

# Student Perceptions and Outcomes of Vocational Education and Training in Schools (VETiS)

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Submitted by

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# TABLE OF CONTENTS

Table of Contents	ii
List of Tables	vii
List of Figures	viii
List of Appendices	ix
Summary	x
Statement of Authorship	xi
Declaration of Ethics Committee Approval	xi
Acknowledgements	xii
Chapter 1 Introduction	1
1.1 Introduction	2
1.2 Introduction to VETiS	2
1.3 Background	3
1.4 Purpose of the Study	4
1.5 Statement of the Research Problem	5
1.6 Specification of Research Questions	5
1.7 Scope of Study	5
1.8 Definition of terms	7
1.9 Summary	8
Chapter 2 Literature Review	9
2.1 Introduction	10
2.2 Overview of a VET Study	11
2.3 Historical Context	13
2.4 VETiS and the VCE in Victoria	16
2.5 Participation in VETiS	18
2.6 Socioeconomic Status	19
2.6.1 Introduction	19
2.6.2 Measures of Socioeconomic Status	19
2.6.3 Socioeconomic Status and VETiS Participation	21
2.6.4 Socioeconomic Status and Student Achievement	23

2.7 Pathways of VETiS Students	24
2.8 Student Perceptions of VETiS	26
2.9 Career Advice and Perceptions of VETiS	29
2.10 Summary	31
Chapter 3 Methods	32
3.1 Introduction: The Research Problem	33
3.1.1 Specification of the Research Questions	33
3.2 Research Approach and Design	34
3.3 Research Methodology	35
3.3.1 The Setting for the Research	35
3.3.2 My Position in the Research	37
3.3.3 The Survey Instrument	37
3.3.4 Data Gathering – The Survey	38
3.3.5 Data Gathering – School Data Base	39
3.3.6 Data Gathering – Interview	40
3.3.7 Data Analysis	40
3.3.8 Validity Issues	41
3.4 Summary	42
Chapter 4: Results	43
4.1 Introduction	44
4.2 Number of Students undertaking VETiS at MSSC and the Socioeconomic profile	44
4.2.1 Measurement of Socioeconomic status	44
4.2.2 Socioeconomic Status of VETiS Students completing the Survey at MSSC	45
4.2.3 Socioeconomic Status of VETiS Students at MSSC	45
4.2.4 Socioeconomic Status of Students at MSSC	46
4.3 Post-Year 12 Aspirations of Surveyed VETiS Students at MSSC	48
4.3.1 Post-Year 12 Aspirations of VETiS Students	48

4.3.2	Post-Year 12 Aspirations by Gender	49
4.3.3	Post-Year 12 Aspirations by Socioeconomic Status	50
4.4	VETiS Subjects and Socioeconomic Status	52
4.4.1	VETiS Subjects with a VCAA Study Score	55
4.5	Reasons for the Decision to Undertake a VETiS Subject	56
4.5.1	Reasons for the Decision to Undertake a VETiS Subject - Enhance ENTER Score and SES	58
4.5.2	Enhance Enter Score and Subject Choice	59
4.6	Career Advice Given in Making the Decision to Study a VETiS Subject.	61
4.6.1	Advice Given by Parents in Decision of Undertaking VETiS and SES	62
4.7	Student Perceptions of VETiS by SES.	63
4.8	Interview Results	66
4.8.1	What is the Main occupation of Your Father? What is the Main Occupation of Your Mother?	66
4.8.2	What are You Thinking of Doing after Year 12?	66
4.8.3	Can You Tell Me why You Chose This Vocational Course?	67
4.8.4	Tell me About the Advice you Received Before Selecting a VETiS unit at BSSC. Was the Advice Useful?	67
4.8.5	Is the VETiS Unit you are Studying What You Expected? Can you Further Explain What You Mean?	67
4.8.6	If you had the Opportunity to Choose a VETiS Course again, and Based on your Experiences with your Current Course would you do so?	68
4.8.7	Other Comments	68
4.9	Summary of Interviews	69
4.10	Summary of Results	69

Chapter 5	Discussion of Findings	71
5.1	Introduction	72
5.2	Number of Students Undertaking VETiS and Socioeconomic Status Profile	72
5.3	Post-Year 12 Aspirations of VETiS Students at MSSC	73
5.4	VETiS Subjects and Socioeconomic Status	74
5.5	Reasons for the Decision to Undertake a VETiS Subject	75
5.6	Career Advice given in Making Decision to Study a VETiS subject	76
5.7	Student Perceptions of Existing VETiS study	76
5.8	Summary of Discussion	78
Chapter 6	Summary and Conclusion	81
6.1	Introduction	82
6.2	Background	82
6.3	Summary of Literature	83
6.4	Methods Used	85
6.5	Findings and Conclusions	86
6.6	Limitations of Study	88
6.7	Directions for Further Research	88
References		89
Appendices	Refer to CD in pocket inside back page	

## LIST OF TABLES

Table 1.1.	Definition of terms used in this study	7
Table 3.1.	Number of students enrolled in a VETiS area of study at MSSC during semester 2 2008	36
Table 4.1.	Socioeconomic status of surveyed VETiS students and total school population of VETiS students	46
Table 4.2.	VETiS subjects at MSSC and Subject Codes used in Figures 4.8 - 4.10	52
Table 4.3.	Subject profile based on SES tendency	54
Table 4.4.	Subject profile based on SES tendency with study score	55
Table 4.5.	2009 Scaling Report for VET VCE subjects ranked by aggregate total	60
Table 4.6.	VETiS subject ranking by scaling and SES profile of subject	60

## LIST OF FIGURES

Figure 3.1.	Graph of number of survey returns by VETiS study area	39
Figure 4.1.	Graph of SES of 108 survey respondents	45
Figure 4.2.	Graph of SES: Survey respondents and total VETiS students	46
Figure 4.3.	Graph of SES for total population of VETiS and non-VETiS at MSSC Semester 2 2008	47
Figure 4.4.	Graph of SES difference as a percentage of population for VETiS and non-VETiS students at MSSC	47
Figure 4.5.	Graph of intended destination of surveyed VETiS students	48
Figure 4.6.	Graph of destination aspiration by gender of surveyed VETiS students	49
Figure 4.7.	Graph of destination aspiration by SES of surveyed VETiS students	50
Figure 4.8.	Graph of SES and VETiS subjects (Section 1)	53
Figure 4.9.	Graph of SES and VETiS subjects (Section 2)	53
Figure 4.10.	Graph of SES and VETiS subjects (Section 3)	53
Figure 4.11.	Graph Reasons for decision of undertaking a VETiS Subject (First set of questions)	56
Figure 4.12.	Graph Reasons for the decision of undertaking a VETiS Subject (Second set of questions)	56
Figure 4.13.	Graph Reasons for decision of undertaking a VETiS Subject (Third set of questions)	57
Figure 4.14.	Graph of SES and reason for the decision of undertaking a VETiS subject to enhance ENTER score.	58
Figure 4.15.	Graph of advice given in undertaking a VETiS subject 1-4 options	62
Figure 4.16.	Graph of advice given in undertaking a VETiS subject 5-8 options	62

Figure 4.17.	Graph of parental advice and SES	62
Figure 4.18.	Graph of SES and VETiS student enjoys study	64
Figure 4.19.	Graph of SES and if VETiS student feels they are making progress	64
Figure 4.20.	Graph of SES and student understanding of competency based assessment	64
Figure 4.21.	Graph of SES and if VETiS subject is as expected	65
Figure 4.22.	Graph of SES and if student would recommend VETiS	65
Figure 4.23.	Graph of SES and if VETiS subject is as expected	65

## LIST OF APPENDICES

- Appendix 3.1 Survey tool
- Appendix 3.2 Interview questions & data recording tool
- Appendix 3.3 Enrolment tool MSSC
- Appendix 3.4 LaTrobe University Faculty of Education Ethics approval
- Appendix 3.5 Department of Education and Early Childhood Development Ethics approval
- Appendix 3.6 Parent/student Information sheet and informed consent forms
- Appendix 3.7 Survey results master – spreadsheet
- Appendix 3.8 Survey results sorted by SES status – spreadsheet
- Appendix 3.9 My VET in schools subject –spreadsheet
- Appendix 3.10 Whole school query VET vs non-VET – spreadsheet
- Appendix 3.11 Whole school VET query SFO by class – spreadsheet
- Appendix 4.1 VTAC study scores and Enter Scores
- Appendix 4.2 Interview responses

## **SUMMARY**

This is a report of an investigation titled *Student Perceptions and Outcomes of Vocational Education and Training in Schools (VETiS)*. A large Victorian regional senior secondary college, given the pseudonym Midlands Senior Secondary College, was the setting for this study. The project gathered data from three sources: a survey of students enrolled in a VETiS subject; the student enrolment data base for all students enrolled in either a VETiS or non-VETiS course; and individual interviews with a small focus group of VETiS students.

Students with a lower socioeconomic status were more likely to enrol in a VETiS subjects as compared with students with a higher lower socioeconomic status. A large number of students from the middle-upper to lower socioeconomic status classification undertook a VETiS study. Post-Year 12 aspirations of VETiS students were linked to socioeconomic status with most VETiS students, regardless of socioeconomic status, considering a post-Year 12 pathway that did not involve the work force directly. Students elected to study a VETiS course because they enjoyed some aspect of the study. The influence of peers and consideration of the student's ENTER score were not factors in their choice. Student perceptions of their existing VETiS course were favourable as students indicated that they enjoyed the VETiS subject and would recommend the study to others. VETiS students did not rate initial career advice highly, but students did seek some parental advice in making their pathway choice. The focus group indicated that they did not understand what VETiS involved when they were making their subject choice to undertake a VETiS study.

Further work is required to improve how students gain an understanding of Vocational Education in order to make an informed choice as to what pathway to undertake at senior secondary college.

## **STATEMENT OF AUTHORSHIP**

Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma.

No other person's work has been used without due acknowledgment in the main text of the thesis.

This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution.

## **DECLARATION OF ETHICS COMMITTEE APPROVAL**

All research procedures reported in the thesis were approved by Latrobe University, Bendigo, Educational Faculty Human Ethics Committee (Approval Number R018/08 dated 6/06/2008) and the Department of Education and Early Childhood Development (Approval Number SOS003849 dated 29/08/2008).

Signed:

Dated:

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# Chapter One

## Introduction

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## **Chapter One: Introduction**

### **1.1 Introduction**

This chapter is an introduction to the project *Student Perceptions and Outcomes of Vocational Education and Training in School (VETiS)*. The chapter begins by describing what is currently happening in Vocational Education and Training in Schools (VETiS) in the senior years of post-compulsory education in Victoria. A statement of the research problem is then given followed by specification of the research questions used in the study. The scope of the study is then outlined along with a rationale for the need for this investigation. The relevance and significance of the study to the training/educational practices of VETiS is also stated. A list of terms used is provided. The chapter concludes with a brief summary.

### **1.2 Introduction to VETiS**

VETiS refers to nationally recognised training that students can elect to study in their senior years of post-compulsory education. Within the Victorian curriculum the nationally recognised vocational educational qualifications have been developed into full programs of study within the Victorian Certificate of Education (VCE) and can contribute towards the achievement of the VCE. Fullarton (2001) stated that a key feature of secondary VETiS subjects is that they comply with the National Training Framework and form part of the students' senior secondary certificate. In the report that analysed characteristics of students who undertake VET programs Fullarton (2001) stated:

VET in Schools ideally promotes the concept of lifelong learning by presenting students with a picture of a world in which education and work are intertwined, providing them with opportunities to enter either work or tertiary education, or some combination of the two.

(p. 2)

As the name implies a VETiS program involves work education within the school educational setting.

### **1.3 Background**

In the State of Victoria, the VCE covers the final two years of secondary school. The VCE structure is flexible as students can elect to undertake Units 3 and 4 in Year 11 as well as Units 1 and 2 in Year 10.

VETiS was introduced into Victoria in 2001 within the VCE curriculum. VETiS subjects are offered within VCE units as outlined by the Victorian Curriculum and Assessment Authority (VCAA). The packing rules within the industry-based training packages are embedded within the corresponding VCE subject. Packing rules outline what units and prerequisites are required to complete a qualification. The ICA05 Information and Communications Training Package (Innovations and Business Skills Australia, 2009) states that “a training package is an integrated set of nationally endorsed competency standards, assessment guidelines and Australian Qualifications Framework (AQF) qualifications for a specific industry” (p. 57). Students will achieve units of VCE as well as, in many cases, completing a VET certificate. The most common level is Certificate II with some studies undertaking units from a Certificate III qualification.

Within this framework the Victorian Certificate of Applied Learning (VCAL) has also been introduced. VCAL is senior secondary school qualification available since 2002 with students required to complete a VETiS unit in order to qualify for the VCAL qualification. The VCAL sits alongside the VCE as an alternative for Years 11 and 12 students to develop practical work-related experience as well as literacy and numeracy skills. Students who enrol in a school-based New Apprenticeship (SBNA) can also complete VETiS units as part of their apprenticeship.

A VETiS subject is delivered by a trainer/teacher in a traditional classroom, but is competency-based with normally a component of work placement within the course. The VETiS trainer/teacher is required to hold a Certificate IV Training and Assessment qualification.

An added complexity is that students in some subject areas, although undertaking a competency-based qualification, can also elect to undertake VCAA assessment within Year 12 of the VETiS course and as such gain a study score for the VCE

component of their studies. The subject is in fact dual assessed. The study score is used to calculate the Equivalent National Tertiary Entrance Rank (ENTER) scores for university entrance.

Figures taken from the report into the 2006 Victorian Year 12 Cohort by Polesel and Teese (2007) indicate enrolments in the VETiS program at over 35,000 students. The report further states that “VET in Schools enrolment rates was highest in non-metropolitan Victoria and in regions with a low socioeconomic profile” (p. 1).

Students may make this choice of enrolling in a work-oriented competency-based subject in order to enhance their chances and ease the transition from school to work. Polesel (2001) stated “that the most obvious, yet most often neglected aspect of vocational education and training [is] its role in preparing young people for the workforce” (p. 333).

VETiS is now a significant component of post-compulsory education with a large cohort of students undertaking a vocational educational study.

#### **1.4 Purpose of the Study**

Why include a VETiS study in a student’s secondary study? This decision is based on a wide variety of reasons and preconceived ideas of what a VETiS study actually is. It is far more than a series of studies for students that are good with their hands.

This study aims to examine the reasons why VCE students make the decision to study a VETiS subject at a large Victorian regional senior secondary college and if student socioeconomic status is a factor in this selection.

Little research has been completed within the Victoria VCE education system on VETiS at the student response level. Most reports refer to VET students at the Technical and Further Education (TAFE) level or simply refer to the numbers of students undertaking VET and completion rates. Consequently, this study will contribute to a better understanding of VETiS.

## **1.5 Statement of the Research Problem**

This study aims to investigate why students chose to study VETiS and whether this subject selection is related to socioeconomic status.

## **1.6 Specification of Research Questions**

From a Regional Victorian perspective why do VCE students elect to study a VETiS unit? Is there a relationship between students undertaking of a VETiS subject and socioeconomic status?

Specific questions being investigated are:

- How do the percentage of VETiS students at MSSC compare to the State wide percentage and what is the socioeconomic status profile of VETiS students at MSSC?
- What are the post-Year 12 aspirations of VETiS students? Is there a socioeconomic link to post-Year 12 destinations for VETiS students?
- Is there any difference in the choice of a VETiS subject by socioeconomic status?
- Is there a relationship between the reasons why students chose a VETiS subject and socioeconomic status?
- What is the level of advice given in the decision to undertake a VETiS subject and is this related to socioeconomic status?
- Is there a relationship between how VETiS students view their VETiS studies and socioeconomic status?

## **1.7 Scope of the Study**

The study is centred in a large regional secondary college and, as such, the results could be generalised to inform the situation in other secondary colleges in Victoria. The study is limited to the Year 10 to Year 12 sector of secondary education and as such cannot be extrapolated to the Technical and Further Education (TAFE) sector. VETiS is only offered at the senior sector of secondary education. Within the TAFE sector, students study a VET certificate outside the constraints of the VCE, and this sector is beyond the scope of this study.

A large body of research has been undertaken covering the outcomes of VET post-formal school education such as apprenticeship and traineeships but little research has been undertaken at a senior secondary level within Victoria.

As such there is little formal research at a school-based level of the reasons why students undertake VETiS studies and whether there is a relationship with socioeconomic status within this cohort of students.

As outlined by Jenkins (2006) in a study of a secondary college in Queensland, she highlights the concern that the rapid growth of vocational education in schools has hampered the process of analysis and evaluation. At a school level the planning and implementation of the diverse subject offerings is often a response to immediate needs of a rapidly growing area. This study, *Student Perceptions and Outcomes of Vocational Education and Training in School (VETiS)*, endeavours to add further understanding to the factors influencing students who select a VETiS subject. Findings from this study may help to develop better understanding of, and to ensure positive educational and training outcomes for the cohort of VETiS students in the future.

## 1.8 Definition of Terms

A number of terms and acronyms are used in the area of vocational education and VETiS. Table 1.1 lists the terms and acronyms used in this study.

Table 1.1 Definition of terms used in this study.

Term	Definition
ABS	Australian Bureau of Statistics
ANTA	Australian National Training Authority
AQF	Australian Qualifications Framework
AQTF	Australian Quality Training Framework
Certificate I to VI	Qualification level at Senior Secondary Certificate of Education in Vocational Education and Training Sector
Competency Standard	Nationally agreed, industry developed statements of the competencies required for effective performance in a
DEST	Department of Education, Science and Training
ENTER	Equivalent National Tertiary Entrance Rank
FOS	Family Occupation Status
HSC	High School Certificate
NCVER	National Centre for Vocational Education Research
NTIS	National Training Information Service
Packing Rules	Grouping units of competency that receive recognition as a AQF qualification
RTO	Registered Training Organisation
SBNA	School-Based New Apprenticeship
SEIFA	Socioeconomic indexes for Areas
SES	Socioeconomic Status
TAFE	Technical and Further Education
Training Package	Specify which competency standards make up the qualifications for a particular industry
VCAA	Victorian Curriculum and Assessment Authority

VCAL	Victorian Certificate of Applied Learning
VCE	Victorian Certificate of Education
VET	Vocational Education & Training
VETiS	Vocational Education and Training in Schools

## 1.9 Summary

The purpose of this study is to investigate why VCE students elect to study a VETiS unit and to determine if there is a relationship with socioeconomic status. Students elect to study a VETiS subject based on various considerations. It is important for schools to understand the cohort of students undertaking such a course in order to develop meaningful strategies to assist in subject selection and development. This also may ensure enhanced training and educational experiences for this group of students.

Chapter Two will provide a literature review covering a brief history of Vocational Education and Training in Australia as well as a review of the issue of socioeconomic status and VETiS. The methods used are outlined in Chapter Three. Data collection for a sample of VETiS students is then carried out. The results of the survey are presented and compared to whole-school data in Chapter Four. Further discussion of these results and the implications are covered in Chapter Five. A summary and review of the overall project is reported in the concluding chapter.

# Chapter Two

## Literature Review

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## **Chapter Two: Literature Review**

### **2.1 Introduction**

This chapter is a review of the current literature covering VETiS as well as a review of methods to measure socioeconomic status. The link between socioeconomic status and the VETiS cohort is also reviewed in the literature. The chapter initially places VET into a historical context. The importance of socioeconomic measures is then examined with a review of the standard methods of measuring socioeconomic status. The relationship of socioeconomic status and education in schools is examined with reference to student outcomes. The literature is further reviewed in relation to socioeconomic status and the VETiS. Finally, current studies in the VETiS field are reviewed along with student outcomes and student perceptions. A summary of this literature review will conclude the chapter.

## 2.2 Overview of a VET Study

The Vocational Education and Training (VET) system provides training that is based on skills and competencies. The system provides training across a wide variety of subject areas and is linked to industry by way of national industry competency standards. In the report *Courses and Students* by the National Centre for Vocational Education Research (NCVER, 2008) that reviewed training statistics, students and courses, the scope of the training system was outlined:

The system provides training for students of all ages and backgrounds. Students have many options for training and may study individual subjects or full courses that lead to formal qualifications. Training takes place in classrooms, in the workplace, online and through other flexible delivery methods. Providers of vocational education and training in Australia include not only Technical and Further Education (TAFE) institutes, but also universities, secondary schools, industry organisations, private enterprises, agricultural colleges, community education providers and other government providers. (p. 3)

Australian VET courses offer a wide range of training in areas such as business studies, multimedia, music skills, community services and hospitality. VET courses provide students or trainees with skills sets that are based on industry standards. *Training Packages @ Work: Back 2 Basics* (2007) published by the Department of Education and Training and the Arts, explains that skills sets, called national industry competency standards, have been developed based on the requirements of the relevant industry. They are “a clearly defined statement of the skills and knowledge required by an individual to meet industry needs or a licensing or regulatory requirement” (p. 41).

