

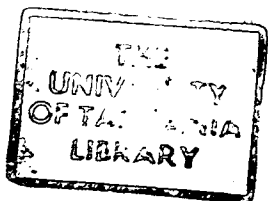
Youth attitudes to enterprise:
An evaluation of the Young Achievement Australia "Venture"
program from one perspective

A thesis submitted in fulfilment of the
requirements for the degree of Master of
Education by Research

by

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Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma by any educational institution and, to the best of my knowledge and belief, it contains no material previously written or published, except where due reference is made in the text of the thesis.

Julia M. Edwards.

Julia Melanie Edwards

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Abstract

Young Achievement Australia (YAA) provides several forms of enterprise-styled education programs. One program is the Venture program for adolescents. It could be argued that participants in the Venture program act as entrepreneurs, creating and operating a new small business, using goods and services they have designed or adapted. The new business operates in the real business world.

The relationship between the Venture program and participants' attitudes to enterprise form the core of this research. Thus an evaluation of this program was undertaken in 1993. The evaluation was divided into four components: a demographic survey, an attitude test, participant observations and a telephone survey. Data were obtained from three perspectives, while the demographic survey provided sample details.

All (118) Tasmanian Venture participants were offered the demographic and attitude surveys, the latter on a pre-post basis. All (26) participants of Group 1 were observed by the researcher for six months. Ten participants from Group 1 were surveyed by telephone on completion of the program.

The attitude test was based on the Entrepreneurial Attitude Orientation (EAO) instrument, which was used by Robinson et al. (1991) to distinguish entrepreneurs from non-entrepreneurs on the basis of attitudinal differences. The four attitude subscales which were studied related to affective, cognitive and conative aspects concerned with *achievement in business, self esteem in business, personal control in business and innovation in business*.

Seven of the twelve subscale components of the modified EAO instrument were found to have acceptable internal consistency reliability. Of these seven subscale components, five showed significant differences between the pre-

and post-test scores. One subscale component, *self-esteem conation*, showed a significant positive change in attitudes for the grouped Venture participants. The remaining four subscale components recorded *negative* attitude changes.

The telephone survey provided insight into the attitude systems of individual Venture participants. Both negative and positive entrepreneurial behavioural intentions were evident in the attitude systems.

Whole group attitude changes were thus detected in five of the twelve subscale components of the attitude test and individual attitude changes were detected by the telephone survey. From participant observation, limited evidence of true entrepreneurial behaviour was found. As far as attitudes are concerned, it was found that entrepreneurial qualities such as innovation may be actually stifled by the program. The program, however, is related to positive changes in participants' self-esteem in relation to entrepreneurial behaviour. Venture also impacts on career options of participants.

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Abbreviations

YAA	Young Achievement Australia
TDA	Tasmanian Development Authority
EAO	Entrepreneurial Attitude Orientation
LOTE	Languages Other Than English
DEET	Department of Employment Education and Training
SD	Standard Deviation
YA	Young Achievers
Ach-aff	Achievement affect
Ach-cog	Achievement cognition
Ach-con	Achievement conation
Se-aff	Self-esteem affect
Se-cog	Self-esteem cognition
Se-con	Self-esteem conation
Pc-aff	Personal control affect
Pc-cog	Personal control cognition
Pc-con	Personal control conation
In-aff	Innovation affect
In-cog	Innovation cognition
In-con	Innovation conation
TAAF	Total achievement affect
TACG	Total achievement cognition
TACO	Total achievement conation
TSAF	Total self-esteem affect
TSCO	Total self-esteem conation
TIAF	Total innovation affect
TICG	Total innovation cognition
MI	Multiple Intelligence

PREAMBLE

The acquisition of entrepreneurial attitudes by adolescents participating in the Young Achievers Venture program form the core of this research. Although the study is evaluative in nature, only one aspect of Stufflebeam's (1985) approach to evaluation is referred to. Context, input, process and product are all outlined in Stufflebeam's schema of evaluation. This study is concerned with the product aspect of evaluation as it focuses on the possible impact of the Venture program on the participants' attitudes. More specifically it focuses exclusively on enterprising attitudes and is therefore a limited evaluation.

As will be seen in chapter 2, attitudes are open to change and can be developed. As far as can be established, no-one has examined attitude changes in Venture participants from the perspective proposed by this study. Whether or not this program is related to attitudinal change and the extent and type of this relationship is largely an unknown quantity.

This research grew from a genuine concern about the development of young enterprising Australians. This area of concern relates largely to three main issues. These are, firstly, high youth unemployment and associated factors such as high levels of crime; secondly, education trends; and thirdly, future business needs. In order to illustrate the magnitude and provide background to the underlying concerns, these issues are discussed briefly below. This is essential background information required to place the research question into its proper context.

BACKGROUND ISSUES

Australian society has, despite recent improvements, an unemployment problem. Many professions are focussing on this vital issue in order to find the causes, identify related problems, and ultimately plan for a future with less unemployment.

Until recently youth unemployment has been a focal point, but this employment crisis is now affecting people of all socio-economic backgrounds regardless of age. It is a serious problem, therefore solutions must be found.

Tasmania's youth unemployment as stated in the *Mercury* on October 9, 1992, p. 2 under the headline 'Tassie Worst and Without Hope' was 35.9% unadjusted. Tasmania's unemployment rate is one of the Nation's worst, and in 1994 the picture has not improved, with the unemployment rate for Tasmania in February being 12% seasonally adjusted (1994, p. 2).

Unemployment is related to many social problems, not least of which seems to be high levels of criminal activities and poverty. Studies have both "proved" and "disproved" a relationship between unemployment and crime. For example, Box (1987) reviewed 32 cross sectional studies and found 19 studies supported the view that a positive association exists between crime rates and unemployment.

In Weatherburn's article (1992, p. 1-8) many key issues relating to crime and economic adversity are addressed. For example, he believes that the causes of crime can be found within, rather than outside, the mind of the person, and that the particular attitudes a person holds towards fellow people and property will affect their attitude to crime. In order to reduce crime, Weatherburn states:

The cure to crime is therefore not a rearrangement of the economic fabric of society. It is a rearrangement of the thinking of offenders (1992, p. 1).

Similarly Weatherburn holds that the importance of the motives, desires, beliefs and attitudes of people are related directly to their involvement in criminal activities. Farrington et al. support this view in that

...unemployment does not cause essentially law-abiding male youths to begin offending, but it does accelerate the offending rates of youths with some pre-existing tendency to delinquent behaviour (1986, p. 335-56).

Many studies show low socio-economic geographic areas are linked strongly to high crime rates and high unemployment levels. The causes are not defined clearly as numerous demographic variables make study methodology unwieldy. Weatherburn refers to an Australian study by Devery in 1991, linking known offenders with specific suburbs. Devery's studies showed that

...areas with high proportions of proven offenders would appear to be those which are lower on the socio-economic scale (1992, p. 2).

It appears from these studies that the youth of the unemployed or low-income families are most at risk of developing criminal tendencies during a time of recession. The social impact on the children of unemployed parents affects their developing attitudes, therefore such children are particularly at risk of resorting to crime. This demographic group faces high unemployment levels, and the prospect of no future personal employment.

The increase in Tasmanian crime levels (Tasmanian Crime Statistics 1991 no. 54, Appendix D, p. 95) may be due to the reduced capacity of a person to earn money by legitimate means. The young unemployed from low socio-economic backgrounds are particularly at risk as their aspirations cannot be matched with legitimate job opportunities.

One possible solution to crime and unemployment may lie in the area of self-employment. The unemployed possess a vast array of knowledge, skills and attitudes. Used effectively, such personal qualities could be harnessed for the purpose of self job creation, particularly in the small business arena. If young Australians possessed positive attitudes towards job creation, they may see a viable alternative to a life of crime.

Social Comment

To some observers, the Australian culture in general seems to foster a poor work attitude. Visiting leading Japanese economist, Leung Woon Ho, commented on the work attitudes of Australians when compared with those

of the Japanese. She believes that Australians do not possess the right attitudes towards employment and states:

To Hong Kong people, work is very important. ... but Australians don't care that much. When I was in Australia I had the feeling that people were very happy but they didn't care if they had a job (*Weekend Australian*, 6-7 Nov. 1993, p. 1).

As well as possessing a poor attitude to work as employees, it could be argued that Australians do not possess the attitudes necessary to create self-employment or to become employers. It is this researcher's opinion that most Australians leave school believing it is their right to gain employment rather than create their own.

Australian Liberal Senator Bishop stated:

We need to create a climate where more young people will become employers rather than employees (*Examiner* 20 Nov. 1993, p. 11).

Creating a climate for the development of employers is a noble goal, but unless the youth of Australia possess the knowledge, skills and attitudes to create a business opportunity for themselves, the correct economic climate will not produce employers. Only by combining positive attitudes to job creation and a conducive economic climate will this goal be achieved.

Adams, Chairman for the Commission for The Future, also believes a cultural and educational change must take place. He believes innovative, enterprising people must be fostered in our society. He states:

We have to create a culture where innovation is supported, where forward thinking and planning are applauded, where the impacts of scientific and technological change are discussed over the dinner table and in pubs and on trains and at the races (1987, Foreword).

He believes that entrepreneurs are at the core of small business development; they are the people that make things happen. He lists attitudes, attributes and skills which are possessed by entrepreneurial people

such as those related to risk-taking, financial management, confidence and a drive towards excellence and success. He firmly believes

these skills and attitudes can be both taught and learned
(1987, Foreword).

