that the structured work placement resulted in agency outcomes for students that would give them greater confidence in developing future opportunities; and greater levels of control in feeling more confident about their skills in activating opportunities as they arise.

The analysis of the scores for Factor 1 showed that students of both genders who had undertaken a work placement were significantly more confident about their skills for employment than were students who had not engaged in work placement. That confidence, through interpretation of the factor loadings, was associated with increased clarity about which industry they would wish to work in when they left school, their skills and experience they believed they would carry into employment as a result of their placement, their understanding of employer expectations of them, and an increased self esteem. In Smith, Henry and Munro's (2002) terms, this result can be interpreted to indicate that the work placement had provided students with greater confidence in the propositional, procedural and dispositional skills with a possible consequence of providing these students with an increased sense of agency in identifying and accessing opportunities.

Factor 2 scores indicate that students of both genders who had undertaken a work placement reported that their VETiS program had been significant in assisting them with post-school employment and training outcomes. These findings have some resonance with the previous research by Velde and Cooper (2000), who were able to report that their student participants had cited as an advantage of a VETiS program that 'it may lead to an apprenticeship or traineeship' (p.87). The result is also consistent with the finding in this current research that a work placement had been perceived by students as significantly effective in assisting them in their decision whether to leave or to stay at school. As an interesting further finding, 36 percent of students in the current study who had undertaken a work placement and who had left school had been offered a job with the employer with whom they had undertaken their placement.

Conclusion

The current research has shown that a work placement as part of a VETiS program at secondary level is viewed by students as a positive influence on their enjoyment of the program, and that there are positive effects in terms of their confidence about employment, and how much they believe it will assist them in getting post-school employment. The work placement was also seen to assist them in their decision to stay at school or to leave.

From those perspectives, work placement has been shown to have significant advantages in assisting young people towards a post-school decision, and the opportunity to develop insights into the world of employment at a general level, and insights into at least one specific form of employment. These outcomes of work placement provide students with a sense of increased agency and control over the decisions they make on eventual employment and on the processes they use to achieve those.

There may also be scope for policy makers to reconceptualise work placement not only as an experience of work, but also as a process that can provide at least some of the agency required by young people as they make their school to work transition. It is of concern though that work placements are not available to a larger proportion of VETiS students. Policy makers may need to develop strategies to enhance the motivations of employers to take part in work placement programs, and devise mechanisms to enable schools and other agencies to provide the administrative support required to place students and monitor them. There appears to be a need for these strategies and mechanisms to also address the disparity between the work placement opportunities of male and female students, since the mean number of days female students spend in work placement was shown to be only about half the number of days spent by male students.

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