VET programs are examples of competency-based training. Harris, Guthrie, Hobart and Lundberg (1995) described competency-based education as a “certification based on attainment of competency rather than time-based completion of a course or training program” (p. 24).

The competencies within a VET unit are vocationally based. As outlined in the TAA04 Training and Assessment Training Package (Innovations & Business Skills

Australia, 2005), vocational competence “refers to the particular set of skills, knowledge and experience required for a given area of work in an industry and can relate to industry-related technical skills and subject matter expertise” (p. 11). Mayer (1992) as quoted by Adams and Boote (2005) identified a set of generic competencies that are considered essential for workers to effectively contribute in any work place. These competencies are now the backbone of all training packages. The seven key competencies as identified by Mayer (1992) are “collecting, analysing and organising information, communicating ideas and information, planning and organising activities, working with others and in teams, using mathematical ideas and techniques, solving problems and using Technology” (p. 15). Mayer (1992) further developed the key competencies concept into three levels of performance that reflect the complexity of work activities. As work activities become more complex a higher level of qualification is required and is acknowledged through awards such as Certificate II through to Diploma. As a result three levels of performance exist within each of the seven key competencies.

For example in the ICA05 Information and Communications Technology Training Package (Innovations & Business Skills Australia, 2009) Mayer’s key competencies have been embedded within the units of competency. Within the training package ICA05 (2009), these “are clustered into 1 of 9 fields as follows: Analyse and Design, Build, Documentation, Implement, Strategy Planning, Support, Team work, Test and Use” (p. 64). These nine fields relate directly to the seven key competencies as developed by Mayer (1992). This is applicable in all certificates within the VET sector of education throughout Australia. Therefore there is a commonality within all training packages.

## 2.3 Historical Context

Vocational education and training in Australia began with the First Fleet. Robinson (2007) linked vocational education with convict transportation. The First Fleet data base as edited by Wills (2000) includes details of the trade of some of the convicts. The types of trades that would have been included in an apprenticeship or guild structure include baker, cabinet maker, farrier, shipwright, silversmith, stonecutter, stonemason, surgeon and tailor. These trades were to become the backbone of the new colony and further vocational education becoming essential for the colony's development. Robinson (2007) outlined the complex and demanding nature of an apprenticeship in the 1800s as:

Early Australian apprenticeships lasted nine years and the contract of training at that time was more complex than that of today, and certainly contained more data items on it. For example, potential apprentices had to pledge that they attended church on Sundays and that they wouldn't misbehave generally. (p. 6)

For over a hundred years until the 1960s VET training in Australia related to the traditional male trades such as plumbers, electricians and construction workers. In the 1960s and 1970s there was an emergence of communication and finance industries. The more traditional industries started to decline with more women receiving an education and entering employment.

Robinson (2007) highlights that the most important report ever released, relating to vocational education in Australia was chaired by Myer Kangan. The 1974 Kangan report *TAFE in Australia* is the basis of the current Technical and Further Education (TAFE) system in Australia. Kell (2006) Chair of the TAFE Futures Inquiry outlined the outcomes of the Kangan report as:

required to take account of manpower requirements and the emerging needs of industry commerce and governments as they adjust to technological, economic and social change, it also looked at community attitudes and the needs and aspirations of individuals seeking to undertake courses in technical and further education. The outcomes of the ACOTAFE,

widely known as the Kangan Report, included greater access for women, migrants and other minority groups to further education. The Report also foreshadowed a broader purpose than technical training and signalled an emphasis on further education. (p. 7)

The Kangan report (1974) recognised the importance of TAFE as an integral part of the nation's education system with the primary role of training being the development of the individual rather than the development of skilled manpower. Pickersgill (2004) considered the Kangan report as a “milestone of great and enduring significance ushering in the modern era of TAFE in Australia, defining TAFE as an alternative sector of education and delineating the general role for the current VET sector in Australia” (p. 37).

Until the late 1980s when technical colleges were abolished in Victoria, a split system of education existed between the high schools and the technical schools. Brown and Sutton (2008) stated the rationale for this divide was “that the more academically orientated students went along to high schools and had their chance of entry to university and later the professions, while technical schools educated for the workforce in preparation for entry into manual trades” (p. 2).

In 1986 the Victorian government endeavoured to overcome the inequities of the dual system forming a single secondary system. The dismantling of the split system was linked to the Blackburn report by Pritchard and Anderson (2006) “when responsibility for delivering all senior secondary education to young people was transferred to secondary schools following the Blackburn Report” (p. 3).

A new Certificate of Education for Victoria was developed. The main reason for the introduction of the Victorian Certificate of Education (VCE) is outlined by Brown and Sutton (2008) as

part of numerous reform strategies, [where] work begun on developing and implementing the new Victorian Certificate of Education (VCE). This was implemented in 1991-92 to replace the then cumbersome, and what was considered by many as the overly academic, High School Certificate (HSC) that marked the end of Year 12. (p. 2)

This change in the educational landscape, along with an increase in youth unemployment which peaked at 24% in 1992 (Smith, 2004), led to an emphasis on

youth issues and school to work transition problems. During this period between 1978 and 1995 about half the full-time jobs for young men between the ages of 15 to 19 disappeared (Brown and Sutton, 2008). There was a common belief that if young people were properly prepared for work, they could find jobs (Smith, 2004). This resulted in considerable pressure being placed on post-compulsory education in Australia with increase in retention rates. Smith (2004) stated the problem that schools faced

the increase on retention rates not only created pressures on school resources, but also delivered to the care of schools a large number of young people who would not in previous decades have still been at school and whose interests tended not to be academic. (p. 562)

It was within this educational environment that VETiS was originally instigated in Victoria in 1994 (Brown and Sutton, 2008). Pritchard and Anderson (2006) outlined that governments

pursued two key policy goals through the Vocational Education and Training (VET) system to promote improved national economic growth and social cohesion, specifically: the creation of an industry driven VET system and a substantial increase in participation rates in post-compulsory education and training, particularly of young people. (p. 1)

The late 1990s saw the development of Australian Apprenticeships, the National Training Framework, the introduction of VETiS and the development of Training Packages. In 2004 the role of ANTA was transferred to the Department of Education, Science and Training (DEST). In 2006 the Australian Quality Training Framework was reviewed to create national guide lines. Therefore a VETiS qualification completed in a Victorian school would have the same standing as the same qualification being completed in another state. As reflected by the historical context, the nature of Vocational Education in Australia has and will continually develop in response to employment conditions.

## 2.4 VETiS and the VCE in Victoria

In the report *VET in Schools 2005* by the National Centre for Vocational Education Research (NCVER, 2008) a VETiS program allows students to combine vocational studies within their general education. The report states

Students participating in VET in Schools continue to work towards their senior secondary school certificate, while the VET component of their studies gives them credit towards a nationally recognised VET qualification. The program may involve structured work placements and includes the options of a school-based apprenticeship and traineeship or VET subjects and courses. (p. 8)

The report *VET in Schools Pathways, the 2004 Year 12 Cohort*, (Department of Education and Training, 2006) outlines what is considered to be a VETiS course.

A Vocational Educational and Training course is considered to be a VET in Schools course if the course completes or partially completes, that is gives credit within a recognised qualification that is covered by the Australian Qualifications Framework (AQF). The course is also taken as part of a senior secondary certificate. (p. 3)

Polesel (2001) explored the introduction of VETiS into the VCE in Victoria with the accredited VET content being embedded into subjects that form part of the VCE. This allows students to study a VETiS qualification with credit gained towards the VCE Certificate. The nationally accredited VET qualification is an entry level qualification such as a Certificate II.

The *VCE VET Information Technology Assessment Guide* (Victorian Curriculum and Assessment Authority, 2007) outlines the background into the development of VCE VET study scores. The Victorian Curriculum and Assessment Authority (VCAA, 2007), then the Board of Studies (BOS), undertook a series of steps to align the status of a VET program with the VCE. "Students who complete a VCE VET study receive equal recognition for their achievements in VET programs within the VCE" (p. 1). Students can, during their second year of VETiS study, gain a study score by completing assessment tasks.

Brown and Sutton (2008) stated the methodology for dual assessment as being: dual assessment that both assesses competency, and which synthesises evidence gathered from a range of different tasks with an exam, leading to a Year 12 study score that can be used for comparison purposes to obtain university entry, the Equivalent National Tertiary Entrance Rank (ENTER) score. (p. 4)

Brown and Sutton (2008) further describe VCE VET in Victoria with 30 programs being on offer for students. The six most popular VCE VET programs are Hospitality, Sports and Recreation, Information Technology, Building and Construction, Automotive and Business.

There are fourteen programs for which scored assessment can be undertaken by students:

- Business Administration;
- Community Services;
- Dance;
- Electrotechnology;
- Engineering Studies;
- Equine Industry;
- Financial Services;
- Furnishing;
- Hospitality;
- Information Technology;
- Laboratory Skills;
- Multimedia;
- Music Industry;
- Sport and Recreation which include Community Recreation and Outdoor Recreation (Scored Assessment for VET subjects, VCAA, 2009).

## 2.5 Participation in VETiS

The increase in participation in secondary schooling of VETiS in Australia has been highlighted by Coates and Rothman (2008) in that

70 percent of schools offered VETiS in 1997; this grew to 87 percent in 1999 and over 95 percent in 2005. Over the same period there was a strong growth in the number of students participating in VETiS, which rose from only 16 percent in 1996 to 38 percent in 2000 (p. 1).

*VET in Schools 2007* (2009) is published by the National Centre for Vocational Education Research (NCVER) annually giving details of participation in VETiS courses. The report states that the current participation rates of students enrolled in a VETiS subject have levelled. The report stated that for Australia “in 2007, there were 174,800 VET in Schools students, representing 33.4% of school students undertaking a senior secondary certificate” (p. 1).

*VET in Schools 2007* (2009) also states that “VET in Schools students comprised a higher proportion of females (49.2%), compared with the proportion of female 15 to 19-year-old students enrolled in the public VET system (44.1%)” (p. 6).

Coates and Rothman (2008) reviewed the groupings of subjects that were studied by VETiS students based on gender:

Males more frequently studied in the learning areas of Technology, Computing and Health and Physical Education, while females were more frequently enrolled in Home Economics Business Studies and the Arts.  
(p. 1)

The number of VETiS subjects that schools can offer to students varies greatly and can be aligned to the traditional learning areas. The rate of completion is also stated by Coates and Rothman (2008) as “61.9% of enrolments in VET in Schools subjects resulted in a pass, either through assessment, recognition of prior learning or recognition of current competency” (p. 6).

The *VET in Schools 2007* (2009, p.7) also gave details of the number of VETiS students as a percentage of school students by state and school type. For Victoria the percentages are: Government schools 29.2%, Catholic schools 24.2%, and Independent schools 15.4%. Based on the literature a VETiS student will most likely have the following profile, a male enrolled in a Government school and is

studying either one of the following: Technology, Computing, Health or Physical Education. Only 30% of his follow students would be studying a VETiS and he has only a 60% probability of completing the course.

## **2.6 Socioeconomic Status**

### **2.6.1 Introduction**

Socioeconomic status is closely linked to education and student outcomes. The relationship between family socioeconomic status (SES) and academic performance of children is well documented by research (Considine and Zappala 2001). Foley (2007) states “research has found that students from higher socioeconomic backgrounds have greater participation and achievement in these education sectors than students from lower socioeconomic backgrounds” (p. 7).

### **2.6.2 Measures of Socioeconomic Status**

SES is not an easy concept to measure and, as depending on the method of data gathering available to the researcher, and also to what use the SES measurement is going to be put, differing methods of SES determinations can be used. Marks (1999) highlight the issue by saying “although there is almost universal agreement on the importance of socioeconomic status there is little agreement on its conceptualisation and measurement” (p. 2).

The methods of determining SES is dealt by Foley (2007) with the gathering of data on educational, occupational and economic attainment such as income level, occupational status, and employment status. SES data can be gathered by two distinct methods: individual data and aggregate data. Foley (2007) outlines the two methods as:

- Individual data being obtained directly by means of participant surveys or as part of the educational enrolment process.
- Aggregate data obtained from a collective population within a certain geographical area.

Ainsley and Long (1995) criticised the individual approach as being expensive, complex and time consuming. But the aggregate method is not without problems as the key assumption as stated by Linke, Oertel and Kelsey (1988) “is based on

the assumption that people tend to live in areas of comparable housing quality, amongst others of broadly similar occupational, educational and income attainments.” (p. 12). On a study into SES and school system enrolments by Mukherjee (1999) the use of aggregate data was used based on the Socioeconomic indexes for Areas (SEIFA).

The Australian Bureau of Statistics (ABS) constructed five such indexes based on the 1996 Census of Population and Housing called the Socioeconomic Indexes for Areas (SEIFA). These indexes relate to the socioeconomic conditions in an area, the smallest of which is the census Collection District containing about 250 dwellings. (p. 1)

Mukherjee (1999) used data sets compared on the basis of each census Collection District to calculate an aggregate SES score. This use of aggregate data based on about 250 dwellings may not be appropriate as there is the possibility of students who undertake VETiS courses will travel from their collection district in order to attend VETiS training.

Foley (2007) declared that despite criticisms of aggregate data, it “remains the most appropriate method for analysing socioeconomic status in large data collections. It has been widely applied to student data in the school, higher education and, to a limited extent, the VET sectors” (p. 11).

Graetz (1995) diffused the debate about the choice of methods by claiming that, the results of SES studies and student outcomes remain the same, irrespective of how the SES data was measured.

What data gathered either individually or in an aggregate manner relates directly to the SES index can be derived from codes assigned to parental occupations (Foley, 2007; Marks, 1999; Rothman, 2003). Marks (1999) investigated the method of SES determination within the Longitudinal Surveys of Australian Youth (LSAY) project. In the analysis of the LSAY data the fathers’ occupation status followed by the mothers’ occupations status or which ever is the highest is used as a determination of SES. Rothman (2003) used this method within a LSAY project in which four occupational groups were used being:

- Group I managers and administrators, professionals and associate professionals;

- Group II clerical, sales and service workers;
- Group III tradespersons and related workers;
- Group IV intermediate production and transport workers, and labourers and related Workers, (p. 2)

The measurement of SES within a student population can be undertaken using the proposals as outlined by Marks, McMillian, Jones and Ainsley (2000) in a report on *The Measurement of Socioeconomic Status for the Reporting of Nationally Comparable Outcomes of Schooling*. The first proposal is that “individual level rather than area based measures of socioeconomic position are preferred for monitoring of the relationship between Socioeconomic Status and educational outcomes” (p. 4). The second major proposal relates to how to measure the SES position as “best measured by data on parental occupation and education” (p. 5).

### **2.6.3 Socioeconomic Status and VETiS Participation**

Foley (2007) states the link between SES and VETiS as:

a strong relationship between VET participation and socioeconomic status. VET participation rate is greatest in low socioeconomic areas (12.7 students per 100 population), which is significantly higher than the national participation rate (10.8%). In contrast, high socioeconomic areas recorded a significantly lower participation rate (8.7%) by comparison with the national average and other socioeconomic regions. (p. 28)

Work by Dalley-Trim, Alloway and Walker (2008) suggest that VETiS programs attract low-achieving students, those from non-English speaking backgrounds, those residing in rural areas, those attending government schools and those whose parents did not have a tertiary education. Students from low socioeconomic backgrounds are also more likely to participate in these programs, and these students are also less likely to apply to university than their non-vocational peers. (p. 56)

VETiS programs are therefore thought to cater for students from lower socioeconomic backgrounds and are less likely to undertake a university study post-Year 12. Fullarton and Ainley (2000) support this view as “students from disadvantaged backgrounds tend to participate in courses that lead to vocational

education and training or more often to entry into the labour market without any further formal education or training" (p. 1). Fullarton and Ainley (2000, p. 37) linked the reason why this cohort of students undertakes a VETiS study as being vocationally orientated and a support in gaining employment. Therefore participation in a VETiS program is linked to a student characteristic, with the greater take up of VETiS being within lower socioeconomic status background students.

Foley (2007) questioned this traditional view of VET as "no research has examined the relationship between VET participation and socioeconomic status using the NCVER national data collection" (p. 7). He carried out a national analysis of VET participation, reaching the conclusion that there is a considerable variation in VET participation across Australia (Foley, 2007, p. 28). Although the study by Foley (2007) is based on VET overall, not just VETiS, his conclusions were:

VET participation rate is greatest in low socioeconomic areas (12.7 students per 100 population), which is significantly higher than the national participation rate (10.8%). In contrast, high socioeconomic areas recorded a significantly lower participation rate (8.7%) by comparison with the national average and other socioeconomic regions. (p. 28)

In conclusion, the strongest involvement in VETiS comes from a cohort of students from a rural area of lower socioeconomic status with parents of lower educational backgrounds.

## 2.6.4 Socioeconomic Status and Student Achievement

The relationship between socioeconomic status and student achievement is also to be considered. It appears that students with a lower socioeconomic status tend to select a VETiS course in preference to students of higher socioeconomic status, but the question of achievement in a VETiS course is also to be considered. Foley (2007) found that

students living in low socioeconomic areas not only have high participation in the VET sector, but also achieve 'better than average' results. Students from low socioeconomic areas achieved a higher proportion of qualifications issued (30.5%) than their share of total enrolments (28.8%).  
(p.28)

This conclusion is also supported by Polesel, Helme, Davies, Teese, Nicholas and Vickers (2004) who reported that the academically weakest students who are often from the lower SES grouping have, "rates of progression to further study [that] were stronger than for non-VET students" (p. 19). This was not supported by Rothman (2003, p. 12) who has reported that there is a decline in the influence of SES when the relationship between SES and academic achievement is considered. Overall this is not supported by the literature as there appears to be a strong link between SES and school achievement. Students from a higher SES are represented to a greater number in more advanced studies such as University and Certificate IV studies.

## 2.7 Pathways of VETiS Students

Within the senior school years there has been an increase in the breadth of curriculum offered to students. The inclusion of vocational education programs is now a major part of the school curriculum. VETiS and traineeships are now embedded into the senior secondary school curriculum. Polesel et al. (2004) links schools with a “strong commitment to VET [as being] better placed to offer a range of curriculum programs and careers advice and support relevant to the diverse needs of young people” (p. 51). Most schools have recognised the need to provide a varied curriculum to cater for the diverse range of students who attend. Coates and Rothman (2008, p. 2) in their report *Participation in VET in Schools* reported that in 2005 over 95% of secondary schools offered some form of VETiS with over 49% of all senior secondary students in 2004 being enrolled in subjects that contributed to a Certificate II or Certificate III qualification. The integration of VETiS into the senior school curriculum has meant that students who elect to undertake a VETiS study do not exclude themselves from undertaking a university course post-Year 12. The VCE VET Information Technology Assessment Guide (Victorian Curriculum and Assessment Authority, 2007) outlines the method for allowing VETiS students to achieve a study score. The study score then can contribute towards the “Equivalent National Tertiary Entrance Rank (ENTER) [that] is calculated by VTAC for use by tertiary institutions in selecting candidates for entry to courses” (p. 3).

Knoo and Ainley (2005) investigated outcomes of VETiS students post-Year 12. They estimated one in five male VET graduates enter university, compared to three in ten female VET graduates who entered university. Knoo and Ainley (2005) drew the conclusion that “This further strengthens the case for VET as a strong and broad platform for entry into various post-schooling destinations” (p. 15). Undertaking a VETiS subject no longer removes the option of undertaking a university study, provided the option of being able to gain a study score exists within the study. The students who elect not to undertake a VETiS study as Polesel et al. (2004) identified, come from an academic pathway. The main reasons for students not enrolling in a VETiS study “seem[s] to be associated with the

academic, university-oriented pathway of the student's program. They include the need to concentrate on academic courses and a view that, because they are going to university, they do not need VET" (Polesel et al. 2004, p. 53).

Students who are academically orientated may also have a complete course of academic subjects at senior secondary that doesn't allow for the option for a VETiS study to be included.