It is this researcher's belief that our present education system (kindergarten to year twelve) fails to develop, nurture or value entrepreneurial qualities. At present our society is geared largely to job-seeking and job-training rather than job-creating. As a result, most unemployed people do not see creating a job for themselves as a viable option.

Recent Education Trends

Leading educators appear to be acknowledging the need to develop more enterprising people. There is a continued reference by educators and politicians to Australia becoming the "clever country". To achieve this goal people with qualities such as creativity, innovation and initiative need to be developed in the education system. Development of such qualities reflect access to multiple intelligences as shown in the works of Gardner (1983) and Armstrong (1994).

The new nationally developed curriculum framework has been designed to address many of Australia's needs of the future. The nationally developed curriculum emerged largely from a document produced in 1988 by John Dawkins entitled "Strengthening our Schools". This document outlined the perceived needs of future Australians.

The Australian Education Council which consists of State, Territory and Commonwealth ministers met in 1989 and approved the document known as the Hobart Declaration (Appendix A). This document states ten common and "agreed" national goals for schooling in Australia in the future.

Subsequently, eight areas of study for all Australian students were developed - these being Mathematics, Science, Technology, Health, Languages other than English (LOTE), English, Studies of Society and the Environment, and the Arts.

Of particular interest to this study is the Technology learning area. This learning area encompasses the traditional areas of Materials Design and

Technology, Home Economics, and the newer areas of Information Technology and Media Studies. Designing, making and appraising underpins all activities in the Technology learning area, which aims to produce people who are capable of designing, making and appraising using problem-solving approaches. In essence the Technology learning area should encourage the development of more enterprising and productive members of society, able to face real problems in both a logical and creative manner.

Enterprise Education

Enterprise is considered in some circles to be the third essential focal point after general and vocational education. Enterprise education is designed to develop

a set of attitudes and competencies that enable a person to exercise initiative, be confident and at ease with constant change, seek opportunity, and be creative and innovative (Connections, 1992, p. 12).

In recent years the development of enterprising people has come to the foreground for some educators. Lack of employment and increased leisure time are problems which this researcher believes will require enterprising people with new solutions to new dilemmas. Ball, from The Commission for the Future document "Use Your Initiative", gives a detailed definition of an enterprising person:

An enterprising individual has a positive, flexible and adaptable disposition towards change, seeing it as normal, and an opportunity rather than a problem...an enterprising individual... is at ease when dealing with insecurity, risks, difficulty, and the unknown. An enterprising individual has the capacity to initiate creative ideas, and develop them either individually or in collaboration with others, and see them through into action.... An enterprising individual is active, confident and purposeful (Ball, 1990, p. viii).

As will be seen in chapter 2, many of these characteristics are common to entrepreneurs. Today's educators appear to be acknowledging the need to develop enterprising people with entrepreneurial attitudes. In fact the two words enterprise and entrepreneur appear on the surface to have similar

meanings in our society. It seems to depend on the perspective of the "user" of the two terms.

Needs of the Small Business Sector

According to the Commission for The Future document, "Education, Entrepreneurship and the Future", in 1987 97% of Australia's enterprises, public or private, were small businesses. As small business is thus the backbone, in at least one sense, of the Australian business community, its stability and expansion is vital for the country's economic survival (Hutchinson 1987, p. 1). Unfortunately the failure rate of small businesses in Australia is extremely high. Of 14,000 Australian small businesses surveyed by Williams in the previous 13 years, a fraction under 60% had since ceased operation.

According to Hutchinson, Williams attributes failure of small businesses to lack of business or management experience, skill and ability in 60.5% of instances and to inadequate, inaccurate, or non-existent books and records in 55.35% of instances (Commission for the Future, 1987, p. 1).

A recent study conducted by the Tasmanian Development Authority (TDA) investigated the needs of the small business sector. One hundred Tasmanian small businesses responded to a detailed survey aimed at identifying problem areas. The document (TDA, Part 1, 1990, pp. 2,13,14,15) identified several key issues which are relevant to this study. A high level of innovation appeared to be missing in Tasmanian small business management. "Entrepreneurial flair", seen as a necessary factor for the success of small business, was lacking. Education in basic economic and management skills was found to be a necessary but often missing component for small business success. Finally the ability to delegate responsibility down through the firm and the necessary communication/conflict management skills required for this task were deemed essential but often lacking qualities.

From a Tasmanian small business perspective the education system is failing to satisfy the needs of this sector, with regard to the development of entrepreneurial people with the skills, knowledge and attitudes to manage a small business. According to Edwards, Managing Director of Moonraker

Australia Pty Ltd, lack of communication between business and education leaders is a key factor, and he states:

There seems to be a lack of understanding and certainly communication between education and end users of the educator's product. If Australia is to go forward to the 21st century with any hope of competing on the world market, we must take steps to change this situation (Commission for The Future, 1987, p. 6).

While one may question whether or not students become "educators' products", there is an argument that the needs of the small business sector should be taken into consideration in the school curriculum.

Both educators and small business personnel, on the surface at least, appear to be desiring the same qualities in Australian people as possessed by "enterprising" or "entrepreneurial" individuals. The terminology used is different, but the outcomes to society obtained by the presence of people with these qualities is essentially the same.

SIGNIFICANCE OF THE PROBLEM

The problems mentioned above are diverse but interrelated. For successful resolution they all involve a change in attitudes to education, work, business and society in general. More specifically, attitudes relating to the development of enterprising or entrepreneurial people need to be refined. Could these problems be impacted upon using a common solution?

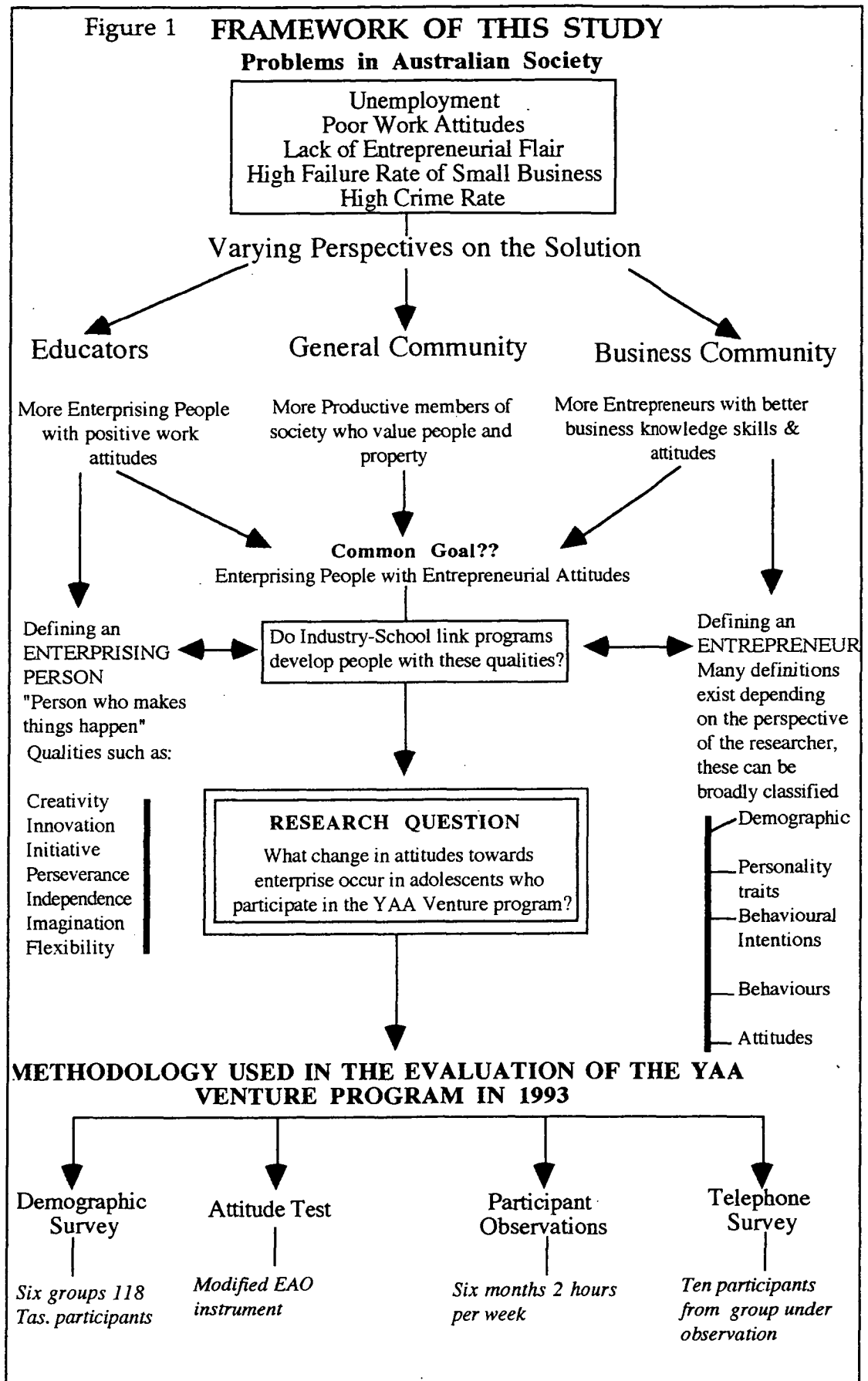
Attitudes are pivotal to what is called "entrepreneurship". Therefore, it is appropriate to ask whether attitudes can be developed to alleviate many of society's problems, by educating adolescents to gain enterprising/entrepreneurial attitudes. According to Robinson et al. entrepreneurial attitudes can be influenced by education programs. They claim:

The attitude model of entrepreneurship...has ramifications for entrepreneurial education and change programs. Because attitudes are open to change, entrepreneurial attitudes may be influenced by educators and practitioners (Robinson et al., 1991, p. 24).