Polesel et al. (2004) also investigated the trends as to what types of certificates were studied by students post-Year 12. It was found that

students who graduated from 'mainstream' programs in their senior certificate were more likely than their VET in Schools peers to enter at the higher level (certificate IV and above), a finding which may reflect their more academic orientation at school. (p. 57)

The pathways for students who are not academically orientated also are to be considered. VETiS graduates as determined by Polesel et al. (2004) are also more likely to be in the labour force post-senior secondary studies, with

unemployment rate being lower than that of their non-VET in Schools classmates. Despite a greater likelihood of entering the labour market without further study, they were less likely to be unemployed – a finding which confirms the value of VET in Schools as a tool for accessing jobs and also highlights its flexibility in helping students access a range of post-schooling destinations. (p. 56)

This is contrasted to some extent by findings by Anlezark, Karmel and Ong (2006) in that the ease of transition to work varies to some extent as to when it actually occurs:

transition for school VET students who leave school after Year 11 is certainly smoother than those who do not participate in school VET programs. However, the gain is soon diminished over time. For students who complete Year 12, we see no benefit from participation in school VET programs. (p. 8)

The post-senior secondary schooling outcomes for the two groups, VETiS and non-VETiS was highlighted by work done by Polesel et al. (2004) as "non-VET students were approximately twice as likely to go to university as VET in Schools

students, the VET students fully compensated for this difference with much higher rates of transition to VET and to apprenticeships and traineeships” (p. 53).

As the key competencies, as identified by Mayer, are embedded in all training packages it is more likely that students undertaking a VETiS course within the Secondary school system would demonstrate improved transition of school to work compared with non-VET in schools students due to their exposure to the vocational competencies.

## **2.8 Student Perceptions of VETiS**

Dalley-Trim, Alloway and Walker (2008) stated that issue of the lack of understanding of student perceptions of VETiS in the early years was due to “research into students perceptions of VETiS and the factors influencing their decisions for perusing or not perusing, VET pathways while at secondary school has until quite recently been limited” (p.57). Thus student perceptions of a subject can be linked to the reasons why students enrol or not enrol in a subject.

Ainley, Jones and Naveratnam (1990) determined that four main reasons for subject choice existed for students in Year 11 and 12. These four reasons were: being relevance to work, requirements for further study, enjoyment and interest and usefulness and practicality. In summary the report concluded that

choice of subjects in many subject areas was more influenced by enjoyment and interest than other factors but that choices in the mathematics, physical sciences, physical education, computer studies and economics and business subject areas were more influenced by perceived future requirements of work or further study. (Ainley, Jones and Naveratnam, 1990, p. 107)

Alloway, Dalley, Patterson, Walker and Lenoy (2004) in a survey of Vocational and Technical Education (VTE) reported that “current secondary students aged 15-19 years identified the following as triggers to participation in VTE: future job opportunities (81%), a recognized qualification (73.1%) and interesting subjects (77.3%)” (p. 19).

Research completed by Polesel, Teese, Lamb, Helme, Nicholas and Clarke (2005), investigated the destination and satisfaction of 2004 HSC VET students in New

South Wales. This major survey tracked the progress of over 6000 post-Year 12 students who had studied a VET subject as part of their HSC.

A series of 20 questions were generated by Polesel et al. (2005) which will form the basis of several questions asked in this study. Former HSC students were asked questions that related to experiences at school in both VET and non-VET subjects. Results from the study by Polesel et al. (2005) found that former VETiS students “unequivocally endorse[d] the value of their VET in schools subjects” (p. 4). As part of the survey students were asked to indicate their main reasons why they undertook a subject. The reasons outlined by Polesel et al. (2005) included “relevance to work, requirements for further study, enjoyment and interest, getting good marks, tertiary entrance score rules, not being able to do the subjects desired, parents and teachers’ advice, being with friends, tertiary entrance, usefulness and practicality” (p. 105).

Porter (2006) added to this discussion outlining reasons as

students found VET subjects interesting, were good at them, liked them and preferred practical subjects as they were more ‘hands on’ and were perceived to be more suited to their academic ability. Factors relating to future aspirations included: VET subjects allowed experimentation of career paths and informed decisions on future careers and could offer a head start in a chosen job or career. (pp. 17-18)

Dalley-Trim et al. (2008) in the study of secondary School student’s perceptions and factors influencing their decision-making in relation to VETiS carried out focus groups interviews of Years 10 and 12 students in public secondary schools in Queensland, Western Australia and New South Wales. The following are some student perceptions from the focus groups.

- The fun factor

Students from all three states stated that VETiS studies were fun, enjoyable and exciting. They compared VETiS subjects to “the boring traditional year 11 and 12 studies” (p. 63).

- A Ticket to ride

VETiS subjects were considered by students to give them a head start in their future lives by providing a qualification and offer links into the TAFE

system. "VETiS is also seen as a back up qualification that students could fall back on" (p. 63).

- A change in pace

VETiS was seen by many students to be a change in pace in their study program. VETiS subjects were more likely to be taken as a subject to be less demanding. "This view was typified in interview with a group of Year 10 non-academic males from a lower SES school when they were questioned as to why students would choose to enrol in a VET subject" (p. 64).

- Why not do VETiS

Many students expressed negative perceptions and experiences of VETiS subjects. This was expressed across all schools and all SES groupings. "The key reason identified by students for not enrolling in VETiS is centred on the issue of the status of VET" (p. 65).

- Those who can't do VET.

Students clearly expressed the opinion that VETiS was for the non-academic student. "VET was for the non-academic "doers" of physical and undervalued work; while in contrast, non-VET subjects were for the doers of valued and mentally rigorous work" (p. 65).

Students who were undertaking academic, university-orientated studies and expressed negative perceptions of VETiS as a pathway were also investigated. Polsel et al. (2004) found that students who did not enrol in a VETiS program were associated with the academic, university-orientated pathway. "The perception that VET will not help their career choices is also strong" (p. 53). This may be a perception problem of the worth of VETiS as several studies have highlighted the number of VETiS students who access the university pathway post-senior secondary studies. This view was also discussed by Dalley-Trim et al. (2008) in that "Students spoke of VET subjects as being a waste.... and perceived them to be subjects that won't get you anywhere. VET was seen to be easier - and thus devalued - because they're courses that you can do without studying" (p 66). The perception of VETiS of its status and usefulness appears to be linked to the importance of university entrance scores for the more academically orientated

student although the majority of students enrol in a VETiS subject because they feel that they would enjoy the subject and also have an interest in the area.

## 2.9 Career Advice and Perceptions of VETiS

There is a strong interest and focus on VETiS and its place within the school curriculum. For students to elect to enrol in a VETiS subject an understanding of what the subject involves is required in order to make an informed decision. Students seek career advice from many sources such as parents and teachers. Polesel et al. (2004) reviewed the function of career education and guidance to “work more effectively for those students who go on to further study in university or TAFE” (p. 61). Many students, as indicated from the *On Track Survey 2008* (Department of Education and Early Childhood Development, 2009) data, move from a VETiS course to employment and these students may not be getting adequate advice. Rothman, Hillman, Curtis and McMillian (2008) suggested that “students make their decisions based on the degree of match between their own attributes and certain perceived characteristics of occupations” (p. 1). Students therefore require a good understanding of what is actually involved in occupations that they are interested in. To undertake this, schools must provide adequate career advice. Rothman et al. (2008, p. 3) found that the most common career advice within the senior years was the distribution of written material and handouts. Rothman et al. (2008) also found students “were generally positive about the value of the career advice they received at school, although some types of advice were seen as more useful than others” (p. 4). On examination of what advice was seen to be useful, Rothman et al. (2008) found “students are most satisfied with career advice in the form of individual consultation with a school-based career advisor. Two thirds of students reported experiencing this form of advice and two thirds of them were very satisfied with it” (p. 8). The most useful advice to students appears to be individual consultation rather than handouts and written material. On examination of the Rothman et al. (2008) data, five ninths (over half) of the students responded that they did not get individual advice or were not satisfied with the advice given. Rothman et al.

(2008) may have alluded to the problem by noting that “the process could be assisted by career advice that focuses on existing labour market opportunities and on the changes that can be expected” (p. 9).

As VETiS subjects are vocationally driven, it is essential to provide students with current career advice that is industry driven. This problem was identified further by Barnett and Ryan (2005) who claimed that “little is known about the extent to which schools counsel students to enter VETiS and the extent to which this reinforces the academic and socioeconomic profile of VETiS” (p. 26).

In a study of career advisors’ perceptions and advising practices in VETiS by Dalley-Trim, Alloway, Patterson and Walker (2007) it was found that academic students are advised to take VETiS subjects

in order to gain an advantage over their fellow academically orientated peers and to get some relief from the serious and rigorous work of academic studies. In contrast, the undertaking of VETiS is presented as the only option to those academic students’ non-academic counterparts. (p. 31)

Dalley-Trim et al. (2007, p. 31) found that career advisors direct the non-academically orientated into VETiS because they perceive VETiS subjects to be softer options. There may be an image problem with VETiS as students perceive a study in VETiS as the softer option. A career advisor’s comments as quoted by Dalley-Trim et al. (2007)

A lot of students, I think see VET as the vegie subjects, the second grade subjects, unfortunately, a lot of teachers see it in that way as well, and so when students go into these subjects they think they are doing the lower, the second rate subjects ... and there really has to be a change in perception from teachers and kids and parents about the worth of the VET area.

(p. 33)

This perception may not be a realistic point of view as Polesel et al. (2004) highlighted the integration of VET and senior certificates such as the VCE resulting in the belief of some teachers that “some senior certificate VET programs ... [are] too difficult for some students”(p. 27). Polesel et al. (2004) also stated that “recent moves to introduce study scores into VET subjects were seen as intensifying the pressure on those subjects to meet the needs of the academic curriculum rather than the needs of a broad range of learners” (p. 27).

In summary it will take concerted effort on the part of schools to market VETiS as a meaningful course of study. This includes comprehensive career advice for all students before a meaningful, informed selection of subjects can be made at a senior secondary level.

## **2.9 Summary**

This chapter has examined the nature of VETiS subjects and placed the current environment of VETiS within a historical framework. The structure of VETiS within Victorian senior secondary education also has been reviewed. Student participation rates of VETiS depend on the type of educational institution, with the highest participation rate occurring in state schools.

The concept of socioeconomic status (SES) was reviewed in the literature with methods of measuring SES being compared. The relationship of student achievement and SES was also explored. A linkage between SES and school achievement has been well documented in the literature.

From the literature it is apparent that VETiS students are less academic and from a lower average socioeconomic background when compared to their non-VETiS peers.

VETiS student pathways have been reviewed with only a small percentage of VETiS students enrolling in university but the majority of VETiS students undertaking a post-Year 12 study of some type.

Student perceptions of VETiS were reviewed in the literature with most VETiS students having a positive attitude towards their VETiS studies. The main reason why students undertake a VETiS course is interest in the subject. Academic oriented students are less represented and have a lower perception of VETiS. The role of career advice given before the selection of a VETiS course requires improvement so before informed choice can be made by students.

The research methodology used in this study is developed within the next chapter.

# Chapter Three

## Methods

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## **Chapter Three: Methods**

### **3.1 Introduction. The Research Problem**

This study aimed to examine the reasons why VCE students choose to study VETiS and whether this selection is related to socioeconomic status.

#### **3.1.1 Specification of the Research Questions**

From a Regional Victorian perspective why do VCE students elect to study a VETiS unit? Is there a relationship between students undertaking of a VETiS subject and socioeconomic status?

The research questions to be investigated were:

- How does the percentage of VETiS students at MSSC compare to the State wide percentage and what is the socioeconomic status profile of VETiS students at MSSC?
- What are the post-Year 12 aspirations of VETiS students? Is there a socioeconomic link to post-Year 12 destinations for VETiS students?
- Is there any difference in the choice of a VETiS subject by socioeconomic status?
- Is there a relationship between the reasons why students chose a VETiS subject and socioeconomic status?
- What is the level of advice given in the decision to undertake a VETiS subject and is this related to socioeconomic status?
- Is there a relationship between how VETiS students view their VETiS studies and socioeconomic status?

This chapter contains an explanation of the methods undertaken in this investigation. My position in the research and the setting and scope of the research is described, and an account of the data collection instrument and the data collection techniques are outlined. A summary concludes the chapter.

### 3.2 Research Approach and Design

Students can select from a wide variety of subjects at VCE. Therefore there is a discrete population of students that include a VETiS subject as part of their studies. This group of students can be easily identified by examination of subject enrolment data. VETiS students can be sampled based on enrolment and as such can be sampled directly through their VETiS class.

Within any given school, the school enrolment data for VETiS students, as well as non-VETiS students can be accessed after seeking relevant approvals. This data set contains student subjects, parental occupations and education levels. The enrolment data can be used as a comparison of VETiS and non-VETiS student's socioeconomic status to develop an overall profile of the two populations of students.

The research approach is based on a mixed method of both quantitative and qualitative methods. Mixed methods research is defined Creswell (2005) as being where the researcher collects and analyses data using both qualitative and quantitative methods in a single study.

A survey of VETiS students at MSSC was followed by an interview with a limited number of applicants which was used to check the validity of the survey results. Creswell (2005, p. 515) states that this method of first collecting quantitative data and then collecting qualitative data is termed as an explanatory mixed methods design. In this study the steps as outlined by Creswell (2005, p. 516) were followed with the researcher placing a priority on quantitative data and analysis; the quantitative data was collected first in the sequence and the researcher then used the qualitative data to refine the results from the quantitative data.

The hypothesis to be investigated was to establish if there was a relationship between undertaking a VETiS subject and the socioeconomic status of the students undertaking the course. The null hypothesis to be tested in this study was that undertaking a VETiS subject was not related to the socioeconomic status of the student.

This is a directional hypothesis, it was predicted that there was a direct link between low socioeconomic status and undertaking a VETiS subject. The statistical

analysis of this hypothesis could make use of a one tailed test of significance (Creswell, 2005, p. 188).

### **3.3 Research Methodology**

#### **3.3.1 The Setting for the Research**

This study examined why students undertook a VETiS subject at post-compulsory level and if there was a relationship to socioeconomic status using data taken from one large Victorian Regional Secondary College. The school will remain anonymous throughout this study by assigning the school with the pseudonym of Midlands Senior Secondary College (MSSC).

Midlands Senior Secondary College (MSSC) is a large Victorian regional senior secondary college with over 1800 students enrolled in Years 11 and 12. Within this population of students there are over 450 students enrolled in a VETiS subject.

MSSC students come from five junior secondary colleges (Years 7-10) within the local area as well as other private educational organisations. The school also draws students in limited numbers from other geographical locations such as outlying districts, interstate as well as internationally. The decision of study pathway is made before attending MSSC.

MSSC was justified as a meaningful educational institution in which to base the investigation as it is a large regional government educational institution. Work carried out in Victoria by Polese, Teese and O'Brien (2001) analysed trends for the introduction of VETiS. They found that VETiS enrolment rates tend to be highest in non-metropolitan areas and in those regions which have the lowest socioeconomic profile and the poorest rates of transition from school to university. Fullarton (2001) found that students in regional and rural areas were more likely to participate in VETiS, with one in four students participating compared with about one in five students in urban areas. These two investigations highlight that MSSC was an ideal environment to base this study, as MSSC is a regional college with a large number of regional and rural students. However, caution must be

shown in generalising to a non-regional context based on results obtained from this regional study.

This setting allowed students to be sampled across a wide range of VETiS subjects as MSSC offers 34 different VETiS units within 17 subject areas. At MSSC there were over 480 students undertaking a VETiS subject making this a large population to students to study. Table 3.1 details the diversity of subjects offered and the number of students enrolled in each VETiS area of study at MSSC during semester 2 2008.

Table 3.1. Number of students enrolled in a VETiS area of study at MSSC during semester 2 2008.

Study area	Number of students enrolled
Automotive	43
Building & Construction	49
Business Administration	28
Clothing Design	5
Community Services	28
Community Recreation	77
Dance	30
Electrotechnology	12
Engineering	12
Equine Industry	18
Furnishing	8
Hospitality	31
Information Technology	14
Music Industry	12
Music Performance	26
Multimedia	66
Outdoor Recreation	21
<b>Total Semester 2 2008</b>	<b>480</b>

### **3.3.2 My Position in the Research**

I am a teacher/trainer of VETiS within the area of Information Technology at MSSC. I have taught Information Technology at a VCE level for over fifteen years and have taught VETiS Information Technology since its introduction in 2002 at MSSC. I have completed the Certificate IV in Workplace Assessment and Training. As a teacher of VETiS I developed an interest into the reasons why students undertook a VETiS subject and was interested to undertake research to uncover the motivational factors of why VCE students elect to study a vocational education study.

### **3.3.3 The Survey Instrument**

The Student perceptions and outcomes of VETiS survey tool is included as Appendix 3.1. The follow-up interview questions and data recording tool are included as Appendix 3.2.

The survey tool was developed to seek student responses in order to investigate the reasons why VCE students elect to study a VETiS unit and if this choice is related to socioeconomic status.

The survey was divided into four main sections:

- About your VETiS Course  
VETiS area of study and what year of study
- About you and your family  
Gender, previous school and socioeconomic status of household
- Why undertake a VETiS subject  
Post-Year 12 possible destinations, reasons for undertaking VETiS and advice received in making a decision to undertake a VETiS subject.
- My VET in Schools Subject.  
Progress being made, VETiS is as expected and understanding VETiS.

The Family Occupation Codes (FOS) as used by MSSC for student enrolment was adopted in the student survey tool. This allowed for commonality of parental

classification between the survey tool and data gathered from the school data base. The student enrolment tool from MSSC is included as Appendix 3.3. LaTrobe University Faculty of Education and Department of Education and Early Childhood Development ethics approvals were obtained in order to conduct this investigation and are include as Appendix 3.4 and 3.5.

The student reasons for selecting a VETiS subject were based on a study of subject choice in senior secondary school by Ainley et al. (1990). These previously developed categories were used with some adaptation for the VETiS environment at MSSC.

The survey tool was developed with support from follow VETiS teachers and a trial of the survey was undertaken with a small sample of VETiS students to determine ease of data entry by respondents. Based on student comment regarding the structure of the data gathering device, the survey was reformatted to allow for greater ease of data entry by the participants. Student responses from this trail stage were not processed as part of the investigation.

### **3.3.4 Data Gathering - The Survey**

Being a large population that was readily accessible to the researcher, all VETiS students were invited to undertake the survey. All VETiS teachers at MSSC were asked to be involved in the delivery of the survey. As part of the regular meeting structure, VETiS staff members were briefed on and asked to assist in the project- *Student Perceptions and Outcomes of Vocational Education and Training in School (VETiS)*.

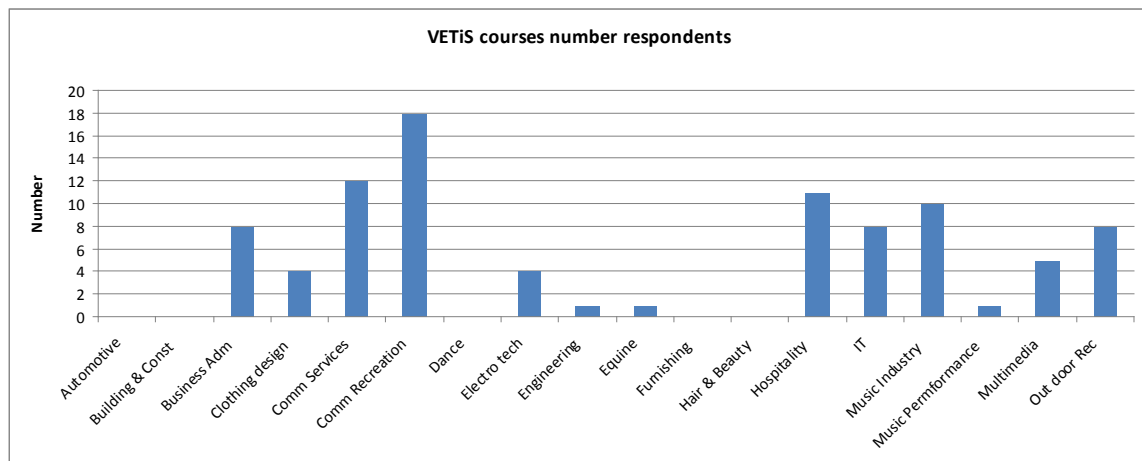
VETiS staff members within their normal classroom training gave informed consent forms (copy provided as Appendix 3.6) to all VETiS students. Students who wished to be involved in the project returned signed consent forms to their teacher. These were collected by the investigator, and the required number of surveys was issued to each VETiS class.

Following informed consent being obtained, the survey was only administrated to students who were prepared to voluntarily participate in the project. Students were also asked if they were willing to participate in a structured interview.