Traditional educators and industry members are acknowledging the importance of a productive society consisting of enterprising people with an industrial perspective. People who display positive entrepreneurial characteristics, particularly positive entrepreneurial behavioural attitudes, are more likely to utilise their time in enterprising ways. Possessing entrepreneurial attitudes may not always result in persons generating small businesses but people with entrepreneurial attitudes may simply have the increased capacity to gain more control of their lives, with the potential to be more productive members of society both at work and leisure (Adams for Commission for the Future, 1987; Ball for Commission For the Future, 1990). Productive members of society with positive attitudes, according to Weatherburn (1992), should value people and possessions and be less likely to resort to crime. If a percentage of school leavers succeed in the small business domain jobs will have been created and less unemployment will be the result. Members of society who can see an alternative to unemployment, poverty and crime are likely to take more personal control of their futures. Entrepreneurial/ enterprising attitudes, gained perhaps through educational programs, are vital to Australia's future. Figure 1 on page 10, outlines the framework used in this research study beginning with the social problems discussed.

THE FOCUS OF THE LITERATURE REVIEW

The focus of the research reported in this thesis is adolescents' attitudes towards entrepreneurial activity following enterprise training programs. The literature review is related to three background issues, namely the nature of the YAA Venture program, the nature of entrepreneurs and enterprise, and the nature of attitudes. A considerable section of the literature review is devoted to defining the terms "entrepreneur" and "attitudes". This is deemed essential if evidence of the development of entrepreneurial attitudes through enterprise programs are to be determined with any degree of accuracy. Without an in-depth study of these terms the research produced would lack depth and context. The following definitions are based on the Literature review.



DEFINITIONS

Entrepreneurs/Entrepreneurship/Enterprise

Before educational programs can be designed to develop entrepreneurial/enterprising attitudes in a person, these terms must be defined and a profile of such a person outlined. As stated previously the terms "enterprise" and "entrepreneur" appear to be used in similar ways within the community, it appears to depend on the perspective of the user. The term entrepreneur is seldom used at high school level and is considered by many to belong to the business rather than education realm. Many people, including teachers, associate the term entrepreneur with wheeling and dealing with large sums of money in a ruthless business world. If, however, we view entrepreneurs as business people possessing certain attitudes and personal qualities similar to those possessed by enterprising people, the terms can be seen as more closely related. According to Lam (1990), Ball's description of an enterprising person shown on page 12 lists many qualities, which, as can be seen in chapter 2, are often used to describe entrepreneurs. Is the difference in terminology simply the result of terminology translation from the education to the business domain? In essence how different are the terms?

Educationalists, for example, use the term enterprise, when referring to certain qualities such as creativity, initiative, innovation, perseverance, imagination, independence and flexibility which are developed in people through enterprise and technology education. Enterprise education tries to de-emphasise the money-making side of the activity, it is the process of problem-solving which is important in school-based enterprise programs. A very broad definition of enterprise, is given in the Tasmanian Enterprise Education Handbook, which states simply, 'enterprise means making things happen' (1990, p. vi). Consequently, enterprising behaviour encompasses a wide range of activities, which may or may not be classified as entrepreneurial.

The relative importance and subsequent consequences of the enterprising behaviour seems to be one distinguishing factor. According to the "Tasmanian Enterprise Education Handbook" any person who 'makes things happen' is considered enterprising. This could include organisation of simple processes such as morning tea for the staff; a raffle at the school fair; or

preparing lunch with minimum resources. Entrepreneurs on the other hand are part of the business domain, creating business organisations which operate in the business community, at a profit or loss, and survive or breakdown depending on success and failure. Entrepreneurs are often employers with enormous responsibility to their employees.

This research examines enterprising behaviour exhibited in the "entrepreneurial sense" described. It is not meant to be an evaluation of school enterprise education systems at all levels, rather an evaluation of enterprise education operating in the "real-life" business context.

For the purposes of this research, Ball's (1990) definition of an enterprising person has been adopted.

An enterprising individual has a positive, flexible and adaptable disposition towards change, seeing it as normal, and an opportunity rather than a problem...an enterprising individual... is at ease when dealing with insecurity, risks, difficulty, and the unknown. An enterprising individual has the capacity to initiate creative ideas, and develop them either individually or in collaboration with others, and see them through into action.... An enterprising individual is active, confident and purposeful (Ball, 1990, p. viii).

In essence, this definition incorporates a broad view of an enterprising person, including many qualities common to entrepreneurs.

As will be seen in chapter 2, the task of gaining consensus on a definition of an "entrepreneur" is a daunting one. For the purposes of this research however, based on Gartner's (1988) behavioural definition discussed fully in chapter 2, an entrepreneur is defined as a person who starts up a business organisation and provides newly developed goods or services, and entrepreneurship is defined as the act of starting up a business organisation with newly developed goods or services. As the term organisation features in these definitions it must also be defined.

Organisations

The term "organisation" can be used in many ways. Any group of people or components which have been ordered in some way according to the Collins Dictionary (1993) could be termed "organised". As detailed in chapter 2,

Morgan (1986), uses metaphor as a basis for defining the term. He compares organisations with machines, organisms, brains and culture to name a few. With each analogy he emphasises the varied nature of organisations, and many of the elements which may be fostered or blocked within organisational structure such as "innovation". These descriptions offer a useful basis for further discussion in chapter 5 concerning the type of organisation the researcher believed had been created by the Venture program participants. For example: was the organisation created similar to a "McDonalds" hamburger chain i.e. mechanistic, repetitive, regular and consistent or was the organisation one which allowed the individual to initiate change and apply new ideas without fear of reprisal thus encouraging innovation.

How the Venture organisation was created and functioned will need to be addressed, however defining the term organisation for use in this study centred around Gartner's (1988) definition of an entrepreneur described above and Schumpeter's definition of an entrepreneur which Robinson et al. used as a basis for their research. Schumpeter according to Robinson et al. believed an entrepreneur was an innovator who 'introduces new goods or services; introduces new methods of production; operates new markets; finds new sources of raw materials; and/or carries out new organisation of any industry' (1991, p. 20). As a result of incorporating these theorists' views into the organisation definition for this study, an organisation is defined as: a group of people working together to produce newly developed goods or services, and develop manufacturing and marketing strategies which are applied within the real business community.

The researcher believes education to produce people with entrepreneurial attitudes through enterprise education may be an achievable goal. This may be achieved by allowing adolescents to act as entrepreneurs in a "real-life" business context. Recording of overt behaviour in participants of enterprise programs, would establish the type and extent of entrepreneurial behaviour, in particular risk-taking, innovation, perseverance, personal control, achievement and leadership. The characteristics under scrutiny would be based on those common to entrepreneurs as outlined in chapter 2. The researcher believes the merging of educators and business is essential to achieve the educational context required in this study.

Entrepreneurial Attitudes

For the purposes of this research entrepreneurs are viewed as possessing different attitudes to the general population due to their involvement in entrepreneurship. The four attitude subscales which Robinson et al. (1991) identified as being significantly different in entrepreneurs and the general population are achievement, self esteem, personal control and innovation. The research of Robinson et al. was based on the tripartite theory of attitudes discussed fully in chapter 2. The Robinson et al. instrument provided a starting place for the measurement of entrepreneurial attitudes of students participating in enterprise programs. The instrument was modified and used to assess entrepreneurial attitude shifts in Venture program participants.

As stated previously the terms entrepreneur, entrepreneurship and enterprise are clearly intermeshed. While there are definition problems, it is taken that entrepreneurs demonstrate entrepreneurship and enterprise which are taken to be essentially the same in nature. Throughout the thesis, in order to avoid confusion, the term enterprise is normally used. On occasions the term entrepreneur will be used when enterprise is deemed inappropriate/ misleading or out of context.

Attitudes

Attitude theory is complex. Major theories and models relating to the nature of attitudes and attitude change are outlined in chapter 2. From the literature reviewed it is clear that attitudes are open to change and may impact on behaviour. The debate of attitude-action vs action-attitude is still continuing amongst leading psychologists. There is ample evidence, however, to support the view that a change in attitudes may result in changes in behaviour, and that behaviour of a person can have an impact on his or her attitudes towards this behaviour in the future. According to Zimbardo and Leippe (1991), for attitudes to impact on behaviour they must be strong and clear, personally relevant and have a strong affective or cognitive base. For the purposes of this research, attitudes are defined as the predisposition to respond to an object, issue or action following evaluation of the person's place in the holistic situation. This definition is in line with Kahle's (1984) interactive attitude theory.

In this study attitudes are viewed as a five-component system as outlined by Zimbardo and Leippe (1991, p. 33) and illustrated on page 41. This allows

the mapping of behavioural intentions of a person, and is complementary to the tripartite attitude theory used by Robinson et al. in their research instrument, the EAO.

RESEARCH ENVIRONMENTS

As this research focuses on the acquisition of enterprising attitudes by school aged adolescents, a variety of programs based on the start-up of a business organisation were examined to determine the suitability of such programs for empirical research purposes. The researcher felt that a program which appeared to allow students to behave as entrepreneurs was crucial to the success of this study.

Industry-school link programs provided the key focus, as students worked in a "real-life", "in-context" business situation. This can be seen as an essential feature of the behavioural view of entrepreneurship which is examined further in chapter 2.

Industry-School Link Programs

The most recent study into industrial link programs was conducted through a project known as *Connections*. The project *Connections* was carried out during 1991, under the guidance of the National Industry Education Forum. Funded by the Commonwealth Department of Employment, Education and Training (DEET) and published by the Curriculum Corporation, this major piece of work provides information on the majority of best practice industry-school link programs considered to be of national significance. The *Connections* document provides a full overview of these programs, their aims and objectives along with evaluations to date (1991, pp. 85-180).

A number of industry-school link programs operate and these were assessed to determine several key factors:

Suitability to this Research

Behaviour in accordance with the adopted definition of enterprise was essential to the success of this study, therefore only programs which allowed participants to start up a business organisation and provide newly developed goods or services were considered suitable.

Access to the Researcher

The geographic location of the program was a minor consideration.

Length of Program

In line with the definition of enterprise adopted in this thesis, the program should involve the creation of a business organisation using newly developed goods or services. Creating such an organisation would require time and effort. One would assume that longer programs exceeding 10 weeks would provide a more in-context view of organisation creation process than short programs of less than 10 weeks.

Previous Formal Evaluations

The researcher had no desire to repeat previous research in this field.

Program Outcomes

The aims and objectives of the program should suggest that enterprising behaviour, in line with the definition, was likely to be taking place to some extent.

Program Descriptions

Three programs were considered most suitable for study and these are described briefly below.

New South Wales Technology High Schools: Moorefield Girls and Cherrybrook.

These technology high schools emphasise student-centred learning with a focus on problem-solving, risk-taking and group work.

The main aims are to enable girls to be resourceful, confident, empowered citizens, with enterprise skills, to control their lives within the demands of a changing society.

These high schools aim to develop enterprise skills in students, but unfortunately they do not operate in a real in-context business situation, and for the purposes of the current study, the gender-specific aspect of the Moorefield Girls program was not considered appropriate.

Enterprise Education Programs

Enterprise education aims to promote enterprise skill development and an understanding of business in young people. Enterprise programs are available throughout Tasmanian high schools. They vary considerably in nature, although they are often concerned with the design of a product, manufacture, marketing and distribution. Some of these programs were considered suitable for this research project. Elizabeth College in Hobart, Tasmania, has what is regarded as a particularly well developed enterprise program.

Young Achievement Australia Venture Program

Young Achievement Australia (YAA), is an independent organisation with more than 250 groups around Australia involving over 1000 advisers from some 200 companies.

Students involved in the Venture program meet for two hours every week out of school hours. They set up a business organisation which is fully registered, and operates in the "real business world".

The Venture model is a unique project where a team of students, with the aid of a sponsor company, start up and manage a small business for a six month period. Following product design, development, manufacturing and marketing stages, the Venture business is liquidated and evaluated. The Venture program provides participants with the "big picture" experience of the small business environment. This program has been operating out of school hours throughout Tasmania for several years but recently Venture was trialed in one Tasmanian district high school during school hours.

The Venture program appeared to contain all the necessary requirements for this study. Initial contacts with the state coordinator confirmed a Launceston-based group would be operating in 1993. The National coordinator was contacted to ensure the program could be used for research purposes, and this liaison proved fruitful.

RESEARCH QUESTION

The specific research question addressed in this thesis is:

What changes in attitudes towards enterprise occur in adolescents who participate in the YAA Venture program?

RESEARCH DESIGN

This study adopts a triangulation design comprising of a demographic survey, an attitude test, participant observations and a telephone survey.

The Demographic Survey

All 118 participants in the 1993 Tasmanian YAA Venture program were surveyed to gain demographic details, including age and gender plus other aspects related to enterprise.

The Attitude Test

All 118 Tasmanian Venture participants were offered a modified version of the Robinson et al. EAO instrument to determine any group shift in entrepreneurial attitudes over the course of the Venture enterprise experience. The same attitude test was offered on two separate occasions, these being during weeks 4 and 24 of the program. Ninety one participants completed the first attitude test, 89 completed the second. The discrepancy was due to human error detailed on page 19.

Participant Observations

The researcher observed Venture Group 1 (n=26) for the duration of the program (50 hours over six months). The main aim of the observation was to determine if students participating in the program displayed overt enterprising behaviours. The researcher recorded the type and extent of these enterprising behaviours.

The Telephone Survey

Telephone interviews to follow up on the attitude test were conducted with ten Group 1 participants following completion of the program.

LIMITATIONS OF THE STUDY

The focus limitation of this study was mentioned on page 1, further limitations are detailed below.

Size Limitation

Although YAA Venture is a National program, the study is limited to the Tasmanian participants (n=118) in 1993. Participant observations relate to only one of the statewide groups, namely Group 1 (n=26). Telephone survey participants (n=10) were selected from the same group under observation.

Program Limitation

Choice of research environments was limited due to the need for participants to behave as entrepreneurs in a real business situation.

Limitation of Research Instrument (*modified EAO attitude scale*)

Instruments which can be used to predict entrepreneurship in adolescents are limited in number. The transfer of the validated American EAO attitude scale to Tasmanian adolescents was not ideal. The cultural and age differences between the American entrepreneurs and the Tasmanian Venture participants probably contributed to these transfer problems. Every attempt was made to increase the validity of this instrument by adapting the items to ease interpretation; pointing the focus directly to the Venture business context; and removing items which appeared, *prima facie*, to be unsuitable.

The questions on the EAO attitude scale were context-specific to the Venture program, therefore a control group could not be used. The items on the attitude test would have been meaningless to adolescents not involved with the Venture program.

Limitation of Human Error

The researcher relied on the YAA Venture advisers to distribute, administer and return the modified EAO attitude scale. Two advisers did not administer the attitude tests correctly and this resulted in an irretrievable loss of valuable data. One adviser failed to collect all the completed attitude tests while the second adviser did not send all the completed forms to the researcher in time to be used in this study.

SUMMARY

Educators, small business personnel and society in general are seeking ways to alleviate unemployment and associated factors. Recent investigations conducted by educators, the Tasmanian Development Authority (TDA) and other relevant business authorities all point to the need for the development of more enterprising people. One way to impact on these factors and develop such enterprising people could be the changing of associated attitudes. Developing people with enterprising attitudes could impact positively on the small business sector, and contribute to a more productive society in general.

The Venture program provides a research environment suitable to investigate the development of enterprising attitudes. The Venture program allows adolescents to operate in a real business situation, and, according to Gartner (1988), behaving as an entrepreneur is crucial to the behavioural definition of an entrepreneur. Following a review of literature pertaining to enterprise programs, entrepreneurs, and attitudes the research question adopted is:

What changes in attitudes towards enterprise occur in adolescents who participate in the YAA Venture program?

CHAPTER OUTLINES

In chapter 2 the literature concerned with the three key areas of this study is reviewed. External evaluations of the YAA Venture program are examined along with the specified aims and objectives. A definition of entrepreneur is established. The nature of attitudes and theories of attitude change are examined.

In chapter 3 the methodology of this research is described. Both qualitative and quantitative methods of collecting data were used. The investigation of Venture participants was divided into four distinct components - the demographic survey, an attitude test, participant observations and a telephone survey. Each component is described in detail within this chapter. The demographic survey provided the details of the research sample. These sample details are outlined in this chapter and descriptions of the attitude test modification and validation are also found.

In chapter 4 the results of the attitude test, participant observation and telephone survey are presented.

Chapter 5 interprets, analyses and evaluates the data obtained in order to answer the research question. Conclusions are then drawn based on these results. Within this chapter the research methodology is reviewed and recommendations for future research in this area are outlined.

The three key areas reviewed in depth to develop a research framework are:

THE YAA VENTURE PROGRAM

previous evaluations
specified aims and objectives

ENTREPRENEURS/ENTREPRENEURSHIP/ENTERPRISE

definitions
previous research methodologies

ATTITUDES

definition and nature
change theories

YOUNG ACHIEVEMENT AUSTRALIA VENTURE PROGRAM

What others have said about YAA Programs including Venture

At present, as is the case with many industrial-school link programs, there is limited documented evaluation of the Australian-based YAA programs and most data are anecdotal. This state of affairs is summarised as follows:

There appears to be insufficient hard evidence available to make reliable judgements on the effectiveness of most industry-school link activities (*Connections*, 1992, p. xiii).

Connections lists competencies and values which seem to be common to many industry-school link programs including Venture. Four which are of consequence to this study, as they are associated directly with the definition of an enterprising person provided on page 12 are:

thinking and problem-solving
decision-making and leadership
enterprise and excellence
positive attitudes to the work ethic and business
(1992, p. 3).

It appears the nurturing of such qualities in adolescents is a common goal of industry-school link programs.

The *Connections* document makes general comments on industry-school link programs, as well as specific evaluations of programs such as Venture. The development of self-esteem and self-confidence are mentioned frequently as general positive outcomes.

Venture and other industry-school link programs are described as being competency based, suggesting that the development of attitudes is involved. As stated in the *Connections* document:

Competency learning means not just the knowledge about, but having the required skills and attitudes to do
(*Connections*, 1992, p. x).

This form of learning is experientially based. This includes learning in the workplace. Such experiences are more "real-life" and "in-context" for adolescents than are school-based or knowledge-based programs.

Description of the YAA Venture Program

Although a "real" business organisation is formed, the YAA experience could best be described as a type of role playing. The participants know the experience will last for only the six months in which the program operates and that it is not a life time commitment, a conscious change of career, or a high risk-taking venture. It is, however, closer to a real business enterprise experience than most shorter school-based programs.