During Semester two before the Spring Vacation in 2008, staff members were asked to administer the survey to the students in their classes who had completed and returned the consent forms, within the individual classroom/training environment. This method was chosen to minimize disruption and to ensure that a representative sample was obtained.

Of a possible 480 students, 108 students returned consent forms and completed valid surveys, representing a return rate of 23%. A sample of six students was selected at random and asked if they wish to undertake an interview. The level of returned informed consent forms and therefore questionnaires, related directly to the support of the VETiS teacher/trainer with some study areas returning no responses. Difficulty in obtaining responses from teachers and students enrolled in off site VETiS courses also occurred. Courses that did not respond included Automotive, Building & Construction, Furnishing, Music Industry, and Music Performance. See Figure 3.1 for breakdown of the return of questionnaires forms by study area.

Figure 3.1 Graph of Number of Survey Returns by VETiS study area.



### 3.3.5 Data Gathering – School Data Base

Data was also gathered from the MSSC student enrolment data base. The MSSC data base holds records of all students' enrolment details including subjects, attendance, family details and medical records. The data base called Computerised Administrative System Environment in Schools (CASES21) is part of the Department of Education and Early Childhood Development infrastructure.

Permission to access and use deidentified data was obtained. The following two queries were undertaken:

- All students enrolled at MSSC with the parameter of undertaking a VETiS or non-VETiS subject with parent Family Occupation Status codes.
- All VETiS students enrolled at MSSC with Family Occupation Status codes with the parameter VETiS subject chosen.

The data base queries were initially completed by an independent school administrator with the student identification codes removed before the resulting queries were provided for this research. As such, individual students could not be identified therefore maintaining confidentiality.

### **3.3.6 Data Gathering – Interview**

The six students interviewed were randomly selected from students that returned informed consent forms indicating that they were willing to be interviewed. The interviews took place in semester 1 2009 within the VETiS classroom environment. The interviews were of 5 minutes duration and students were asked to respond to the set eleven questions (see Appendix 3.2) and at the end of the interview asked if they had anything further to state about their VETiS studies at MSSC. The set of eleven questions were developed to match the questions within the survey. The socioeconomic status of each student interviewed was mapped against their responses.

### **3.3.7 Data Analysis**

The data from the survey was manipulated using a Microsoft Excel spreadsheet. Data was entered by student survey and sorted initially by socioeconomic status. In a study by Marks (1999) into the measurement of socioeconomic status and social class in the LSAY (Longitudinal Surveys of Australian Youth) Project various methods of determination of socioeconomic status were examined. All methods investigated by Marks (1999) use a variation of codes assigned to parental occupation. The study concluded that “many of the controversies surrounding the conceptualization and measurement of socioeconomic status are of little consequence in the empirical analysis of survey data” (p. 12).

In this study, socioeconomic status was determined from the Family Occupation Status code (FOS). Cox (2005) used FOS codes to categorize socioeconomic status as he concluded that they “proved to be a sound categorical system” (p. 125). In this study the highest family member status from the father or mother was used to determine the socioeconomic status of the student. The highest educational level of the student’s parent was used as a check against the FOS code. Rothman (2003) used a similar method to determine SES within a LSAY project report. The data from the survey are included as Appendix 3.7. The spreadsheet was used to examine each set of student responses in the four main sections filtered against socioeconomic status and was then graphed. Appendix 3.8 includes the VETiS student results sorted by status, and Appendix 3.9 includes the VETiS student reflections of their current VETiS filtered against socioeconomic status. The resulting two data base queries from the MSSC whole-school data are included as Appendix 3.10 and Appendix 3.11. These are included in order to map the socioeconomic population of the whole-school and to enable a comparison between the two populations of VETiS and Non-VETiS students.

### **3.3.8 Validity Issues**

Participation in the project was of a voluntary nature and the non-return of responses in several study areas is a concern to the validity of any conclusions drawn using these sample data. To ensure the validity of the sample data, this is compared against whole-school data as outlined in the results chapter of this investigation.

To further ensure the validity of the survey a small sample of students (6) were interviewed seeking to triangulate findings and to follow-up on several of the key questions in the survey. The use of interview data matched against survey data was carried out to address the issue of concurrent validity.

### 3.4 Summary

This study was carried out in three distinct sections. The three different methods directly related to the type of data collection being undertaken. The three sections were:

- The population of VETiS students at MSSC were surveyed to determine the SES profile as well as VETiS student's views.
- The whole-school population of non-VETiS students and VETiS students was mapped from the school data base to determine the relevant SES profiles within the school population.
- A small cohort of VETiS students (focus group) completed an interview to triangulate findings from the VETiS survey.

The three data collection methods were used to gather data to answer the research questions that were stated at the end of chapter 1 and the start of this chapter. The next chapter contains the results from the three different data collection methods relating to the research questions.

# Chapter Four

## Results

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## **Chapter Four: Results**

### **4.1 Introduction**

This chapter contains the results from the three data collection methods.

The initial data collection was the survey of Vocational Education and Training in Schools (VETiS) students at MSSC that gathered data on the reasons why students elected to study a VETiS unit, and, further demographic data to obtain a profile of respondent socioeconomic status (SES).

The second data collection method was an examination of the school enrolment data base. The school SES profile (VETiS and non-VETiS students) was obtained, as well as overall SES profile of all VETiS students enrolled at MSSC. The results of each of the research questions are reported separately. The discussion of the results for each question is included in each section. The results of the focus group interviews then follow. A summary of the results and discussion completes this chapter.

### **4.2 Number of Students Undertaking VETiS at MSSC and the Socioeconomic Profile**

The data from the school enrolment data base showed that there were 488 students in semester two 2008 who undertook a VETiS study compared with 1664 students who enrolled in a non-VETiS VCE.

Overall 29% of the total school population at MSSC undertook at least one VETiS subject in semester 2 2008.

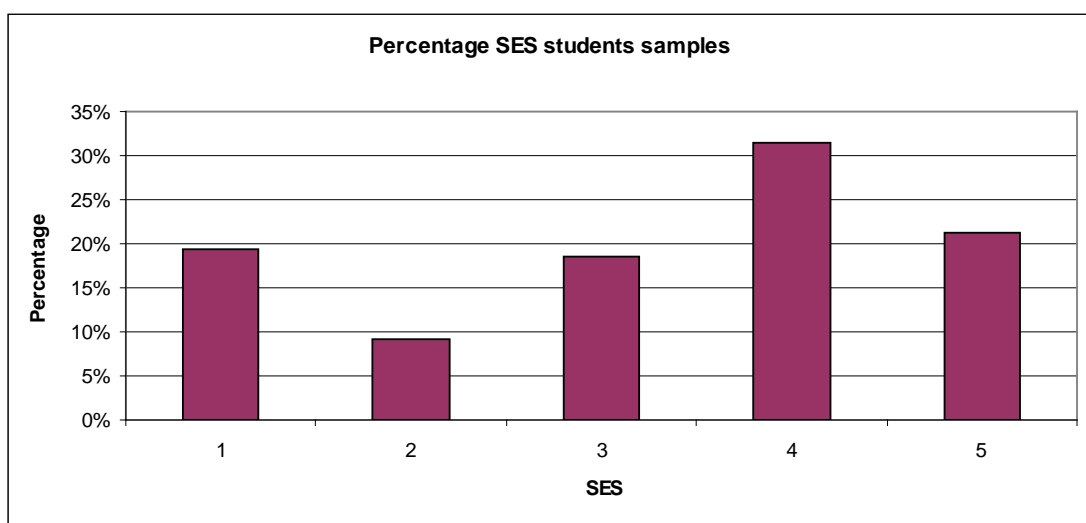
#### **4.2.1 Measurement of Socioeconomic Status**

Socioeconomic status was determined using Family Occupation Status group codes see Appendix 3.3 and Chapter 3, Section 3.3.7. As described in section 3.3.7 the method of determination of SES used by the investigator in this study is to assign the highest parental occupation as the marker for SES of the student. These data were obtained from the survey of VETiS students and was also available from the student enrolment data.

## 4.2.2 Socioeconomic Status of VETiS Students Completing the Survey at MSSC

The data from the survey indicate that all SES groups are represented in a VETiS study at MSSC. (See Figure 4.1). The largest SES group represented is SES Group 4 being Para Professionals followed by next highest group being professional and management group. The second lowest SES grouping was the lowest proportion being only 9% of the sample population.

Figure 4.1. Graph of SES of 108 survey respondents at MSSC.



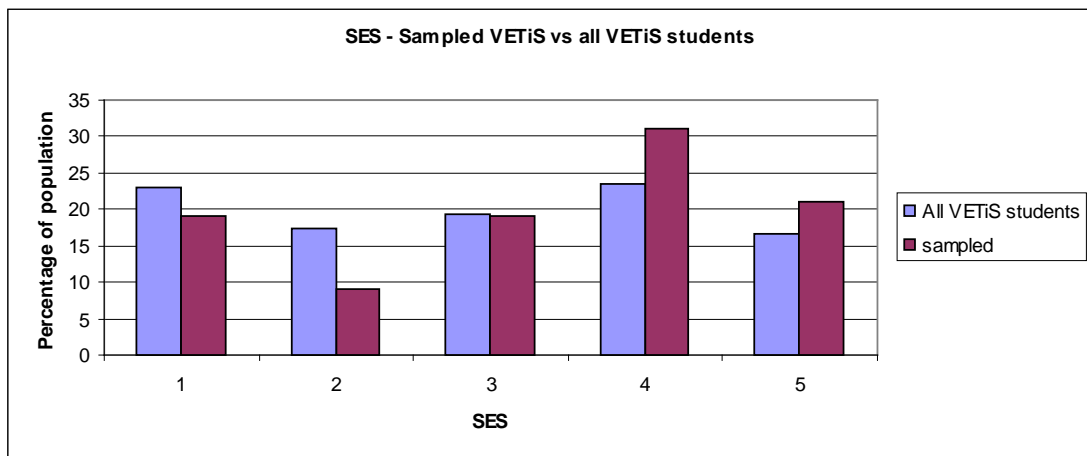
## 4.2.3 Socioeconomic Status of VETiS Students at MSSC

Data relating to all VETiS students were gathered using the enrolment details as outlined in Chapter 3, Section 3.3.4. The SES profile of the sampled population is compared against the SES profile of the total school VETiS population in Table 4.1. The two populations follow the same pattern with a difference in values of 8%. A greater percentage of students in the upper SES range completed the survey as compared with students in the lower SES range; this is shown in Figure 4.2. This can be seen as a variation on either end of the scale of SES that is balanced about the central vale of socioeconomic status 3.

Table 4.1. Socioeconomic status of surveyed VETiS students and total school population of VETiS students.

Socioeconomic Status	Surveyed VETiS Students	Total school VETiS Students	Difference
1	19.4%	23.1%	3.70
2	9.3%	17.5%	8.20
3	18.5%	19.3%	0.80
4	31.5%	23.5%	-8.00
5	21.3%	16.6%	-4.70

Figure 4.2. Graph of SES: Survey respondents and total VETiS students.

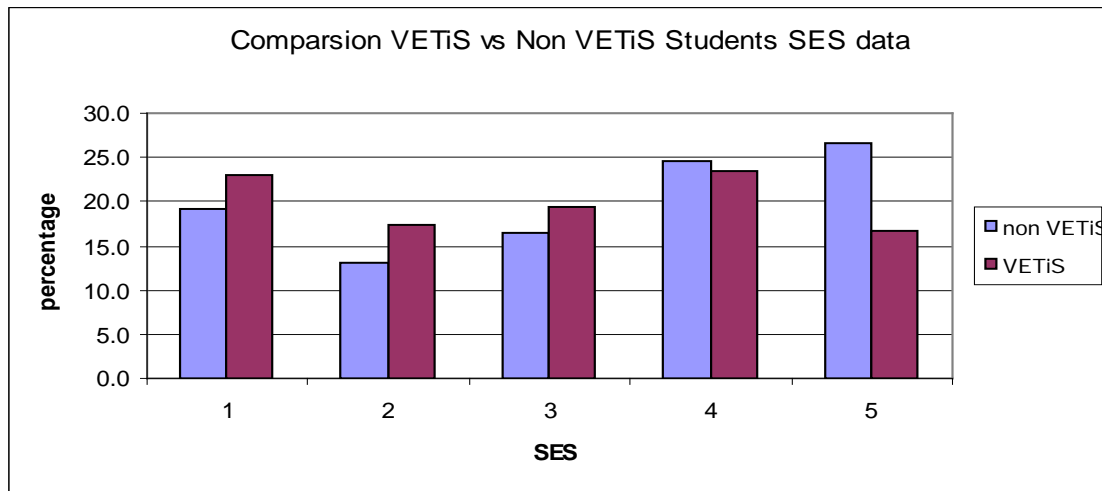


From figure 4.2 although proportionately fewer SES Group 1 and 2 and proportionately more SES Group 4 and 5 were sampled, the sample contains a representative group from SES Groups 1 to 5 and will generally reflect the total population of VETiS students at MSSC.

#### 4.2.4 Socioeconomic Status of Students at MSSC

Figure 4.3 displays a comparison of SES for VETiS students at MSSC against the total population of students at MSSC that are not undertaking a VETiS study. These data are corrected to allow for students who undertook multiple VETiS units

Figure 4.3. Graph of SES for total population of VETiS and non-VETiS at MSSC Semester 2 2008.



From figure 4.3 it can be seen that the option of students undertaking a VETiS subject at MSSC is related to socioeconomic status. A greater proportion of students from a higher SES household elect for a non-VETiS course. This effect increases as the SES of the household also increases. This trend continues for students from a lower SES household, who more are like choose a VETiS subject at MSSC. This trend is shown in figure 4.4 as a percentage difference graph.

Figure 4.4. Graph of SES difference as a percentage of population for VETiS and non-VETiS students at MSSC.

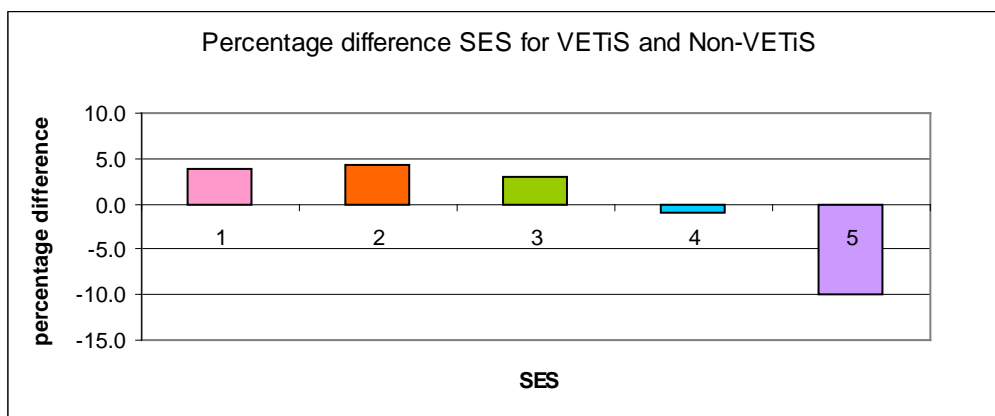


Figure 4.4 displays the difference in the two populations with the highest SES grouping having a 10% difference in the number of students electing not to undertake a VETiS study at VCE. There is little difference between the lower three SES groups with more students electing to undertake a VETiS study rather than a non-VETiS course.

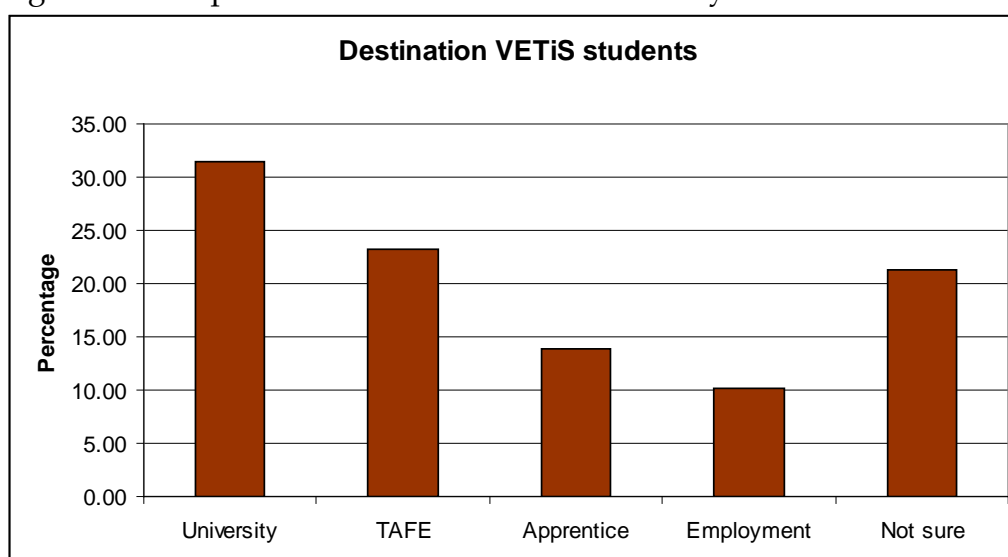
### 4.3 Post-Year 12 Aspirations of Surveyed VETiS Students at MSSC

VETiS participants of the survey were asked about their aspirations post-Year 12. Aspirations post-Year 12 was investigated by gender. This question is also disaggregated by SES.

#### 4.3.1 Post-Year 12 Aspirations of VETiS Students

Four main destinations for students post-Year 12 have been identified as being university, TAFE, apprenticeship or gaining employment. The result from the question of post-Year 12 destinations for VETiS students is presented in Figure 4.5. From the Figure 4.5 it can be seen that 31.5% of all VETiS expressed an interest in attending a university. The trend was TAFE followed by apprenticeship and then employment. Employment was the least preferred option for VETiS students. 68.5% of VETiS students wish to continue with further study with only 10.2% of students wishing to find employment. The majority of the VETiS students were seeking further study/training at either university or at TAFE/apprenticeship. At the time of the survey 21% of respondents indicated that they were not sure of their choice of destination post-Year 12.

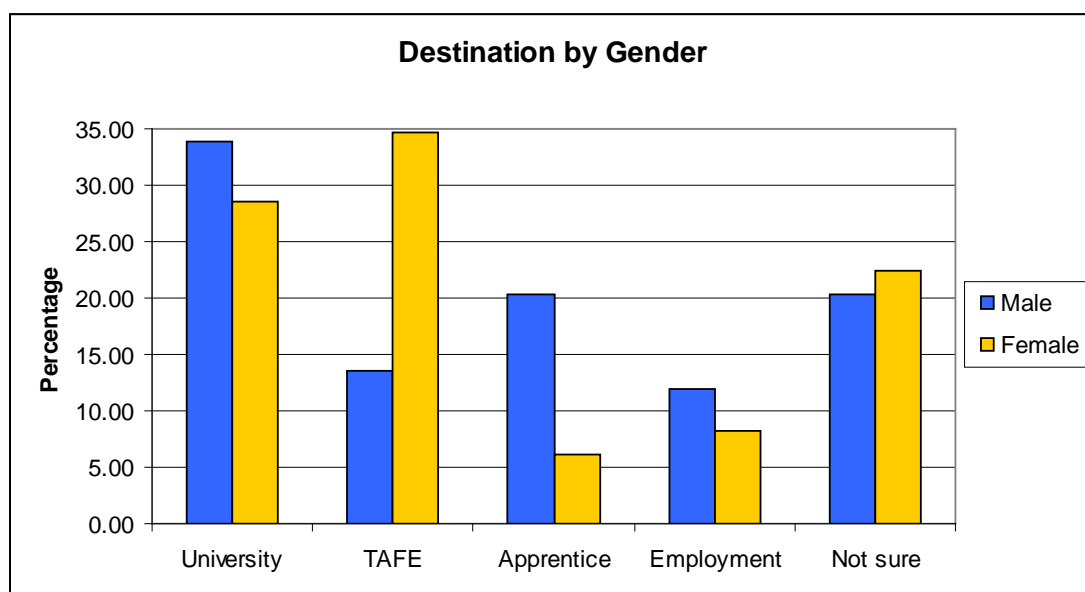
Figure 4.5. Graph of intended destination of surveyed VETiS students.



### 4.3.2 Post-Year 12 Aspirations by Gender

The results from this question are presented in Figure 4.6.

Figure 4.6. Graph of destination aspiration by gender of surveyed VETiS students.



Of the VETiS students that indicated that they were unsure of their destination more females (22.5%) than males (20.4%) had not made a decision.