Specified Aims and Objectives of Venture.

YAA prints a range of advertising materials containing quotes from high profile people and company advisers. Past and present participants also provide anecdotal feedback for the YAA annual magazine.

YAA specifies what participants will gain from the Venture program, as listed in the advertising literature (1993, p. 2):

- a positive exposure to the world of business;
- exposure to other role models;
- experience in running a business;
- an understanding of management/ staff relations;
- experience of achieving goals through commitment and application;
- improved communication skills;
- ability to think independently, make important decisions and take initiatives;
- a sense of achievement, pride and self assurance;
- valuable experience to expand vocational choices.

The *Connections* document lists the objectives in a different format. The objectives of the YAA Venture program are to provide the young people of Australia with:

- knowledge of the values, freedoms and responsibilities of our business system;
- experience in the organisation, operation and management of a business;
- motivation for leadership through the development of knowledge skills, abilities and confidence;
- a demonstration of the relationships with business and between business and community;
- a supplement to the formal educational experience of youth by a constructive, learning by doing experience;
- a preview of career opportunities in business.

(1992, p. 176).

Effectiveness of the Venture Program.

According to the *Connections* document, industry feels the Venture program provides a valuable training ground for members of their staff. They believe the participants gain a sense of satisfaction through achievements, and an insight into the running of a real business enterprise. Previous advisers commented on an improvement in the attitudes and responsibility of participants.

It was reported that participants in the program believed Venture allowed them to liaise effectively with members of the general community. They enjoyed working with the public, selling and marketing, and they believed they were better equipped for their future in the workforce.

Education Departments throughout Australia do not at present recognise officially the outcomes of the YAA Venture program. However recruiting is allowed in schools, which does suggest a general acceptance of the program (*Connections*, 1991, p. 178).

Perspective of this Study

As an evaluation of the Venture program specified objectives has already been undertaken these objectives shall not be re-evaluated in a formal sense. The researcher will however express opinions concerning the stated outcomes of the program as they relate to the context of this study. There is no suggestion in any of the previous evaluations that the YAA Venture program develops entrepreneurial attitudes specifically. As Venture does not claim to produce enterprise attitudes, the evaluation must be viewed as a 'search for further benefits' which the Venture program offers or may offer participants. This could lead to an improvement of the course from a new perspective.

The researcher believes it is not unreasonable to expect the Venture program to have an impact on the enterprise attitudes of the participants as they appear to behave in an enterprising manner by creating a new business organisation and producing newly developed goods or services for sale in the real business world.

This study will therefore attempt to identify the attitudinal impact of the Venture experience on the enterprise attitudes of the adolescents.

SUMMARY

In general, industry-school link programs have in common some elements that could be related to enterprising people such as problem-solving, and decision-making. Venture is an experientially based industry-school link program. As such, one would expect an impact on participants' attitudes. Other than those references outlined in the text, attitudes do not seem to be mentioned specifically in any of the YAA Venture evaluations. Qualities such as leadership, business operating skills, ability to take initiative and to think independently are all mentioned in the YAA Venture aims and objectives which suggest the development of enterprising attitudes in participants. This hypothesis, however, has not been tested.

ENTREPRENEUR/ENTREPRENEURSHIP/ENTERPRISE

The close relationship of the terms enterprise and entrepreneur require further investigation. Entrepreneurs are often referred to as enterprising, however enterprising people may not always be classified as entrepreneurs. As stated previously the terminology issue is quite confusing.

The characteristics of enterprising people appear to be common to entrepreneurs. It is therefore essential to examine the characteristics of entrepreneurs in some detail if a model for observing enterprising behaviour and assessing enterprising attitudes is to be developed.

Defining Entrepreneurs

According to Carland et al. (1988), Schumpeter in 1943 believed Mill brought the term entrepreneur into common use amongst economists in 1848. Carland et al. however, believe the word entrepreneur was in usage as early as 1700, although not always in the economic context. Carland et al. state:

Cantillon, circa 1700, described an entrepreneur as a rational decision maker who assumes the risk and provides management for the firm (1988, p. 33).

Carland et al. refer to Girard's 1962 definition of an entrepreneur. According to Girard, entrepreneur is derived from "entreprendre", the French verb which means to attempt, to undertake, to contract for, to try in hand, or to adventure (1988, p. 33).

Chambers Concise 20th Century Dictionary (1985) defines entrepreneurship in two ways.

1. An undertaking: a bold or dangerous undertaking: readiness, initiative and daring in undertaking: a business concern.
2. One who undertakes an enterprise especially a commercial one, often at personal financial risk: a contractor or employer: an organiser of entertainments.

All these definitions incorporate the term "risk-taking" in some form.

According to Bygrave (1989, p. 7), despite the long-term use of the word, 'entrepreneurship is one of the youngest paradigms in the management

sciences'. Consequently, the struggle to find an identity, let alone define the term, is still continuing. As Welsch and Plaschka state:

Entrepreneurship has struggled long and hard for an identity in an effort to be recognised and accepted (1990, p. 56).

Researchers trying to define entrepreneurship to date have developed a wide range of definitions generally focussed on their particular area of research. For example a researcher focusing on the establishment of takeaway food outlets in Australia in the 70s might decide that entrepreneurs are usually migrants of European origin. This definition, however, would not be applicable to this research study.

Most definitions used in research studies focus on demographic or personality profiles of entrepreneurs. The samples used in such studies are often selected in order to generate results which are valid only for the particular trait investigated. The lack of a clear general definition of the entrepreneur has, in many cases, produced results which remain consistent only to the specific group under examination. Research definitions often have poor generalisability when one tries to extend them to the general population.

Several varying definitions from prominent authors and researchers in this field are listed in Table 1 on page 27. Many other definitions exist, (even from the same theorists) resulting in a general state of confusion for researchers trying to find a concise definition on which to base their studies. The definitions in Table 1 on page 27 have been summarised from Gartner's (1988) works.

Most of the definitions refer to business in some context, many involve people and change (generally innovative), and some suggest organising abilities and leadership qualities as being common to entrepreneurs. The founding of a new company, business or organisation is often mentioned in definitions. While there is no clear definition of the term, boundaries do not exist for researchers discussing the activities of entrepreneurs, as stated by Gartner:

Currently there is not a consensus for the definition of an entrepreneur. Without such a definition boundaries

do not exist regarding what should be included when discussing entrepreneurial activities (1985, p. 27).

Table 1	Previous Definitions of Entrepreneurs
Author	Definition of Entrepreneur
Schumpeter (1934)	... entrepreneurship, as defined, essentially consists in doing things that are not generally done in the ordinary course of business routine, it is essentially a phenomenon that comes under the wider aspect of leadership.
Ely and Hess (1937)	The person or group of persons who assume the task and responsibility of combining the factors of production into a business organisation and keeping this organisation in operation.
Davids (1963)	Founders of new businesses.
Wainer and Rubin (1969)	The entrepreneur in Mc Clelland's scheme is 'the man who organises the firm (the business unit) and/or increases its productive capacity'.
Draheim (1972)	Entrepreneurship- the act of founding a new company where none existed before. Entrepreneur is the person and entrepreneurs are the small group of persons who are new company founders. The term is also used to indicated that the founders have some significant ownership stake in the business (they are not only employees) and that their intention is for the business to grow and prosper beyond the self employment stage.
Brockhaus (1980)	An entrepreneur is defined as a major owner and manager of a business venture not employed elsewhere.
Lachman (1980)	The entrepreneur is perceived as a person who uses a new combination of production factors to produce the first brand in the industry.
Cooper and Dunkelburg (1981)	Owner/ manager

Defining Entrepreneur through the Prediction of Entrepreneurship in the General Population

For many researchers the path to the definition of entrepreneur, it was thought, could be found if an instrument for the prediction of entrepreneurship in the general population could be developed. Many researchers have attempted such a task, focussing on various elements that

appear to be common to selected groups of entrepreneurs, and attempting to use some of these to distinguish between entrepreneurs and the general population. Once again, a wide range of definitions is used when describing test samples. Numerous characteristics are listed as the basis for the research samples chosen. Some characteristics used by researchers are listed in Table 2 below, as summarised from Gartner's (1988) works.

Table 2 Characteristics of Entrepreneurs used in Research

Author	Characteristics
McClelland (1961)	Achievement, optimism, affiliation, power, conscientiousness, asceticism, belief in achieved status market morality.
Davids (1963)	Education, number of children, religion, sports club affiliations.
Litzinger (1965)	Risk preference, independence, leadership, recognition, support, conformity, benevolence, structure consideration.
Gould (1969)	Delinquent associations, perception of opportunity, social class, achievement motivation.
Wainer and Rubin (1969)	Achievement, power, affiliation.
Collins and Moore (1970)	Parents' occupation, education, previous job satisfaction, social attitudes.
Hornaday and Bunker (1970)	Need for achievement, intelligence, creativity, energy level, taking initiative, self-reliance.
Hornaday and Aboud (1971)	Need for achievement, autonomy, aggression, recognition, independence leadership, regimentation, family background, power, innovative tendencies.
Draheim (1972)	Credibility, fear of losing job, prior work experience, "track record" degree of "state of the art technology".
Howell (1972)	Age, marital status, outside activities, educational level, number of previous jobs, previous job pushes, influences.
Durand (1975)	Achievement motivation, locus of control, training.
Gomolka (1977)	Sex, age, ethnicity, education, parents' work and social background.

Table 2 (continued)

DeCarlo and Lyons (1979)	Age, marriage rate, education, previous entrepreneurial effort, regimentation, means of starting, achievement, autonomy, aggression, independence, leadership, support, conformity.
Brockhaus (1980)	Risk taking propensity.
Hull, Bosley, and Udell (1980)	Interest in "money or fame", social desirability, task preference, locus of control, risk propensity, creativity, achievement.
Lachman (1980)	Age, years in Israel, education, father's occupation, achievement motivation, achievement orientation.
Cooper and Dunkelberg (1981)	Parents, immigrants, education, number of previous jobs, age.
Hisrich and O'Brian (1981)	Self-discipline and perseverance, desire to succeed, action orientation, goal orientation, energy level.
Mescon and Montanari (1981)	Achievement, autonomy, dominance, endurance, order, locus of control.
Thorne and Ball (1981)	Age, number of previous ventures, education, family background.
Welsch and Young (1982)	Locus of control, Machiavellianism, self-esteem, risk-taking, openness to innovation, rigidity, government regulation, economic optimism.
Schrage (1985)	Veridical, perception, achievement motivation, power motivation, awareness of impaired performance under tension.

Some of the characteristics are repeated several times, but overall no clear concise list of characteristics is given. As Cole, in 1969, stated in the works of Gartner:

My own personal experience was that for ten years we ran a research centre in entrepreneurial history, for ten years we tried to define entrepreneur. We never succeeded. Each of us had some notion of it, what we thought was, for his purposes, a useful definition. And I don't think you're going to get farther than that (1988, p. 11).

Behavioural Viewpoint

Searching for a definition of entrepreneurs based on demographic and other characteristics at this stage is inconclusive, however the behavioural

viewpoint offers another insight. Many researchers into entrepreneurship have criticised strongly research works which focus solely on developing personality profiles of entrepreneurs. According to Carland et al. (1988), Jenks in 1950 and Kilby in 1971 both suggest that a review of behaviours and activities common to entrepreneurs is essential when defining such people.

Gartner believes that the personality characteristics of the entrepreneur are ancillary to the entrepreneur's behaviours. Therefore research should focus on what the entrepreneur does, and not on who the entrepreneur is. He defines entrepreneurs in a behavioural sense, i.e. an entrepreneur is one who creates an organisation. He claims that the entrepreneur, during the creation of the organisation, takes on many roles, such as innovator, manager, small business owner, division vice president etc, and states:

Entrepreneurs, like baseball players are identified by a set of behaviours which link them to organisation creation. Managers, small business owners etc are also identified by their behaviours (1988, p. 26).

The behavioural approach suggests that entrepreneurs are part of the process of organisation creation, and that a series of actions must be displayed in order for a person to qualify as an entrepreneur. It is this series of actions which ultimately lead to the creation of an organisation.

This viewpoint suggests that entrepreneurial behaviour would be central to any education program tailored to develop entrepreneurs. The creation of an organisation is an essential component of entrepreneurial activity therefore classroom situations should try to simulate and provide "in context" entrepreneurial behavioural experiences. The workplace environment could provide an alternative "in context" location for the development of entrepreneurs.

Carland et al. (1988) criticise Gartner's (1988) works and claim he is too narrow in his dismissal of personality and demographic traits when attempting to describe the entrepreneur. He refers to Gartner's analogy of entrepreneurs with baseball players. For Carland, Gartner fails to distinguish between success of the baseball players, or the environment and interaction of players which might affect the game. The behavioural approach in Carland's view is one-sided. Carland believes the factors before, during, and

after the creation of a new business organisation will all affect the performance of the organisation. Gartner fails to take these factors into account in his definition.

As the term organisation is used in Gartner's and many other definitions this term will now be reviewed briefly.

An Organisation

Definitions of organisations range from the simplistic, such as supplied in the Collins dictionary which states: 'an organisation is a group of people acting together' (1993, p. 376), to the complex views of Morgan (1986), who uses metaphor to describe organisations.

Morgan (1986) likens organisations to machines, organisms, brains and culture to name a few. These analogies provide a distinguishing factor for organisation investigation.

Morgan (1986) discusses each analogy in detail, focusing on the positive and negative. The machine analogy of an organisation tends to place individuals in the organisation as part of a machine. Each person must play their part in a precise, repetitive, regular and consistent manner, usually in a stable environment. There is limited room for individuals to initiate change, other than those individuals specifically allocated to perform this task. "McDonald's" hamburger chain is used by Morgan (1986) as an example of a machine-like organisation.

On the other hand organisations which act as organisms are seen by Morgan (1986) to be constantly changing to adapt to their environment. Such organisations are not rigid in design and welcome individual input, they are considered to be "open systems" constantly interacting with the environment, competing to either survive or be destroyed.

Morgan's (1986) view of organisations as brains suggests an organisation can learn and self-organise in the same way as a fully functioning brain. He believes this type of organisation would achieve high levels of innovative capacity, able to accommodate the ideas it produces and values.

A final perspective sees Morgan (1986) likening organisations to culture. He believes organisations of all types develop their own peculiar beliefs, routines and rituals which distinguish them from other organisations, in much the same way as people from different countries are distinguished by their cultural habits, beliefs and attitudes.

Morgan's (1986) views are interesting and can be used effectively for research purposes when describing a particular organisation under investigation. For this study however, the definition of an organisation will be based around Gartner's and Schumpeter's definition of an entrepreneur.

Gartner's (1988) definition of an entrepreneur described earlier and Schumpeter's definition of an entrepreneur (which Robinson et al. (1991) used as a basis for their research) were used in the definition. Schumpeter, according to Robinson et al. (1991), believed an entrepreneur was an innovator who 'introduces new goods or services; introduces new methods of production; operates new markets; finds new sources of raw materials; and/or carries out new organisation of any industry' (1991, p. 20). Incorporating these views into the organisation definition for this study, an organisation is defined as: a group of people working together to produce newly developed goods or services, develop manufacturing and marketing strategies which are applied within the real business community.

Entrepreneurial Attitudes

Robinson et al. (1991) argue that examination of attitudinal aspects is presented as a better approach to the description of entrepreneurs than either personality characteristics, demographics or behaviours. Nevertheless, an attitudinal viewpoint has a close link to the behavioural viewpoint, as behaviour may be linked to attitudes either by a direct or more obscure path, as is described on page 42 of this document.

Robinson et al. (1991) designed an instrument which predicts entrepreneurs from the general population, based on attitude differences. This instrument was called the EAO instrument, and was based on four factors which they believed were attitudinally different in entrepreneurs and the general population, these being: *achievement*, *self-esteem*, *innovation* and *personal control*. The attitude differences which were found, were the result of people taking part in an entrepreneurial event; the entrepreneurial event being

related directly to the creation of a new business organisation providing newly developed goods and services. In other words, people who display entrepreneurial behaviour are said to have different attitudes to those who have never displayed entrepreneurial behaviour.

It is imagined that adolescents participating in enterprise-styled programs with an "in context" entrepreneurial experience will undergo entrepreneurial attitude shifts, particularly if these programs allow them to experience directly many of the behaviours common to entrepreneurs, such as achievement, risk-taking, innovation, leadership and business organisation creation which are all behaviours observed in many entrepreneurs, as suggested in Table 2 on page 28. Such behaviours may impact upon the participants' attitudes related to enterprise.

Entrepreneurial Intentions

Another viewpoint regarding the description of the entrepreneur places the intention to behave as an entrepreneur in central focus (Bird 1992; Kruegar 1993). This definition focuses on people's intentions to start a business organisation before they have decided the structure of their business organisation. Brockhaus according to Kruegar (1993), believes that,

... the majority of entrepreneurs decide to start a business prior to deciding what type of business to start (1993, p. 18).

He concentrated on intention-based frameworks claiming they offered the appropriate mechanisms to 'assess the relative impact of various hypothesised exogenous behaviour' (1993, p. 18).

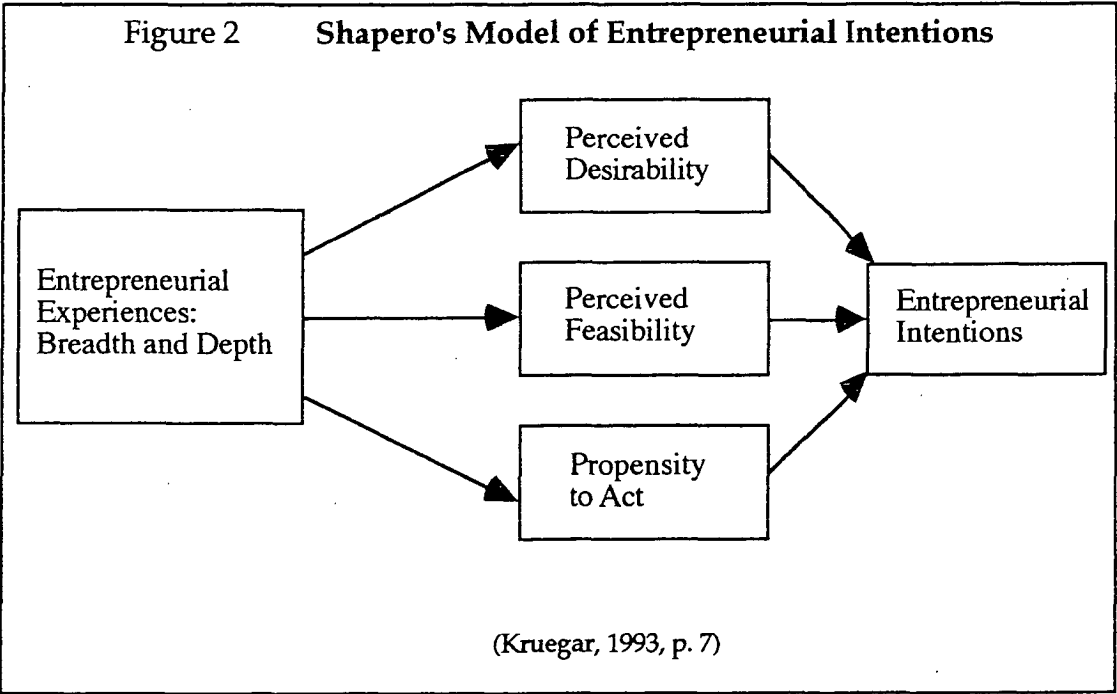
Bird (1992) also refers to the central focus of people's intentions, and their ability to affect perception and subsequent decision-making. If people believe they can control their own future worklives and financial success, this will impact along with their 'beliefs, habits, values, and goals' to affect future behaviours. For Bird, the intention to act as an entrepreneur acts as a 'perceptual screen for viewing of relationships, resources, exchanges, and the like' (1992, p. 11).