12% of males and 8% of females stated that they wish to find employment after their studies at MSSC.

The majority of both male and female VETiS students were seeking further study at either university or at TAFE/apprenticeship. The data for each destination disaggregated by gender is

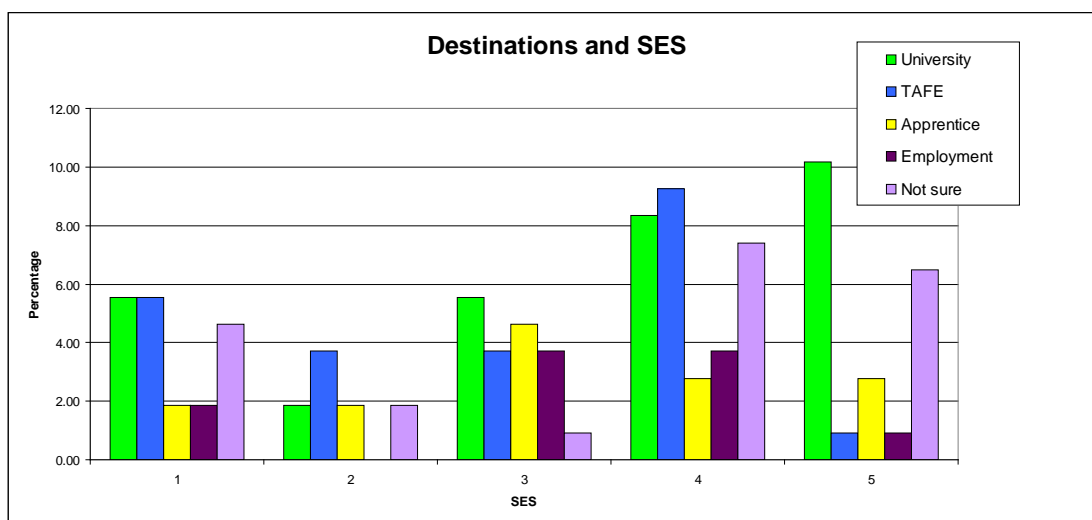
- 33.9% of males and 28.6% of females wished to undertake a university course;
- 13.6% of males and 34.7% of females wished to undertake a TAFE course;
- 20.3% of males and 6.12% of females wished to undertake apprenticeship training.

The trend was reversed for gender choice for TAFE and apprenticeship with more males showing a higher preference to apprenticeship and more females showing a higher preference to a TAFE course.

### 4.3.3 Post-Year 12 Aspirations by Socioeconomic Status

Data from the survey relating to VETiS student SES is graphed against the student response to possible destinations of Year 12 in Figure 4.7. Data is represented as a percentage of the total of survey responses.

Figure 4.7. Graph of destination aspiration by SES of surveyed VETiS students.



When aspirations of VETiS students are disaggregated by SES, the following trends within each grouping are apparent:

- Group one rated university and TAFE equally high, with apprenticeship and employment rated equally low in their destination intentions.
- Group two rated TAFE as a high option with all other options rated lower. Employment was not rated at all by Group 2. Care is to be taken in drawing conclusions from this group due to the small sample size.
- Group three rated all four destinations equally with university being marginally the highest.
- Group four rated both university and TAFE as very high in their destination intentions. They were uncertain as to their destination as indicated by 7.4% not sure responses.
- Group five rated only university as very high. They also were uncertain as to their destination as indicated by 6.5% not sure responses.

It is apparent that several trends may be identified:

- All VETiS students are more likely to undertake further training or studies. This appears to be independent of SES.
- SES Groupings 1, 3, 4 and 5 consider university as a possible destination.
- Based on the “not sure” responses students of a higher SES grouping (Group 4 and Group 5) are more uncertain as to possible destinations. Students of higher SES being in the range of 4 to 5 may be more informed as to possible options and as such may have not made a firm decision. This may be expressed as a not sure response on the survey.
- Students rate TAFE as a highly likely outcome regardless of SES (excluding SES 5).
- Employment is seen as a possible option by a significant number of students from the mid SES grouping.
- Students with highest SES are more likely to opt for university study. They rate gaining immediate employment post-Year 12 as being very low in their destination intentions.

#### 4.4 VETiS Subjects and Socioeconomic Status

A wide range of subjects in VETiS is offered at MSSC. As shown in Table 3.1, students can undertake a VETiS study in 18 VETiS areas of study. Within two VETiS studies at MSSC differing pathways can be studied. They are:

- Music- Music performance and Music Industry;
- Sport and Recreation – Community Recreation and Outdoor Recreation.

To examine the relationship between VETiS subjects chosen and the SES of the student, the whole of school VETiS data was used to map each subject. This was done to compare within each subject the percentage of total VETiS enrolment. Figures 4.7 to 4.9 indicate the percentage of VETiS students enrolled in each individual VETiS subject disaggregated by SES. This has been broken down into three sections for ease of charting. Units 1 and 3 of each VETiS study have been grouped due to the small numbers in some subject areas.

Table 4.2. VETiS subjects at MSSC and subject codes used in Figures 4.8 – 4.10.

No	VETiS Study	Subject Code
1	Automotive	VTAU
2	Building & Construction	VTBC
3	Business Administration	VTBA
4	Clothing Design	VTCD
5	Community Services	VTCS
6	Community Recreation	VTRF
7	Dance	VTDA
8	Electrotechnology	VTEL
9	Engineering Studies	VTEN
10	Equine Industry	VTEI
11	Furnishing	VTFC
12	Hair and Beauty	VTHD
13	Hospitality	VTHO
14	Information Technology	VTIT
15	Music Industry	VTMT
16	Music Performance	VTMU
17	Multimedia	VTMM
18	Outdoor Recreation	VTOR

Figure 4.8. Graph of SES and VETiS subjects (Section 1).

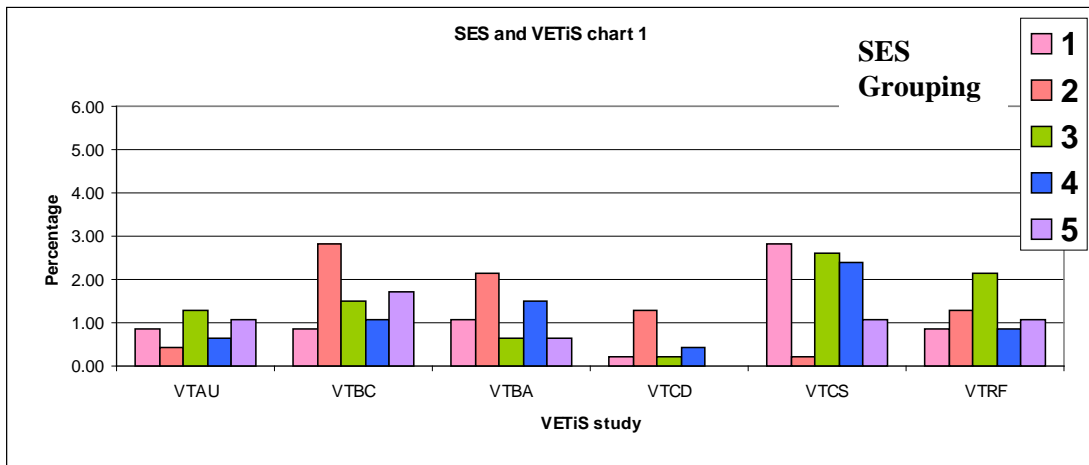


Figure 4.9. Graph of SES and VETiS subjects (Section 2).

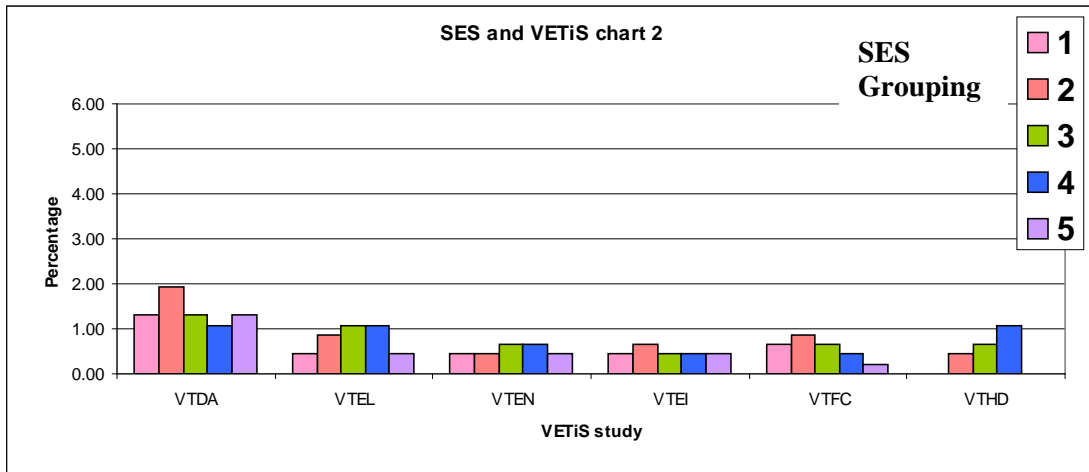
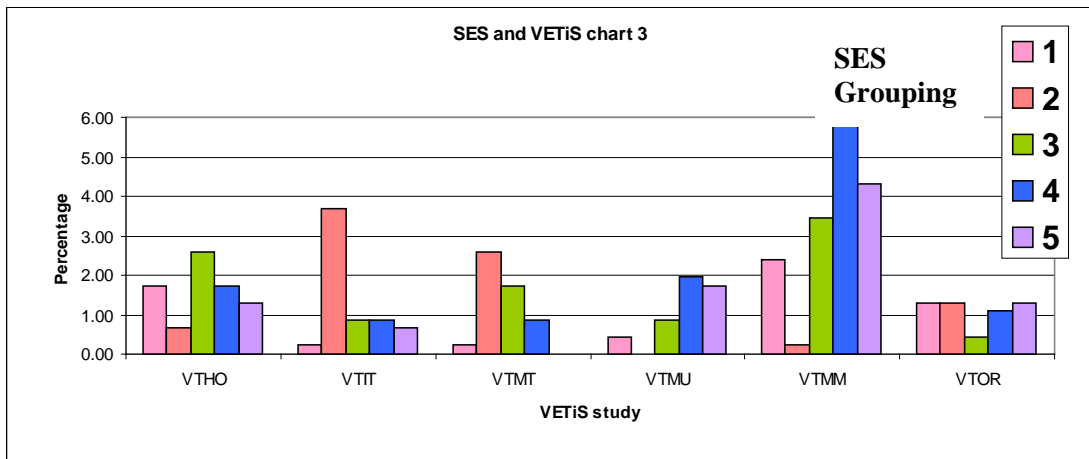


Figure 4.10. Graph of SES and VETiS subjects (Section 3).



From the graphs in Figure 4.8 to 4.10 it is clear that differing cohorts of VETiS students select differing VETiS studies. Three differing profiles can be identified as

- Homogenous SES profile. There is no difference in the proportion of the different SES groups in the students selecting the subject.
- High SES tendency profile. More students from a higher SES family select the subject compared with students from a lower SES family.
- Low SES tendency profile. More students from a lower SES family select the subject compared with students from a higher SES family.

Several subjects did not fit into any of the three profiles there were Community Services and Hospitality.

Table 4.3. Subject profile based on SES tendency.

Homogenous SES profile	High SES tendency profile	Low SES tendency profile
Automotive	Multimedia	Building & Construction
Community Recreation	Music Performance	Business Administration
Dance		Clothing Design
Electrotechnology		Hair and Beauty
Engineering Studies		Information Technology
Equine Industry		Music Industry
Furnishing		
Outdoor Recreation		

The subject profile grouping is shown in Table 4.3. The majority of VETiS subjects are classified as a homogenous SES profile being eight of eighteen studies offered at MSSC. These studies represent a diverse range of subjects from Automotive to Outdoor Education. (45% of subjects)

Only two VETiS subjects are included in the high SES tendency profile, these are Multimedia and Music Performance. (11% of subjects)

The low SES tendency profile group contains six subjects from Building & Construction to Music Industry. (33% of subjects)

Two VETiS subjects could not be classified. (11% of subjects)

#### 4.4.1 VETiS Subjects with a VCAA Study Score

By enrolling in selected VETiS subjects at MSSC students can obtain a VCAA study score. Table 4.4 details the VETiS subjects at MSSC in which a student can obtain a study score that can contribute towards a Equivalent National Tertiary Entrance Rank (ENTER) score.

Table 4.4. Subject profile based on SES tendency with study score.

(Study score not available are shown in green.)

Homogenous SES profile	High SES tendency profile	Low SES tendency profile
Automotive	Multimedia	Building & Construction
Community Recreation	Music Performance	Business Administration
Dance		Clothing Design
Electrotechnology		Hair and Beauty
Engineering Studies		Information Technology
Equine Industry		Music Industry
Furnishing		
Outdoor Recreation		

The majority of VETiS subjects at the VCE level in Victoria allow students to complete scored assessment including a VCAA examination to gain a subject score. (VCAA Scored Assessment 2008) The two unclassified subjects being Community Services and Hospitality also allow students to obtain a subject score. The subjects offered at MSSC that do not have, or do not allow students, to obtain a study score are Automotive, Community Recreation, Building & Construction, Clothing Design and Hair and Beauty. Table 4.4 shows that three of the five subjects that do not allow a study score are within the low SES tendency profile. Students with a lower SES may be electing to study a VETiS subject that does not contribute towards a university placement. This will be explored further in the next section.

## 4.5 Reasons for the Decision to Undertake a VETiS Subject

Students were asked to respond to a range of questions that related to why they chose a VETiS subject (See Appendix 3.5). The responses to the eleven questions are graphed by individual question in three sets of graphs (figures 4.11 to 4.13). This has been presented in three graphs for ease of presentation.

Figure 4.11. Graph of reasons for decision of undertaking a VETiS Subject.  
(First set of questions)

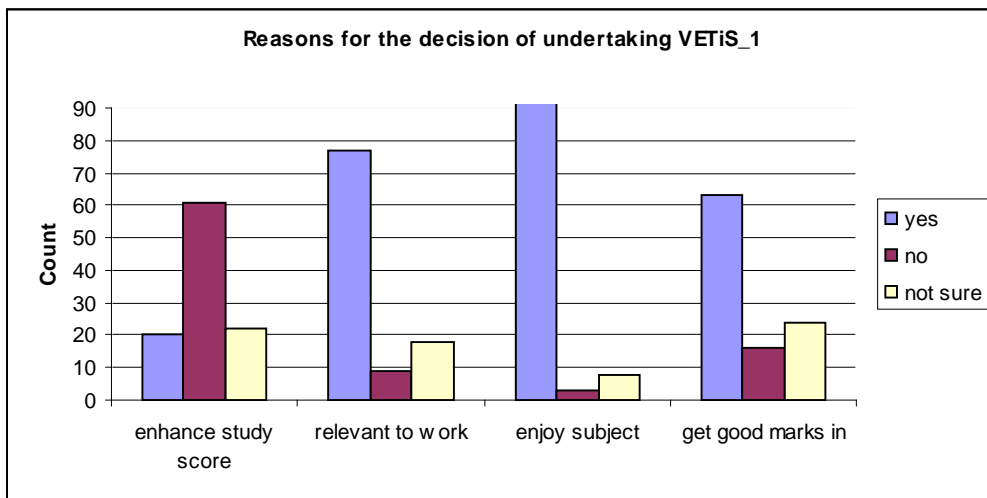


Figure 4.12 Graph of reasons for the decision of undertaking a VETiS Subject.  
(Second set of questions)

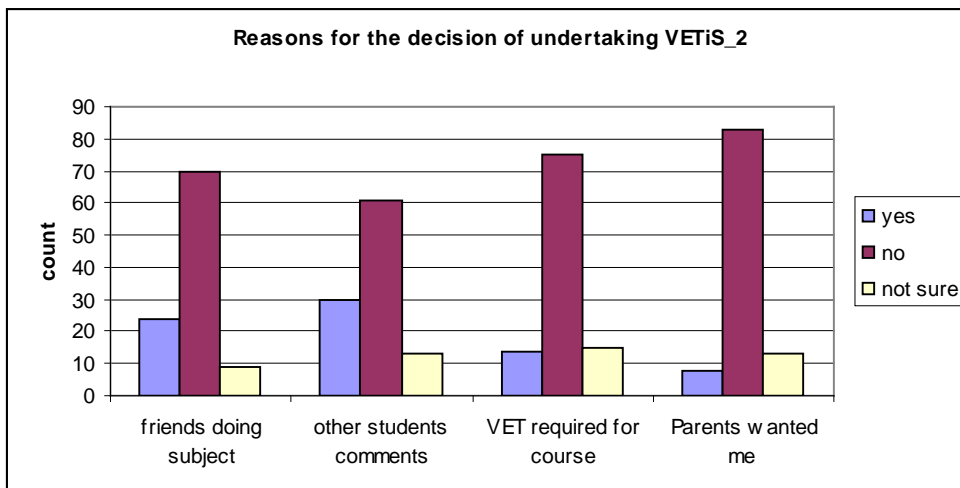
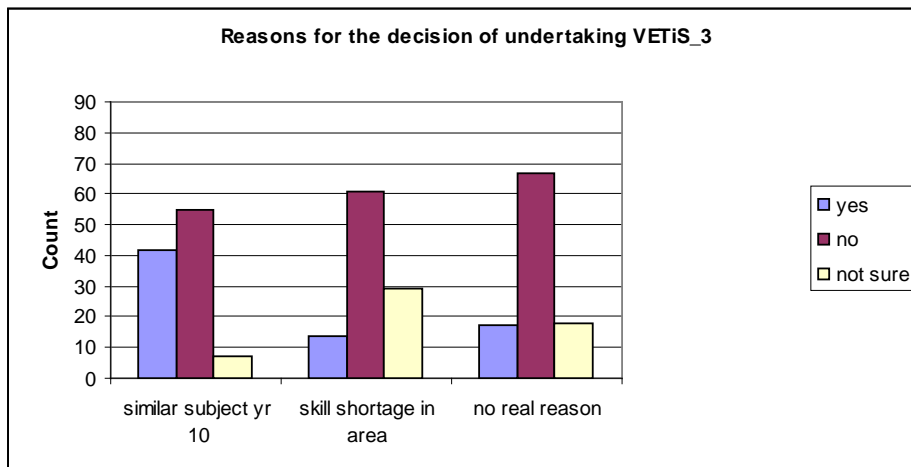


Figure 4.13. Graph of reasons for decision of undertaking a VETiS Subject.  
(Third set of questions)



The student responses can be grouped into three types of responses:

- Students agree with statement;
- Students disagree with statement ;
- No major trend – neither agrees nor disagrees.

Students agree that they have made the choice of a VETiS subject for of the following reasons:

- The VETiS subject was considered relevant to work;
- The VETiS subject was chosen because the student felt that they enjoy the subject;
- The VETiS subject was chosen as the students considered they would get good marks in it.

Students stated that the following reasons had little bearing in the decision of the selection of a VETiS subject:

- It would enhance study score;
- Their friends had chosen a VETiS subject;
- Other student comments about the VETiS study influenced their decision;
- A VETiS subject was required for their pathways course;
- Parents wanted their child to undertake a VETiS subject;
- There exists a skill shortage in the chosen area of study.

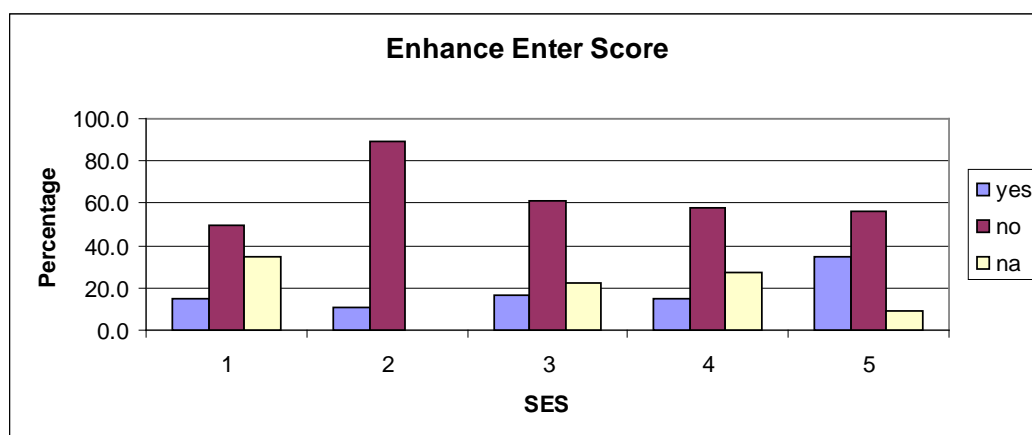
There was no major trend for the statement that the study of similar subjects at a junior secondary level influenced their decision to undertake a VETiS subject at the senior secondary college.

Based on these results students indicated that there were real reasons for the selection of a VETiS subject. Sixty eight students (Figure 4.13) expressed the opinion that they selected a VETiS subject based on some existing ideas or reasons as to why the particular subject was chosen. A large percentage of students (62%) indicated that they selected a VETiS subject as they had given their choice some consideration.

#### 4.5.1 Reason for the Decision to Undertake a VETiS Subject – Enhance Enter Score and SES.

In Figure 4.14 the student response on the survey to the question if a reason for the decision of undertaking a VETiS subject was related to the desire to enhance the students' ENTER score is graphed. The majority of students answered in the negative. A desire to enhance the ENTER score is not a reason why the majority of students elected to study a VETiS subject at VCE. Students from a higher SES are more predisposed to apply for a university placement compared with students of lower SES (See Figure 4.6). Students who responded to the question as to whether they chose a VETiS subject based on enhancing their ENTER scores is disaggregated by SES and graphed in Figure 4.14. Refer to Appendix 3.5 for calculations.

Figure 4.14. Graph of SES and reason for the decision of undertaking a VETiS Subject to enhance ENTER score.



Little difference exists in the response to the question when examined by the SES profile. A slight trend in the “Yes” response exists in the highest SES group (group 5) with proportionately more students considering the ENTER score as being a reason for the selection of the VETiS subject. For SES Group 5, 35% of the highest SES grouping of students said that the ENTER score was a factor, compared with 57% stating that this was not a factor in their choice.

Group 5 are more likely to opt for a university study post MSSC as discussed in Section 4.3.2. Group 5 show a slight trend in the “Yes” response in considering the ENTER score as being a reason for the selection of the VETiS subject. Some high SES students are choosing their subjects strategically to enhance their chances in obtaining a post-Year 12 university placement.

This compares with the majority of students who do not make the subject choice of a VETiS study based on enhancing their chances in gaining a University placement.

#### **4.5.2 Enhance Enter Score and Subject Choice**

VETiS subjects are independently scaled by VTAC by relating student performance to the subject score derived by VCAA. The student’s ENTER score is then determined. The VTAC 2009 scaling report (Victorian Tertiary Admission Centre, 2010) for VETiS subjects is included as Appendix 4.1. The question “Do students select a VETiS subject that has been scaled up to enhance their performance on the ENTER score” is to be considered. The aggregate total of each VETiS subject’s scores of 20, 25, 30, 35, 40, 45 and 50 is shown in Table 3.6. The aggregate total for each VETiS subject is then ranked from lowest to highest. Only VETiS subjects offered at MSSC are included. VCE VET Dance is scaled up the highest with VCE VET Furnishing being scaled the lowest.

Table 4.5. 2009 Scaling Report for VET VCE subjects ranked by aggregate total.

VETiS subject	VCAA Study Scores to ENTER subject scores							aggregate total	rank
	20	25	30	35	40	45	50		
VCE VET Dance	18	22	27	31	36	42	50	226	1
VCE VET Multimedia	16	21	26	31	37	43	50	224	2
VCE VET Music Production	17	22	26	31	36	42	50	224	2
VCE VET Music Performance	19	22	25	29	35	43	50	223	3
VCE VET Equine Industry	17	21	25	30	36	42	50	221	4
VCE VET Business	15	20	24	30	36	42	50	217	5
VCE VET Hospitality	15	20	24	29	35	41	50	214	6
VCE VET Information Tech	15	19	23	28	34	41	50	210	7
VCE VET Sport and Recreation	14	18	23	28	34	41	50	208	8
VCE VET Electrotechnology	14	18	23	28	33	40	50	206	9
VCE VET Engineering Studies	16	19	23	27	32	38	50	205	10
VCE VET Furnishing	14	18	21	26	31	38	50	198	11

In Table 4.4 the VETiS subject profile based on SES tendency is linked to if a study score is available for the VETiS subject. By linking the aggregate total of each VETiS subject's scores as shown in Table 4.5, the relationship between the VETiS subject profile based on SES and the ranking of the VETiS subject based the ENTER scaling can be determined (See Table 4.6). Community Services is not included in the discussion as an SES profile could not be determined.

Table 4.6. VETiS subject ranking by scaling and SES profile of subject.

Rank	Subject	SES profile
1	VCE VET Dance	Homogenous
2	VCE VET Multimedia	high
2	VCE VET Music Production	low
3	VCE VET Music Performance	high
4	VCE VET Equine Industry	Homogenous
5	VCE VET Business	low
6	VCE VET Hospitality	no profile
7	VCE VET Information Tech	low
8	VCE VET Sport and Recreation	Homogenous
9	VCE VET Electrotechnology	Homogenous
10	VCE VET Engineering Studies	Homogenous
11	VCE VET Furnishing	Homogenous

Table 4.6 does not indicate that in general, students from the higher SES grouping elect to undertake VETiS subjects that are scaled up in the calculation the ENTER score.

It is noted that the two subjects with the highest SES rating are in fact ranked two and three on the ENTER scaling table. As this is not a clear trend, further study is required in order to determine if some students with a higher SES are selecting VETiS studies to enhance their ENTER score.

Table 4.6 also does not indicate that students with a lower SES select VETiS subjects that are scaled down. This supports the conclusion drawn in Section 4.5.1 that the majority of students do not make subject choice of a VETiS study to enhance their chances in gaining a University placement.

#### **4.6 Career Advice Given in Making the Decision to Study a VETiS Subject**

Within the survey several sources of advice given to students in making their pathway decision were identified as:

1. The careers coordinator at previous secondary school;
2. Teachers at previous secondary school;
3. Parents;
4. Careers coordinator at Senior Secondary College;
5. VET staff at Senior Secondary College;
6. Student coordinators at Senior Secondary College;
7. Information evenings at previous secondary school;
8. Open day at Senior Secondary College.

Students were asked to rate the advice given, see figures 4.15 and 4.16. Students did not rate highly any source of advice apart from the open day at MSSC.

Students received parental advice to some extent. Most students surveyed were not sure as to what advice they were given in order to make their selections.

Figure 4.15. Graph of advice given in undertaking a VETiS subject 1-4 options.

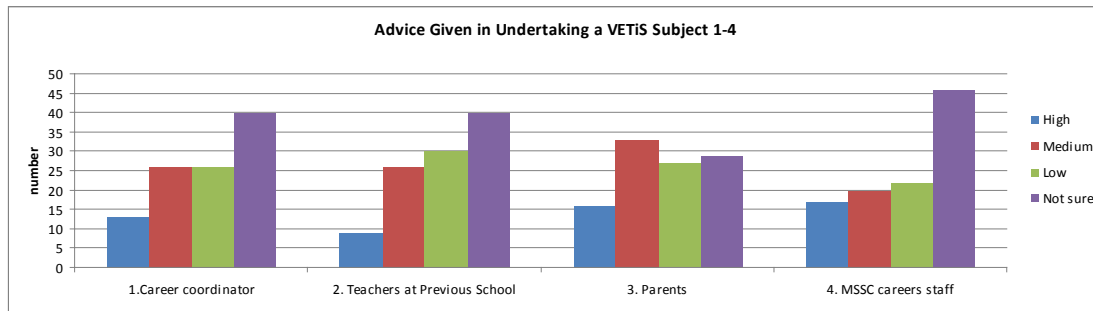
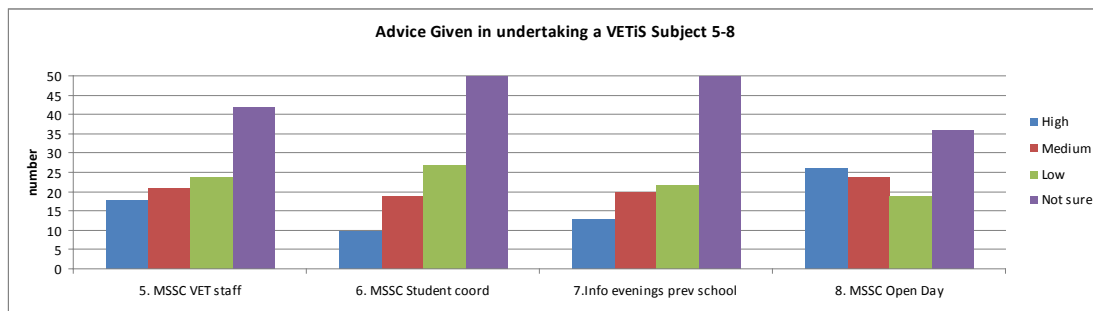


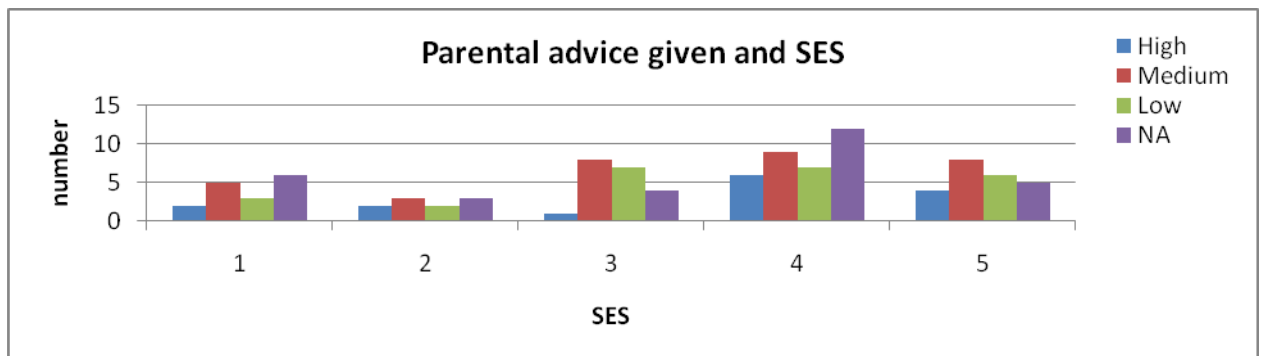
Figure 4.16 Graph of advice given in undertaking a VETiS subject 5-8 options.



### 4.6.1 Advice Given by Parents in Decision of Undertaking VETiS and SES

The level of parental advice given in the decision of undertaking a VETiS subject is graphed against socioeconomic status as measured in Section 4.2.2. See figure 4.17.

Figure 4.17 Graph of parental advice and SES.



Students do take some parental advice on their choice of educational pathways but it is not rated highly and does not appear to be strongly related to the SES of the student.

## 4.7 Student Perceptions of VETiS by SES

Is there any significant difference in how a VETiS student views their VETiS studies when disaggregated by socioeconomic status? Students who undertook the survey were asked about their current studies in VETiS such as:

- Enjoyment of VETiS subject;
- Making progress in VETiS subject;
- Understand competency-based assessment;
- VETiS subject will help gain employment;
- Would recommend a VETiS subject to other students;
- VETiS subject is as expected.

On an analysis of responses, in Figures 4.18 to 4.23 the relationship of the student towards their studies in a VETiS subject does not appear to be strongly influenced by socioeconomic status. All responses are related high to medium. VETiS students are enjoying their studies in the VETiS area and at the same time are making sound progress towards the completion of their studies in this area. VETiS students feel that their studies in the chosen vocational area enhance their chance of gaining employment. They also feel that they would recommend the subject to others and the study is as they expected before enrolment. The VETiS students surveyed also indicated that they understood the concept of competency-based training. As the survey was undertaken in semester 2 2008, students at this time would be well versed in the subject and as such should have an understanding of the structure of the training.

The only aberration in the data is SES Grouping 2 where the pattern is not as strongly demonstrated, although no low responses were observed. The area where the pattern was not as strong related to enjoyment, making progress and understanding of competency-based training.

Figure 4.18 Graph of SES and if VETiS student enjoys study.

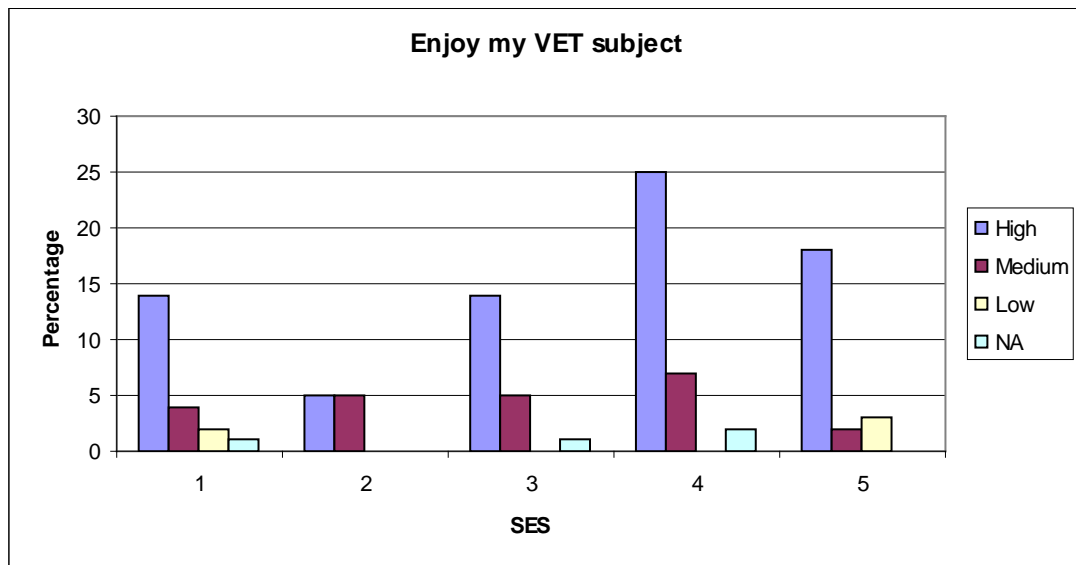


Figure 4.19 Graph of SES and if VETiS student feels they are making progress.

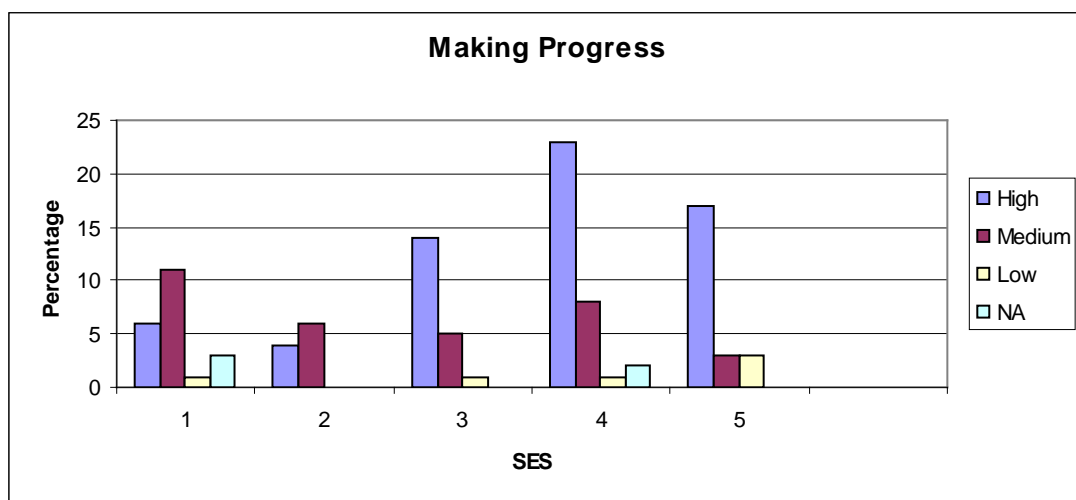


Figure 4.20 Graph of SES and student understanding of competency-based assessment.

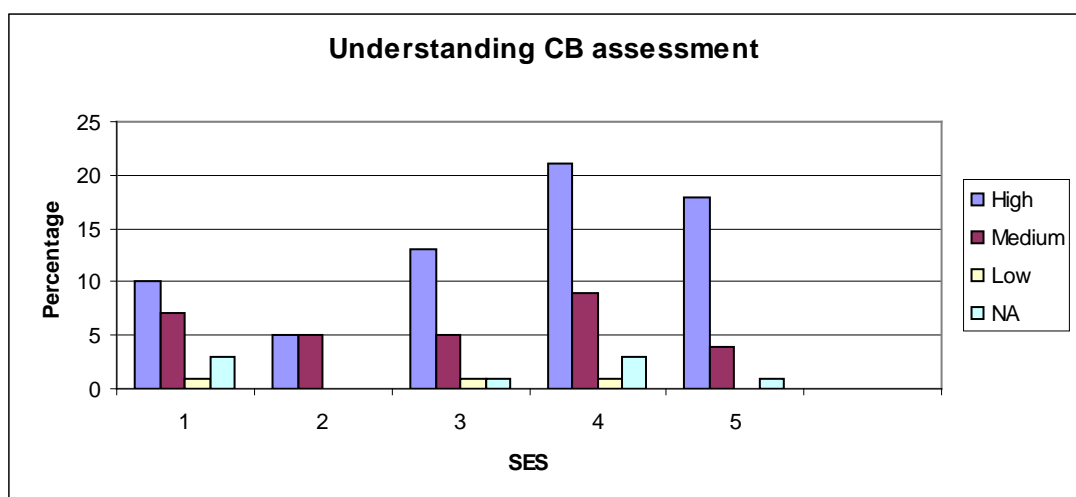


Figure 4.21 Graph of SES and if student feels VETiS helps gain employment.

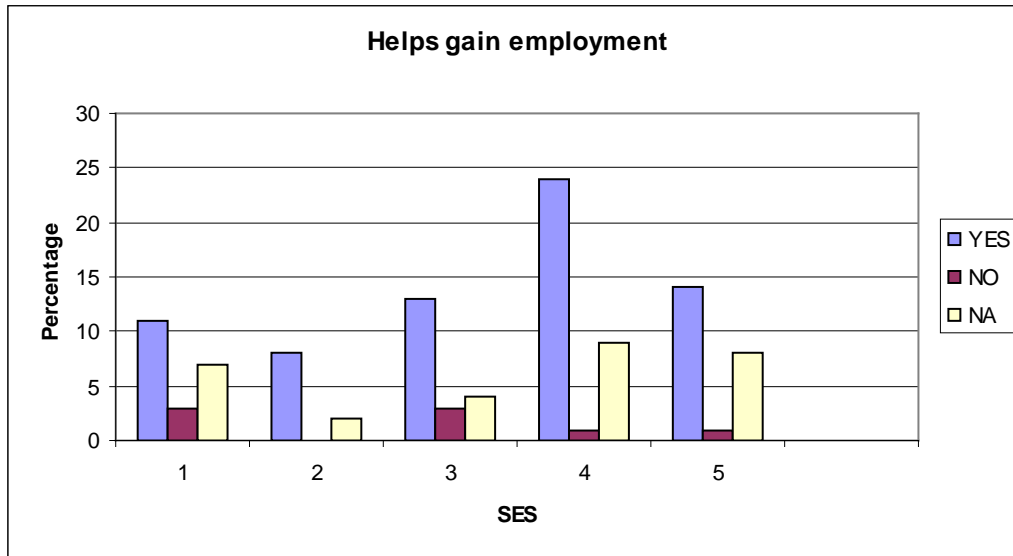


Figure 4.22 Graph of SES and if student would recommend VETiS.