Intentions are therefore seen to be paramount in entrepreneurial behaviour. Various models of entrepreneurial intentions have been postulated. One

which is examined in some detail below is Shapero's Model of Entrepreneurial Intentions.

Shapero's Model of Entrepreneurial Intentions

Shapero's Model of Entrepreneurial Intentions shown in Figure 2 below, identifies some of the factors which are thought to affect the intention of people to behave as entrepreneurs. In this model, the definition of entrepreneurial intention is taken to be 'the commitment to starting a new business' and entrepreneurship is defined as 'starting a new business' (Kruegar 1993, p 7). The perceived desirability is defined as 'the degree to which one finds the prospect of starting a business to be attractive' (Kruegar, 1993, p.5). Perceived feasibility is defined as 'the degree to which one believes that he or she is personally capable of starting a business' (Kruegar, 1993, p. 8). The propensity to act is conceptualised by Shapero as 'the disposition to act upon one's decisions' (Kruegar, 1993, p. 9). According to Shapero's model, the depth and breadth of people's exposure to entrepreneurship affects their perceived desirability, perceived feasibility and propensity to act in relation to starting a new business.



Kruegar (1993) worked with Shapero's model, confirming its usefulness and identifying the impact of positive rather than negative exposure to the start up of a new business. Based on Kruegar's research, the Venture experience would need to have a positive impact on participants' attitudes towards

perceived desirability, feasibility and propensity to act, if behavioural intentions towards entrepreneurship in the future were to be positive.

According to Bird (1992), in order for intentions to be impacted upon, the attitudes of the person must be affected. Kruegar (1993), refers to studies by Carsrud, who 'found less impact by role models on entrepreneurial intentions than Scherer et al.'. It is regarded by Kruegar that '...role models must affect attitudes in order to affect intentions (1993, p. 18)'.

SUMMARY

Searching for a common definition of the entrepreneur is an arduous task. Present descriptions of entrepreneurs used in research can be classified into several broad categories including demographics, personality traits, behaviour, attitudes, and behavioural intentions.

Demographics

Attempts to use demographic variables to identify characteristics of entrepreneurs have yielded little success, with researchers modifying definitions to suit their own ends, thus with limited consensus. Qualities such as sex, age, religion and marital status have not been used successfully to distinguish entrepreneurs from the general population

Personality Traits

Attempts to describe the nature of the entrepreneur using personality traits as the basis have resulted in an almost endless list of requirements. This seems to suggest the entrepreneur is some super human being with unlimited numbers of positive qualities. The extent of the requirements generated to date make personality traits difficult to use successfully as a basis for describing entrepreneurs.

Behaviour

The behavioural approach to describing entrepreneurs attempts to focus on the behaviour that an entrepreneur displays as he or she goes through the process of creating a new business organisation. For Gartner this approach allows people with a wide range of personalities/characteristics to be classified as entrepreneurs. It is the behaviour that is important to Gartner, not demographic and personality variables. A list of common entrepreneurial behaviours related to achievement, risk-taking, leadership, innovation, perseverance can be found if one examines previous research

concerning entrepreneurs. Knowledge of these behaviours could be useful as a research observation framework.

Attitudes

Robinson et al. have taken a different course, designing an instrument that aims to predict entrepreneurs from the general population based on attitudinal differences. This instrument was based on attitude theory and four business factors. Behaving as an entrepreneur was a key component of the entrepreneur sample group used in the Robinson et al. study, therefore it has links with the behavioural approach to the study of entrepreneurs.

Behavioural Intentions

The intention to act as an entrepreneur was also used as the basis for a definition. Behavioural intentions are often linked to the attitudes a person holds, their past behaviours, as well as the extent of their personal control over situations. Shapero offered a detailed model outlining the factors which he believes affect the intention of a person to become an entrepreneur. The Venture program may have an impact on the behavioural intentions of participants, particularly regarding the creation of future business organisations.

Moving on it seems that behavioural intentions are claimed to be linked directly to the attitudes a person holds. The Robinson et al. instrument is based on attitude theory. It is therefore necessary to pursue attitude research in order to examine the question of attitudes and intentions more closely. Attitudes and attitude change are central to the next section.

NATURE OF ATTITUDES AND ATTITUDE CHANGE

This section considers the key questions: what are attitudes? how are they changed? and how can this change be measured?

Definition and Nature of Attitudes

A brief review of the history of the study of attitudes, and a discussion of leading attitudes theories, provides the basis for the definition of the term attitude as it is used in this study.

According to Kiesler et al. (1969, p.5), Allport traced the study of attitudes to Lange as far back as 1888. A basic experiment by Lange illustrated how a

person's *aufgab*, or task attitude, could be varied by a simple oral instruction. This oral instruction moved the concentration of the subject in relation to a stimulus, and the response required as a result of this stimulus.

Even earlier uses of the term attitude are reported by Kahle (1984), who notes its usage in the 1700s as a jargon term to describe body position of models used in painting (1984, p. 1).

Kahle (1984) also discusses the use of attitudes in the Science domain by Charles Darwin in his 1872 book 'Expression of the Emotion in Man and Animals'. According to Kahle (1984), Darwin saw attitudes as stereotypic motor responses associated with emotional expression. He focussed on the posture of the entire body's response to various emotions. For him attitudes were displayed as a sudden response not present continually (1984, p. 2). According to Kahle, Sherrington's view differed from Darwin's. Sherrington viewed attitudes as a continuous state rather than a sudden response to a stimulus.

Kiesler et al. (1969) indicate another historical root of attitudes that stemmed from the need of American psychologists to pinpoint the consistency which occurred in people's behaviour across a wide range of situations. A key question often posed was : is it different attitudes that make people behave differently in the same situation?

Allport, according to Kiesler et al. (1969, p. 6), identified other early usage of attitude theory. He believed followers of Freud, used terms such as longing, love, hatred, prejudice and passion to describe dynamic attributes which are currently ascribed to today's usage of attitudes. Allport argued that for Freud, these dominated every person's unconscious life.

According to Kiesler et al. sociologists added further important dimensions to the concept of attitudes with Blumer, Thomas, and Znaniecki, taking the stance, 'social psychology is the scientific study of attitudes' (1969, p. 6). Such sociologists believed it was necessary to consider psychological variables in order to understand social change.

Kiesler et al. refer to Blumer's 1939 description of the term "attitudes", who believed the word began to be used as a blanket term for many phases of

mental life or psychological theory (1969, p. 6). Early empirical researchers drew a distinction between sociological and psychological analyses as illustrated in the works of Murphy and Murphy and Newcombe which were later described by Kiesler et al.:

Attitudes may be related to sociological variables such as size of community or psychological variables such as personality traits (1969, p. 7).

What are Attitudes?

By reviewing attitude literature many definitions of attitudes can be found. They usually relate directly to the way people feel, what they believe, and how they respond to an object, issue or action.

Kahle (1984) simplifies attitude definitions by dividing them into conceptual 'predisposition to respond' to an object, issue or action; operational 'tendency or predisposition to evaluate' an object, issue, or action; or an interactive definition based on the recognition of attitudes as cognitions. Kahle takes Piaget's view that 'a function of cognition is to facilitate the process of adaptation to one's environment' (1984, p. 4).

Examples of Attitude Definitions

Himmelfarb and Eagly (1974), refer to one of sixteen definitions of attitudes proposed by Allport in 1935 who believed an attitude was a

mental and neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related (1974, p. 5).

Thirteen of Allport's definitions contained conceptual-styled "disposition to act". Himmelfarb and Eagly (1974) believe this particular claim of Allport's suggests a person's behaviours are related strongly to the acquisition of attitudes to objects and situations.

More recently, Baron and Byrne (1981) have defined attitudes as

...relatively lasting clusters of feelings, beliefs and behaviour tendencies directed towards specific persons, groups, ideas, or objects (1981, p. 91).

Robinson et al. (1991), (based on the works of Ajzen in 1982; Hovland and Rosenberg in 1960; and Shaveer in 1987), define attitudes as:

The predisposition to respond in a generally favourable and unfavourable manner with respect to the object of the attitude (1991, p. 17).

The three attitude definitions provided above could all be described as conceptual rather than operational on the basis of Kahle's (1984) division of attitude definitions.