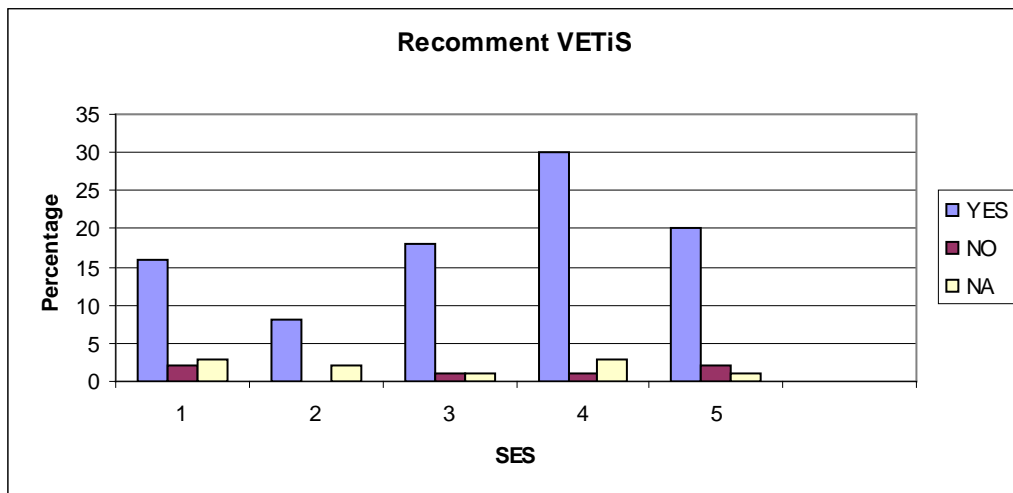
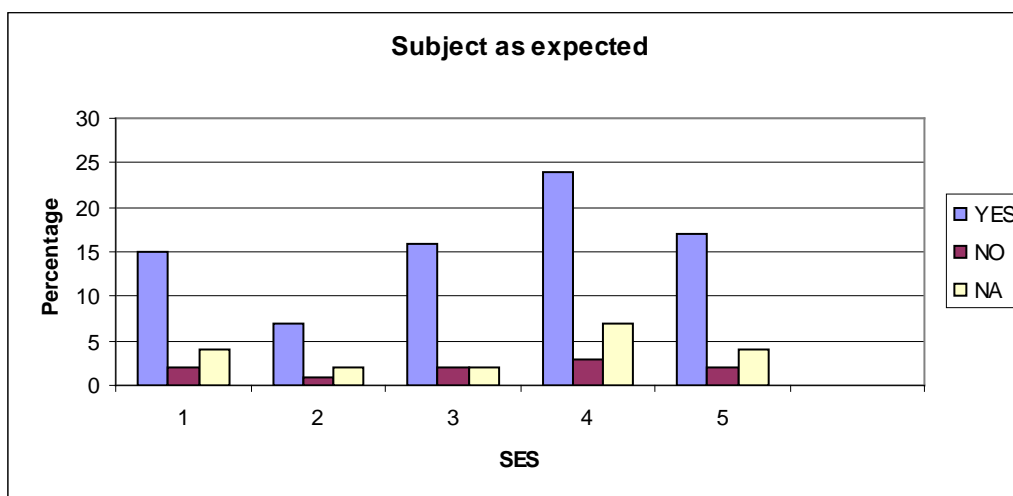


Figure 4.23 Graph of SES and if VETiS subject is as expected.



## **4.8 Interview Results**

Six students were interviewed. Themes which emerged from the student responses are included under each question. See Appendix 4.2 for the summary of student interviews.

### **4.8.1 What is the Main Occupation of Your Father? What is the Main Occupation of Your Mother?**

From the responses of the questions regarding parental occupation, the SES profile of the interview group was determined as being the following:

SES Group 1 - two students;

SES Group 3 - one student;

SES Group 4 - two students;

SES Group 5 - one student.

This is similar to the modal profile of the 108 survey respondents where the highest SES group mode was Group 4 and the lowest SES group mode was group 2. No student interviewed was from SES Group 2. See Figure 4.1 Graph of SES of 108 survey respondents.

### **4.8.2 What are You Thinking of Doing After Year 12?**

Two students are looking for a gap year followed by university entrance. A gap year often involves work or travel. These students are wishing to take a break from their studies at the end of Year 12 at MSSSC. The survey did not provide students with the option of a gap year post MSSC, but the final destination post-Year 12 being university studies for two of the six interviewed students is similar to the survey responses in Figure 4.5.

Three of the five students are looking for full-time employment. The SES of the three students ranges from Grouping 1 to Grouping 5. This response differs from the survey response in Figure 4.6 as half the students interviewed were seeking full-time employment. Interviews were conducted after the surveys were administered; there may have been a shift in student aspirations towards employment towards the end of the academic year at MSSC.

One student is looking for a placement at a TAFE college to continue their studies in the VET area.

#### **4.8.3 Can You Tell Me why You Chose This Vocational Course?**

Four of the five students commented that they chose a VETiS subject because of the certificate obtained and was good for job prospects.

One VETiS student summed up the trend observed from this question as “I chose the subject because places like the certificate”.

Three of the six students expressed a reason for their subject choice was that they were interested in the area.

#### **4.8.4 Tell me About the Advice You Received before Selecting a VET in School Unit at BSSC. Was the Advice Useful?**

All students interviewed expressed the opinion that they were not given any meaningful advice about VETiS before the subject was chosen. One student took advice from his brother who said it was a good field to get into. He found the advice to be useful as he wanted to work in the field.

This response confirms the results obtained in Section 4.6 that students who completed the survey did not rate highly any source of career advice as valuable with the exception of MSSC open day.

#### **4.8.5 Is the VET in School Unit You are Studying What You Expected? Can You Further Explain What You Mean?**

There was no common theme in the student responses to the question “Is the VETiS study as expected?” Responses ranged from “no did not really think about it” to “yes it was what I thought”.

All students who answered either yes or no, qualified their answer in some way. Some VETiS students expected more practical material where as another student expected far more theoretical material.

It would appear from the responses of the interviewed students that students are generally not informed as to the nature and structure of VET studies in junior secondary colleges before they make their decision as to which pathway to undertake at senior secondary college.

This is in marked contrast with the survey results. Figure 4.23 indicated that all VETiS students surveyed reported that the VETiS they were studying was as expected. This result was also reported when disaggregated by SES.

#### **4.8.6 If you had the Opportunity to Choose a VETiS Course again, and Based on your Experiences with your Current Course would you do so?**

All students interviewed expressed a positive attitude towards their VETiS studies. One student responded “Yes 100% absolutely”. This theme was expressed by a second student who also gave the reason why he would recommend the VETiS study as “Yes - enjoyed the relationship with the teacher.”

This is closely related to the survey question “Would you recommend a VETiS subject to other students?” Figure 4.22 indicated that a large majority of VETiS students would in fact recommend their VETiS course to others.

#### **4.8.7 Other Comments**

All students interviewed were asked if they wished to make other comment regarding their VETiS subject.

One student commented on the external assessment aspect of his course as he considered studying VETiS would allow him to achieve an easy study score for university entry after he undertook a gap year. He would use the certificate gained as an advantage in gaining employment during his gap year.

Another student now no longer wishes to further his studies or seek employment in this area due to negative experiences in his work placement because he considered that far too much was expected of him and he had difficulties in undertaking the tasks required of him.

## **4.9 Summary of Interviews**

Students interviewed represented four of the five SES groupings. SES grouping two was absent from this interview group. This was also under-represented in the survey results (See Figure 4.1).

The majority of students interviewed were looking for employment within the area of VETiS study. The only student not in this category no longer wanted to work in the field due to negative experiences during work placement.

All students received little useful advice before undertaking their course, but all would recommend the course studied.

## **4.10 Summary of Results**

This chapter contains the results of the three data collection methods used in the investigation. The three data collection methods were:

- Survey of 109 VETiS students at MSSC;
- Examination of the school enrolment data base of VETiS and non-VETiS students;
- Focus group of VETiS student interviews.

Results from the three data collection methods follow the structure of the survey and relate to the research questions.

Of the total school population 29% of students undertook a VETiS study in semester 2 2008. This is identical to the Victorian participation rate for government schools in 2007. The SES profile of the survey group was measured and compared to the SES profile of all VETiS enrolled at MSSC. The two profiles were similar with some variation at either end of the SES scale.

The whole VETiS SES profile was then compared to the profile of all non-VETiS students at MSSC. Results indicated that higher numbers of lower SES students opt for a VETiS study and lower numbers of higher SES students select a VETiS study.

Post-Year 12 aspirations of VETiS students are likely to include some form of further study with approximately one third wishing to undertake a university qualification.

VETiS subject selection was mapped against the SES cohort of students selecting individual VETiS subjects. It was found that there are three differing SES profiles with individual subjects being homogenous SES grouping, high SES grouping and low SES grouping. VETiS subjects that have students of a higher SES grouping are Multimedia and Music performance.

The reasons why students undertake a VETiS course was investigated with the main reasons for selecting such a course being relevance to work, the enjoyment of the subject and the perception that they will get good marks in the chosen VETiS subject. The reason of selecting a VETiS subject in order to enhance the students ENTER score was investigated, this has little effect on students choice of undertaking a VETiS subject apart from 35% of the highest SES group.

The value of career advice was investigated with most students indicating that such advice was not highly rated although students did seek some parental advice. The level of advice received does not appear to be related to the students SES.

Students overall perceptions of their existing VETiS studies was investigated with most aspects being highly regarded. No difference existed when this was disaggregated by SES.

The next chapter contains a discussion of these results and implications of the findings. A summary and review is reported in the concluding chapter.

# Chapter Five

## Discussion of Findings

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## **Chapter Five: Discussion of Findings**

### **5.1 Introduction**

This chapter is a discussion of the findings of the project *Student Perceptions and Outcomes of Vocational Education and Training in Schools (VETiS)*. The chapter discusses each of the major findings of the project that relate to the research problems of *why VCE students choose to study VETiS and whether this selection is related to socioeconomic status*. These findings are compared to the literature that was reviewed in Chapter 2. A summary of the discussion completes this chapter.

### **5.2 Number of Students Undertaking VETiS and the Socioeconomic Status Profile**

In 2008 approximately one third of the school population at MSSC undertook a VETiS study. Fullarton (2001) stated that in regional and rural areas, one in four students undertook a VETiS study; therefore this study is consistent with Fullarton and indicates a sound growth of VETiS at MSSC.

The number of students enrolled in a VETiS subject at MSSC when compared to data provided by *VET in Schools 2007* (NCVER, 2008) appears to be slightly above the state average for government schools and is approximately the same as the Australia wide percentage for VETiS enrolment. Therefore MSSC enrolment rates compare favourably with the State and Federal averages in the literature and probably indicate that the findings may be generalised.

In an examination of the socioeconomic status (SES) profiles at MSSC of VETiS students and non-VETiS students two trends were observed. Students with a lower SES were more likely to enrol in a VETiS subjects at MSSC, while students with a higher SES were less likely to enrol in a VETiS subject.

The lower SES grouping more likely to enrol in a VETiS subject is in the range from SES 1 to SES 3 groupings. The paraprofessional group being SES 4 has similar numbers of students enrolled in both VETiS and non-VETiS subjects. It is only at the highest SES group where students are under represented within VETiS studies.

This trend in SES and enrolment in VETiS is supported by Foley (2007), Fullarton and Ainley (2000), and Dalley-Trim et al. (2008).

The trend at MSSC does support the common findings that VETiS studies do attract students from a lower SES background, but it is only the highest SES group students from tertiary qualified professionals, who are not taking up enrolment in proportional numbers within a VETiS study.

### **5.3 Post-Year 12 Aspirations of VETiS Students at MSSC**

Most students enrolled in a VETiS subject at MSSC are likely to undertake some form of further study after leaving senior secondary college. Some students are considering a gap year before continuing further study. A gap year is a break in formal education to undertake travel or employment before continuing education or training.

The order of destinations post-Year 12, not including the gap year, is university study, TAFE study, apprenticeship followed by employment. One fifth of the cohort was not sure of their destination post-Year 12.

Aspirations of post-Year 12 students appear to be linked to gender. More male VETiS students were considering university, apprenticeship or employment whereas female VETiS students showed more interest in a TAFE study or were not sure of their destination post-Year 12.

When the SES of the VETiS student was considered it was found that:

- The highest SES students consider university. Employment and TAFE are not options considered.
- The second highest SES students consider university and TAFE as possible options.
- Employment becomes an option for students within the mid SES range.
- Students from the lowest SES range consider all possible options with “uncertain” being the lowest option.

The findings from the SES groups 2 to 5 are well supported by other research findings. Polesel et al. (2005) stated that non-VETiS are more academically orientated and are more likely to take up a university study. This compares to one

fifth of VETiS graduates that undertake a university placement. Dalley-Trim et al. (2008) found low SES students as being more likely to enrol in VETiS and less likely to apply for a university placement. Fullarton and Ainley (2000) stated that lower SES students tend to participate in courses of a vocational nature.

The findings of this investigation are generally supported by the literature, with the exception of the responses made by the lowest SES group in that they were considering all possibilities and were sure that they were going to undertake some post-Year 12 outcome. This group at MSSC appears to be more certain in their outlook than students of a higher SES profile. The students of a higher SES grouping may be more exposed to the possible options post-Year 12 and as a result may be still considering their options.

#### **5.4 VETiS Subjects and Socioeconomic Status**

Differing VETiS subjects attract students with differing SES profiles. Three distinct SES profiles have been identified:

- Homogenous SES profile – These VETiS subjects attract students from the complete range of SES in equal numbers. Half of the VET subjects offered at MSSC demonstrated this profile.
- Low SES profile – These VETiS subjects attract more students from the lower SES groups. Under half of the VETiS subjects fitted this classification including two subjects that did not offer a study score.
- High SES profile – These VETiS subjects attract more students from the higher SES groups. Only two subjects fitted this classification: Multimedia and Music Performance.

It would appear that students self-select VETiS subjects based on their SES. The more challenging studies such as Music Performance are selected more often by students of a higher SES whereas the lesser academic VETiS studies such as Business Administration and Hair and Beauty are taken up by students with a lower SES.

Little research is available in the literature that relates SES profiles to enrolment within VETiS subjects. Research widely exists relating SES to choice of schools, with higher SES students electing to undertake more academic pathways.

Mukherjee (1999) stated the SES of households plays a large role in influencing the choice of schools. Rothman (2003) and Cox (2005) discussed the growing segregation of schools along socioeconomic lines with more academic students undertaking more traditional subjects such as Mathematics and Science. It may follow that VETiS students of a higher SES may be attracted to what they perceived as the more challenging VETiS studies. Further investigation is required in this area.

## **5.5 Reasons for the Decision to Undertake a VETiS Subject**

Students in this study elected to study a VETiS course generally because they enjoy some aspect of the study. An example is students who study VETiS Information Technology have a high interest in some aspect of computing. VETiS students give reasons for the decision to undertake a VETiS course as the study is relevant to work, they enjoy some aspect of the study or they feel that they will achieve good results in the study chosen.

VETiS students do not consider the follow as relevant reasons for selecting a VETiS course:

- Friends doing the subject and the comments of peers;
- Skills shortage in the employment area;
- Parents wanted the students to undertake a VETiS Study;
- To enhance the student's ENTER score which is determined from the VETiS subject score.

Some students from the highest SES grouping do consider the enhancement of the ENTER score as a reason for undertaking a VETiS subject but there appears to be no relationship in the selection of subjects which have a higher scaled ENTER score by students of a low to mid SES profile. This verifies that the majority of students do not select a VETiS study to enhance ENTER scores.

The literature supports the findings that students select a VETiS subject because they enjoy some aspect of the study, and they feel that it is relevant in some way. This is supported by research by Ainley et al. (1990) and Alloway et al. (2004). Porter (2006) also supported these reasons and included the fact that a VETiS subject allowed for a head start in a chosen vocational pathway.

The main reason why students select a VETiS study as found by this study is simply stated by Dalley-Trim et al. (2008) as the “fun factor” (p. 62).

## **5.6 Career Advice Given in Making the Decision to Study a VETiS Subject**

Students enrolled in a VETiS subject did not rate any career advice highly apart from the open day at MSSC. Students did seek parental advice about their selection to a VETiS subject regardless of the SES of the student.

This was in contrast with Rothman et al. (2008) who stated that students were generally positive in regard to the value of career advice they received at school. Polesel et al. (2004) stated that career advice works best for students who were going on to further study such as university or TAFE. As only a very small proportion of VETiS students aspire to a university place, more vocationally driven career advice may be required to enable students to make informed decisions in regard to undertaking a VETiS course. Dalley-Trim et al. (2008) stated that schools needed to undertake a concerted effort to market VETiS as a course of study, as negative perceptions existed. It would appear that the low rating of career advice by VETiS students at MSSC may be linked to the fact that MSSC is a Senior Secondary College and students receive the majority of career advice before they enrol at MSSC. Within their junior secondary studies students are not widely exposed to Vocational Education and this study indicates that improvement is needed in this area.

## **5.7 Student Perceptions of Existing VETiS Study**

All students regardless of SES demonstrated high perceptions of their current VETiS study. Students indicated that they enjoyed the subject, were making progress and would recommend the VETiS study to others. This supports the finding in Section 5.5 that students selected a VETiS study because of interest and the “fun factor”.

Some of the focus group students indicated that they had little real understanding of what a VET study actually was. This links to Section 5.6 in that greater work is required to give prospective students a better understanding of the nature of a VETiS subject.

## 5.8 Summary of Discussion

This chapter contains a discussion of the findings of the project. The major findings that relate to the research questions of why students chose to study VETiS and whether this selection is related to socioeconomic status are summarised in this section.

*How does the percentage of VETiS students at MSSC compare to the State wide percentage?*

MSSC enrolment rates compare favourably with the State wide data for state schools.

*What is the socioeconomic status profile of VETiS students at MSSC?*

Students with a lower SES are more likely to enrol in a VETiS subjects at MSSC whereas students with a higher SES are less likely to enrol in a VETiS subject. This is supported by the literature although the overall SES profile of students enrolled at MSSC may be higher than the Australian average with the paraprofessional group being enrolled in similar numbers in both VETiS and non-VETiS subjects.

*What are the post-Year 12 aspirations of VETiS students? Is there a socioeconomic link to post-Year 12 destinations for VETiS students?*

This study has concluded that Post-Year 12 aspirations of VETiS students are linked to the SES of the VETiS student. This is well supported by the literature, as it has been determined that students of a higher SES are more likely to undertake a university course (Dalley-Trim et al. 2008) whereas students of a lower SES are more likely to undertake a vocational pathway (Fullarton and Ainley, 2000). The finding from this study, that most VETiS students at MSSC, regardless of SES, do consider a post-Year 12 pathway that involves some form of training or study is not supported in the literature as the literature widely reports that lower SES students seek immediate employment post-Year 12.

***Is there a relationship between the reasons why students chose a VETiS subject and socioeconomic status?***

It can be concluded from this study that some students selection of VETiS at MSSC appear to relate to SES. There appears to be a difference in the choice of VETiS subject with students of a higher SES more often undertaking Multimedia and Music Performance and students of a lower SES more often undertaking subjects such as Hair and Beauty and Business Administration. Research exists in linking students of higher SES undertaking more demanding academic courses (Rothman, 2003; Cox, 2005), but the literature does not include investigations of individual VETiS subject choice and student's SES. If a student perception exists that some VETiS subjects are more challenging and therefore more academic, then this is supported by the literature. Students' perceptions of VETiS subject difficulty was not undertaken by this study.

***Is there any difference in the choice of a VETiS subject by socioeconomic status?***

Students elect to study a VETiS course because they enjoy some aspect of the study. Students enrol in a VETiS subject for the fun factor (Dalley-Trim et al. 2008). This is supported by this study as students at MSSC reported that they undertook a VETiS subject because of interest in the area. Other factors such as skill shortage and the influence of peers were not a consideration. A small number of students at MSSC from the highest SES grouping indicated that they selected a VETiS subject to enhance their ENTER score.

***What is the level of advice given in the decision to undertake a VETiS subject and is this related to socioeconomic status?***

VETiS students at MSSC did not rate current career advice highly apart from the open day at MSSC. The student's SES had little effort on how the level of advice was rated. This is contrast with Rothman et al. (2008) who found that students were generally positive about the level of career advice they received. Dalley-Trim et al. (2007) outlined the fact that schools must market vocational education. As prospective MSSC students select their pathways before enrolling at MSSC, there appears to be a need for a proactive approach to better inform Year 10 students, as to the nature of VETiS courses and possible pathways.

*Is there a relationship between how VETiS students view their VETiS studies and socioeconomic status?*

Student perceptions of their existing VETiS course regardless of SES at MSSC were favourable. Students indicated that they enjoyed the VETiS subject and would recommend the study to others. It appears that VETiS courses at MSSC were meeting the students' expectations and as such they would recommend a VETiS study to their peers. It was highlighted that students did not make subject choice based on peer opinions; therefore this is of limited value in better informing prospective students as to the nature of vocational courses at MSSC.

This chapter is followed by the concluding chapter containing the summary and conclusion.

# Chapter Six

## Summary and Conclusion

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## Chapter Six: Summary and Conclusion

### 6.1 Introduction

This chapter summarises the study *Student Perceptions and Outcomes of Vocational Education and Training in Schools (VETiS)*.

The chapter gives the background to the study followed by a summary of the literature review and the methods used in the investigation. A summary of the findings and the conclusions that have emerged from the study are then presented. The chapter concludes with a consideration of the limitations of the study and further directions for study.

### 6.2 Background

In the State of Victoria, the VCE covers the final two years of secondary school. Within the VCE students can choose to undertake a VETiS study. Having taught VETiS information Technology since its introduction over 10 years ago, I have developed an interest into the reasons why students undertake a VETiS subject. As such I became interested in undertaking research into the motivational factors of why VCE students elect to study a vocational education course in their final years of secondary schooling.

Little formal research at a school level has been undertaken into the reasons why students undertake a VETiS study and if there is a relationship with socioeconomic status (SES) within this cohort of students. The general assumption appeared to be that, students of lower SES and academic ability were more attracted to a VETiS study. As a Teacher at MSSC I was keen to investigate the nature of the cohort of VETiS students who make up over 30% of the school population. This study set out to investigate the following research questions:

- How does the percentage of VETiS students at MSSC compare to the State profile and what is the socioeconomic status profile of VETiS students at MSSC?

- What are the post-Year 12 aspirations of VETiS students and is there a socioeconomic link to post-Year 12 destinations for VETiS students?
- Is there any difference in the choice of a VETiS subject by socioeconomic status?
- Is there a relationship between the reasons why students chose a VETiS subject and socioeconomic status?
- What is the level of advice given in the decision to undertake a VETiS subject and is this related to socioeconomic status?
- Is there a relationship between how VETiS students view their VETiS studies and socioeconomic status?

### 6.3 Summary of Literature

The literature review outlined the current status of vocational education courses at the senior secondary level of education in Australia.

Vocational education subjects have been introduced into the final years of secondary schools in all Australian states. A process of refinement of vocational courses has resulted in the development of Vocational Education and Training in Schools (VETiS) programs over the last ten years.

The report *VET in Schools Pathways, the 2004 Year 12 Cohort*, (2006) outlines what is considered to be a VETiS course as giving credit within a recognised qualification covered by the Australian Qualifications Framework (AQF). The course is also taken as part of a senior secondary certificate.

Schools with a strong commitment to VETiS can offer a range of curriculum programs and careers advice and support relevant to the diverse needs of young people (Polesel et al., 2004). The inclusion of vocational education programs is now a major part of the school curriculum. VETiS and traineeships are now widely embedded into the senior secondary school curriculum. The increase in participation in secondary schooling of VETiS in Australia has been highlighted by Coates and Rothman (2008). Many VETiS subjects are dual assessed. Dual assessment allows for assessment of competency and assessment levels leading to a Year 12 study score that can be used for comparison purposes to obtain

university entry such as the Equivalent National Tertiary Entrance Rank (ENTER) score (Brown and Sutton, 2008).

The literature review examined the concept of socioeconomic status (SES) and the relationship between SES and the cohort of students who were involved in VETiS studies. Socioeconomic status is closely linked to education and student outcomes. The relationship between SES and academic performance is well documented by research with students of lower SES tending to perform at a lower level than their peers with a higher SES. (Considine and Zappala, 2001)

SES is not an easy concept to measure and depending on the method of data gathering, differing methods of SES determinations can be used. SES data can be gathered by two distinct methods: individual data and aggregate data (Foley, 2007). A common method for the measurement of the individuals SES that is easy to use is the parents' highest occupation status (Rothman, 2003).

There is a strong relationship between VET participation and socioeconomic status, in that VET participation rate is greatest in low socioeconomic areas (Foley, 2007). Students from low socioeconomic backgrounds are also more likely to participate in these programs, and these students are also less likely to apply to university than their non-vocational peers (Dalley-Trim et al., 2008; Polesel et al., 2004). It is estimated that one in five male VET graduates enter university compared with three in ten female VET graduates (Knool and Ainley, 2005).

Studies into student perceptions as to why students opt to study a VETiS pathway have found that relevance to work and enjoyment and interest are the main triggers for VETiS subject selection (Alloway et al., 2004; Polesel et al., 2005).

Student perceptions varies for students who do not undertake a VETiS subject in that choices in the mathematics, physical sciences areas were more influenced by perceived future requirements of work or further study (Ainley et al., 1990; Cox 2005).

Students make subject choice based on their perceptions therefore sufficient counselling and career advice must be given to students to assist in making an informed decision. Rothman et al. (2008) suggested that students were getting adequate advice. The reasons why student were advised to undertake a VETiS course were also stated in the literature. Dalley-Trim et al. (2007) found that

academic students were advised to take VETiS subjects in order to gain an advantage. Non-academic students also were encouraged by career advisors to undertake a VETiS study.

The next section describes the methods used in this study.

## 6.4 Methods Used

The reasons why students choose to study VETiS and whether this subject selection is related to socioeconomic status was examined in this project. This study was conducted at a regional senior secondary college given the pseudonym Midlands Senior Secondary College (MSSC) in Victoria. The investigation gathered data from three sources:

- The population of VETiS students at MSSC were anonymously surveyed to determine perceptions and SES profile. From a possible 480 respondents, 108 students returned permission forms and valid surveys.
- The whole-school population of both VETiS and non-VETiS students SES profiles were queried from the school enrolment data base with the resulting data being de-identified. The following SES profiles were determined from the queries, SES profile of VETiS, SES profile of non-VETiS students and the SES profile of individual VETiS subjects.
- A small cohort of VETiS students (focus group) completed an interview of a similar format to the anonymous survey.

The data from the survey and the whole-school queries were manipulated using spreadsheet software. For the survey the spreadsheet was used to examine each set of student responses in the four main sections filtered against socioeconomic status.

The research questions were investigated using an explanatory mixed method approach, where the quantitative data from the survey and school data base queries were collected first. The qualitative data from the focus group interviews was then gathered to support the initial quantitative data.

## 6.5 Findings and Conclusions

The number of students undertaking a VETiS course at MSSC is consistent with the Victorian participation rate for government schools. Regional State Secondary Colleges have a higher take up of VETiS studies compared to other educational institutions.

Consistent with other research it was found that students at MSSC with a lower SES are more likely to enrol in a VETiS subjects whereas students with a higher SES are less likely to enrol in a VETiS subject. A large number of students from the middle-upper SES classification are well represented within VETiS studies at MSSC. It would appear that at MSSC a diversity of students are attracted to a VETiS study and undertake a VETiS study for a wide variety number of reasons.

Post-Year 12 aspirations of VETiS students are linked to the SES of the VETiS student but most VETiS students at MSSC, regardless of SES; consider a post-Year 12 pathway that does not involve entering the work force directly. Several of the focus group students indicated that they were considering a gap year, being a break in study after Year 12, before undertaking further studies. It may be thought that students undertaking a Vocational Pathway would be seeking employment post-Year 12, this does not appear to be the case. Students may be opting to undertake further study to enhance their overall employment prospects or this may due to youth unemployment within the area.

There appears to be a relationship between student SES and VETiS subject choice in some subjects although the majority of VETiS subjects attract students from a wide SES profile. Unidentified barriers may exist for students of a lower SES in the undertaking of some VETiS subjects such as fee structure and the lack of access to resources. Other VETiS subjects attract students of a lower SES profile. This requires further exploration, as this is the first study to examine student SES and student choice of VETiS study.

Students elect to study a VETiS course because they enjoy some aspect of the study. The influence of peers and consideration of the student's ENTER score were not factors in the choice of a VETiS study. A small group in the highest SES cohort indicated that they were to use their VETiS subject to increase their chances of a university placement which may indicate that they may undertake a VETiS study to gain credit in a less demanding or academic subject.

Student perceptions of their existing VETiS course were favourable as students indicated that they enjoyed the VETiS subject and would recommend the study to others. This profile did not change with SES. There does not appear to be a negative aspect in students' perceptions of the overall quality and value of VETiS studies at MSSC.

VETiS students did not rate initial career advice highly apart from the open day at MSSC, but students did seek some parental advice in making their pathway choice. The focus group indicated that they did not understand what VETiS involved when they were making their subject choice to undertake a VETiS study. Greater exposure of Year 10 students of the nature of Vocational Education is required. This will allow students to make an informed choice in deciding their Year 11 and 12 pathways. VETiS is not widely available as a study at Year 10 level. It is therefore identified that Year 10 students must have far more exposure to an overview of VETiS.

## **6.6 Limitations of Study**

The major limitation of this study was that the investigation is based on one Victorian regional secondary college and as such may not be truly representative of Victorian cultures and socioeconomic diversity. It is a snap shot of one educational institution. Therefore conclusions drawn from this study can be applied directly to like schools (large regional Senior Secondary Colleges) in Victoria and perhaps Australia.

The study was also limited by the lack of ability to gather a wide cross section of student responses. Several classes could not be sampled due to the logistics of gathering surveys off campus. A comparison of the whole-school VETiS SES and the surveyed VETiS SES indicated a similar profile but the lower SES cohort may have not been fully represented by the survey results and is a problem that has been reported by Cox (2005).

## **6.6 Directions for Further Research**

This study suggests that further work is required to improve the process by which students gain an understanding of Vocational Education in order to make an informed choice as to what pathway to undertake at senior secondary school. The concept of differing SES cohorts within different VETiS subjects needs be further investigated. Such a question is “What is the reason why VETiS Multimedia attaches a cohort of higher SES students?” VETiS students of a higher SES may be attracted to what they perceive as more challenging VETiS studies or is there, other access and equality barriers preventing students from lower SES in undertaking some VETiS subjects. Further investigation is required in this area.

## References

- Adams, D. & Boote, J. (2005). An insight into the influence of Vocational Education and Training in Schools programs and Lifelong learning. *Australian Journal of Vocational Education and Training in Schools*. Volume 5: 60-65.
- Ainsley, J. Jones, W. & Naveratnam, K. (1990). *Subject Choice in Senior Secondary School*. Canberra: Australian Council of Education and Research, Australian Government Publishing Service.
- Ainley, J & Long, M. (1995). *Measuring student socioeconomic status', in Socioeconomic status and school education*. Eds. J Ainley, B Graetz, M Long and M Batten, Canberra: Australian Government Publishing Service.
- Alloway, N., Dalley, L., Patterson, A., Walker, K., & Lenoy, M. (2004). *School students making education and career decisions: Aspirations, attitudes and influences*. Canberra: Department of Education, Science and Training.
- Anlezark, A., Karmel, T. & Ong, K. (2006). *Have school vocational educational and training programs been successful?* Adelaide: National Centre for Vocational Educational Research.
- Barnett, K. & Ryan, R. (2005). *Lessons and challenges: Vocational education in schools - research review* Adelaide: National Centre for Vocational Education Research.
- Brown, M. & Sutton, D. (2008). *Serving multiple masters: Reviewing the role and recognition of Vocational Education and Training within the Victorian Senior Secondary School Certificates*. AVETRA conference 3-4 April 2008 paper 66 Adelaide. Retrieved 1 October 2009 from <http://www.avetra.org.au/AVETRA%20WORK%2011.04.08/CS5.1%20%20Mike%20Brown%20&%20Daryl%20Sutton.pdf>
- Coates, C. & Rothman, S. (2008). *Participation in Vocational Education and Training in Schools*. Longitudinal Surveys of Australian Youth, Australian Council for Education and Research. Retrieved 24 May 2009 from [http://research.acer.edu.au/Isay\\_briefs/14](http://research.acer.edu.au/Isay_briefs/14)
- Considine, G. & Zappala, Z. (2001). *Educational performance among school students from financially disadvantaged backgrounds*. Working paper no.4. Melbourne: The Smith Family.
- Cox, P. (2005). *Participation and performance in mathematics and science: gender issues revised*. Ph.D.Thesis, Latrobe University, Bundoora, Victoria: Author
- Creswell, J. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. (2nd ed.). Upper Saddle River, New Jersey: Pearson Education.
- Dalley-Trim, L., Alloway, N. & Walker, K. (2008). Secondary School Students' Perceptions of, and the Factors Influencing Their Decision-Making in Relation to, VET in Schools. *The Australian Educational Researcher*, Volume 35, Number 2, 55-69.
- Dalley-Trim, L., Alloway, N., Patterson, A. & Walker, K. (2007). Vocational education and training in schools: Career Adviser's perceptions and advising practices. *Australian Journal of Career Development*, 16 (1), 29 -36.

- Department of Education and Early Childhood Development. (2009). *On Track Survey 2008, The Destinations of School Leavers in Victoria*. Darlinghurst, NSW: Author. Retrieved 26 July 2009 from <http://www.eduweb.vic.gov.au/edulibrary/public/voced/ontrack/2008-destinations-report.pdf>
- Department of Education and Training and the Arts. (2007). *Training packages @ Work Back to Basics*. Technology and Product Services. Queensland, Australia: Author.
- Department of Education and Training. (2006). *The 2004 Year 12 Cohort*. Retrieved 25 January 2009 from <http://www.sofweb.vic.edu.au/voced/pdf/research/VET2004Transitions.pdf>
- Foley, P. (2007). *The socioeconomic status of vocational education and training students in Australia*. Adelaide: National Centre for Vocational Education Research.
- Fullarton, S. & Ainley, J. (2000). *Subject Choice by Students in Year 12 in Australian Secondary Schools. Longitudinal Surveys of Australian Youth*. Research Report Number 15. Retrieved 12 December 2009 from [http://www.acer.edu.au/documents/LSAY\\_lsay15.pdf](http://www.acer.edu.au/documents/LSAY_lsay15.pdf)
- Fullarton, S. (2001). *Vocational Education and Training in Schools: Participation and Pathways*. Research Report Number 21, Longitudinal Surveys of Australian Youth, Australian Council for Educational Research. Retrieved 28<sup>th</sup> October 2009 from [http://www.acer.edu.au/documents/LSAY\\_lsay21.pdf](http://www.acer.edu.au/documents/LSAY_lsay21.pdf)
- Graetz, B. (1995). *Socioeconomic Status in Education Research and Policy* 'in John Ainley, Brian Graetz, Michael Long and Margaret Batten, Socioeconomic Status and School Education, Canberra: DEET/Australian Council of Education and Research.
- Harris, R. Guthrie, H., Hobart, B. & Lundberg, D. (1995). *Competency-Based Education and Training: Between a Rock and a Whirlpool*. South Melbourne: Macmillan Education
- Innovations & Business Skills Australia. (2009). ICA05 Information and Communications Technology Training Package, Version 3.0, Burwood, Australia: Author.
- Innovations & Business Skills Australia (2005). *TAA04 Training and Assessment Training Package*. Burwood, Australia: Author.
- Jenkins, G. (2006). *A Critical Analysis of the Teaching of Hospitality at Marymount College*. Masters thesis, Bond University, Gold Coast, Australia: Author.
- Kangan, M. (1974). *Australian Committee on Technical and Further Education & Technical and Further Education in Australia : report on needs in technical and further education*. Australian Committee on Technical and Further Education. Canberra: Australian Government Publishing Service.
- Kell, P. (2006). *Technical and Further Education Futures: An inquiry into the future of technical and further education in Australia*. Australian Educational Union. Retrieved 1 October 2009 from <http://www.aeufederal.org.au/Publications/TFreport.pdf>
- Khoo, S. & Ainley, J. (2005). J. *Attitudes, Intentions and Participation*. Research Report 41. Longitudinal Surveys of Australian Youth. Adelaide. South Australia: Australian Council of Education and Research.

- Linke, R., Oertel, L. & Kelsey, N. (1988). *Regional analysis of socioeconomic trends in educational participation*, Departmental monograph no.7, Canberra: Australian National University.
- Marks, G., McMillan, J., Jones, F. & Ainley, J. (2000). *The Measure of Socioeconomic Status for the Reporting of Nationally Comparable Outcomes of Schooling*. National Education Performance Monitoring Taskforce. Canberra: Australia Council for Education Research and Sociology Program Research School of Social Sciences National University.
- Marks, N. (1999). *The Measurement of Socioeconomic Status and Social Class in the LSAY Project Technical Paper No. 14 . LSAY Technical Reports*. Retrieved 1 October 2009 from [http://research.acer.edu.au/lsay\\_technical/28](http://research.acer.edu.au/lsay_technical/28)
- Mayer, E. (1992). *Putting general education to work: The Key Competencies Report*. Melbourne, Victoria: Australian Education Council. Retrieved 26 July 2009 from [http://www.voced.edu.au/docs/dest/TD\\_LMR\\_85\\_658.pdf](http://www.voced.edu.au/docs/dest/TD_LMR_85_658.pdf)
- Mukherjee, D. (1999). *Socio-economic status and School System Enrolments*. Research Monograph No.1, Darlinghurst: Australian Centre for Equity though Education.
- National Centre for Vocational Educational Research. (2008). *Students and Courses. Australian Vocational Education and Training Statistics*: Adelaide: Author.
- National Centre for Vocational Educational Research. (2008). *VET in Schools 2005*. Adelaide, Australia: Author.
- National Centre for Vocational Education Research. (2009). *VET in Schools 2007*. Adelaide, Australia: Author.
- Pickersgill, R. (2004). *The engagement of vocational education and training and innovation in Australia: Some historical perspectives*. Adelaide: National Centre for Vocational Educational Research.
- Polesel, J. (2001). Vocational Education and Training in Victoria. An appraisal six years down the track. *Journal of Vocational Education and Training*, 53:2, 325-340.
- Polesel, J., Helme, H., Davies, M., Teese, R., Nicholas, T. & Vickers, M. (2004) *VET in Schools: A post-compulsory education perspective*. Adelaide: National Centre for Vocational Education Research.
- Polesel, J., & Teese, R. (2007). *VET in Schools Pathways: The 2006 Year 12 Cohort Report*. Department of Education and Early Childhood Development, Melbourne. Retrieved 28th October 2009 from <http://www.eduweb.vic.gov.au/edulibrary/public/voced/ontrack/vetis06.pdf>
- Polesel, J., Teese, R., O'Brien, K. (2001). *Transitions from the VET in Schools Program: The 1999 year 12 cohort*. Melbourne: Department of Education and Training.

- Polesel, J., Teese, R., Lamb, S., Helme, S., Nicholas, T. & Clarke, K. (2005). *Destinations and satisfaction survey of 2004 HSC VET students in New South Wales*. Department of Education and Training, NSW. Retrieved 2 August 2009 from <http://www.bvet.nsw.gov.au/pdf/melunivetreport.pdf>
- Porter, J. (2006). *What makes vocational training programs in schools work? A study of New South Wales and Queensland schools*. Adelaide: National Centre for Vocational Education Research.
- Pritchard, B., & Anderson, D. (2006). *The Victorian Certificate of Applied Learning and Young People in TAFE: Welcome Challenge or Weary Acceptance*. AVETRA Conference, University of Wollongong. Retrieved 1 October 2009 from <http://www.avetra.org.au/ABSTRACTS2006/PA%200064.pdf>
- Robinson, C. (2007). *Evolution of NCVET and its role in the vocational education and training sector*. Adelaide: National Centre for Vocational Educational Research.
- Rothman, S. (2003). The changing influence of socioeconomic status on student achievement: Recent Evidence from Australia Longitudinal Surveys of Australian Youth. LSAY Conference Papers. Australian Council for Educational Research. Retrieved 12 October 2009 from [http://research.acer.edu.au/cgi/viewcontent.cgi?article=1002&context=lsay\\_conference](http://research.acer.edu.au/cgi/viewcontent.cgi?article=1002&context=lsay_conference)
- Rothman, S., Hillman, K., Curtis, D. D., & McMillian, J. (2008). *Career advice and career plans: Sources, satisfaction and realisation*. Paper presented to AVETA Vocational and Education and Training in Context conference. Retrieved 2 January 2010 from [www.aveta.org.au](http://www.aveta.org.au)
- Smith, E. (2004). Vocational Education and training in Schools in Australia: What are the consequences of moving from margins to mainstream? *Journal of Vocational Education and Training*, Vol 65 no 4. 559-577
- Victoria Curriculum and Assessment Authority. (2009). *Scored Assessment for Vocational Education and Training Subjects*. Retrieved 15<sup>th</sup> October 2009 from <http://www.vcaa.vic.edu.au/vet/programs/scoredasses.html>
- Victorian Curriculum and Assessment Authority. (2007). *Victorian Certificate of Education/Vocational Education and Training, Information Technology Assessment Guide*. Melbourne, Victoria: Author.
- Victorian Tertiary Admission Centre. (2010). *Victorian Tertiary Admission Centre 2009 Scaling Report*. Retrieved 11 Jan 2010 from [http://www.vtac.edu.au/pdf/scaling\\_report.pdf](http://www.vtac.edu.au/pdf/scaling_report.pdf)
- Wills, S. (2000). Editor. First Fleet Data Base. University of Wollongong. Retrieved 2 August 2009 from <http://firstfleet.uow.edu.au/index.html>