Nature of Attitudes

Many attitude definitions refer to three attitude components which make up a person's predisposition to respond to or evaluate objects, issues or actions. These are the affective, cognitive and behavioural or conation responses. Affective responses consist of the positive and negative feelings a person possesses towards a specific object, issue or action. The cognitive component consists of the beliefs and thoughts a person has about an object, issue or action. The behavioural or conative component consists of the behavioural intentions resulting from engagement with the object, issue or action (Robinson et al., 1991).

A number of psychologists believe all three attitude components must be considered individually in attitude research. This was described by Robinson et al. (1991) as the tripartite attitude theory approach. This quality of attitudes referred to by Robinson et al. has direct research implications. If attitudes are to be studied and measured based on the tripartite theory of attitudes, then the researcher must take their three-dimensional nature into account when designing research instruments.

According to Robinson et al. (1991), many leading psychologists (such as Allport; Breckler; Carlson; Chaiken and Strangor; Katz and Stotland; Kothandapani; Ostrom; Rosenberg and Hovland; and Shaver) support the tripartite view of attitudes.

However, there appears to be certain conflicting opinions as to the interrelationships of the attitude components and their subsequent use in research. Robinson et al. (1991), for example, refer to the work of Fishbein and Ajzen who believe attitude is a unidimensional construct and therefore

could be represented adequately by the affective component alone. This does not necessarily mean a total dismissal of the three components of attitudes; rather it could support the view that separating the components is neither essential, desirable nor necessary in research methodology.

In the unidimensional approach, evaluation is central, and attitudes are often defined as evaluative responses that serve a knowledge function (Tesser and Shaffer 1990, p. 481). Tesser and Shaffer (1990) list many theorists who support some form of evaluative definition of attitudes (for example Chaiken and Eagly; Fazio; Greenwald; Kruglanski; Petty and Cacioppo; Pratkanis; Rempel and Zanna). Such evaluative-based definitions can be classified as operational as defined by Kahle (1984).

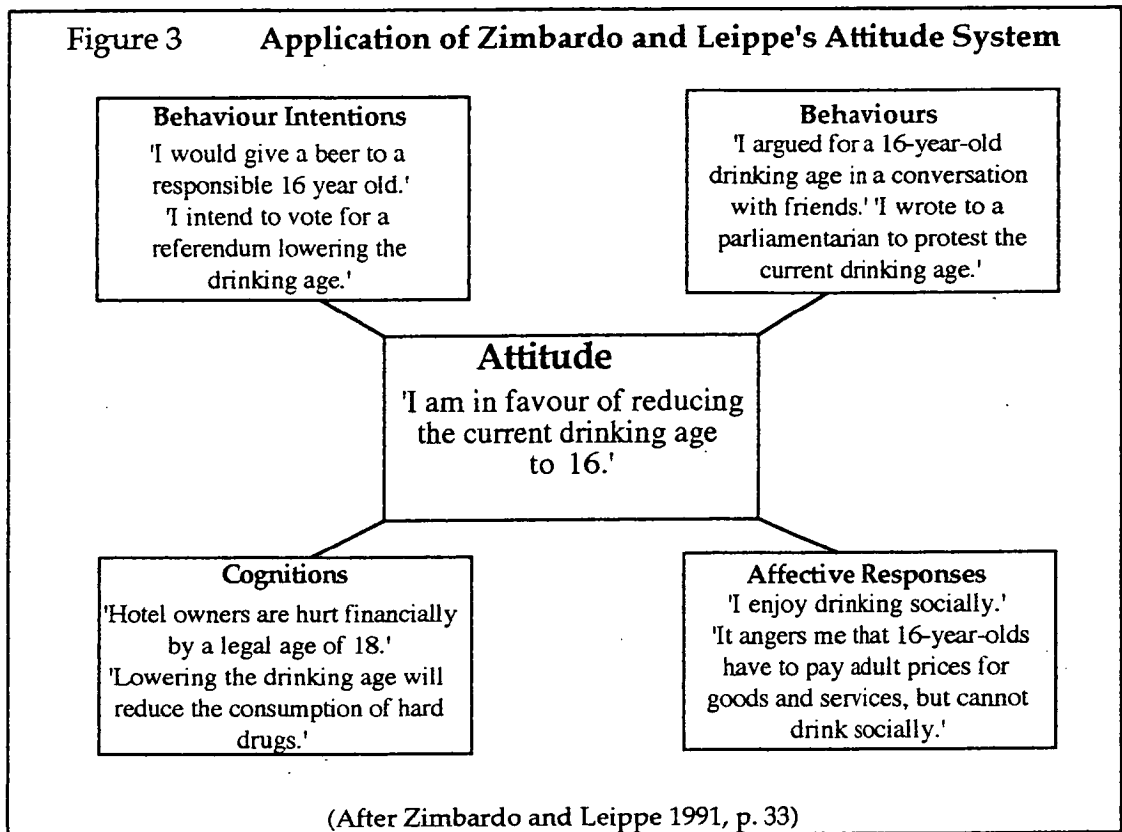
Another point of view regarding the components of attitudes can be seen as Himmelfarb and Eagly (1974) discuss the work of Katz and Stotland. They proposed an operational definition of attitude, and postulated that attitudes always consist of an affective and cognitive component, but a behavioural component was evident '...only if a person engaged in action vis-a-vis the attitude object' (1974, p. 6). This particular viewpoint has direct implications for this research study. It suggests that the behavioural component towards enterprise attitudes would only be present if the person behaved as an enterprising person.

More recently Zimbardo and Leippe (1991) propose the concept of an attitude system consisting of five components. These are behaviour intentions; behaviour; attitude; cognitions; and affect responses. An illustration of this attitude system is given in Figure 3 on page 41.

According to Zimbardo and Leippe (1991), the central and most important aspect in the attitude system is the attitude component itself. This component provides the link between the other components. Zimbardo and Leippe (1991) believe there is an "interconnectiveness" between all the components as well as a "weighting factor". Some attitudes may be based mainly on feelings, others mainly on beliefs or ideas. Examining our attitudes will often affect this weighting factor. More knowledge for example could "fill in" the empty sections of the cognitive component of the attitude system. Zimbardo and Leippe (1991) also believe a change in one component can bring about review of all the other attitude components. A person's

attitudes about one object may connect to his or her attitudes about a different object. As Zimbardo and Leippe state,

attitude systems within and between each other are organised, such that changes in one facet of a person often cause changes in other facets (1991, p. 34).



Attitudes are held to influence perception and thought, are easily accessible evaluative summaries, and are self-defining (Zimbardo and Leippe, 1991, p. 35). How people view themselves will affect how they perceive objects, issues or actions. The attitudes a person holds will therefore be coloured by their self-esteem. In other words, attitudes guide our perceptual and cognitive processes allowing us to choose how we perceive an object, issue or action. They act as a summary or benchmark of where we stand on specific issues, allowing people to cope with the countless stimuli and situations they may encounter, thus providing a system of evaluation (Zimbardo and Leippe, 1991, p. 35). This view of Zimbardo and Leippe would also be in line with the operational classification of attitude definitions.

Tesser and Shaffer also refer to this connection between attitudes, and they define attitudes as 'representations in memory' (1990, p. 482). They argue

that once a person is thinking about one attitude this allows other connected attitudes to be tapped quickly. They refer to this association as "spreading activation" which suggests that people whose attitudes about objects, issues or actions are brought to the surface, are more likely to develop clear attitudes about this object, issue or action and related objects, issues or actions. Participating in an enterprise program would be expected to bring to the surface many attitudes about enterprise and related activities.

As the research reported in this thesis focuses on the consequences of changing attitudes evident following an enterprise experience, the relationship between attitudes and behaviour, either subsequent or intended, will be addressed.

Attitudes and Behaviour

The relationship between attitudes and behaviour is pertinent to this study. Changes in a person's attitudes as a result of enterprising behaviour may result in changes in behaviour or behavioural intentions (negative or positive) towards enterprise. The attitude-action relationship must be considered.

The relationship between the attitudes a person holds and subsequent behaviour or intention to behave is by no means a clearcut case. As stated by Campbell in the work of Thomas (1984 p. 55) 'we should not think of the attitude-behaviour links as all or none'. Campbell referred to this lack of attitude-behaviour consistency as pseudo-inconsistency.

Thomas (1984) believes the complexities of real life make the attitude-behaviour relationship difficult to establish. To assess variables and measure their effects requires problems to be 'sliced up into sufficiently simple components', thus losing real life perspective (Thomas, 1984, p. 56).

Kahle (1984) refers to various studies into the attitude-behaviour relationship. According to Kahle (1984, p. 20), Fishbein and Ajzen identified fifteen studies and Calder and Ross seven studies which supported a consistency between attitudes and behaviour. Kahle believes many studies which refute the attitude-behaviour consistency involved 'attitude and behaviour measures with contradictory adaptive implication' (1984, p. 109). There appears to be ample evidence that attitudes can be related to subsequent behaviour. There

is, according to Kahle, also a bank of studies which support the counter argument.

Zimbardo and Leippe (1991) cast light on this relationship by placing conditions on attitude-behaviour consistency. They believe that for attitude-action consistency to be evident, the attitudes must be strong and clear; relevant; personally important; and have a strong affective or cognitive base.

A final viewpoint by Tesser and Shaffer (1990) refers to the works of Ronis et al. and Fazio et al. who argue that attitudes may 'sometimes be irrelevant in guiding behaviours'. Some behaviours become automatic/habitual, not as the result of rational decisions, and are considered 'divorced from the attitudes to which they are logically related' (1990, p. 492). An example of such a behaviour is smoking. It is doubtful however, that enterprising behaviour could be classified as being habitual in the context of the present study.

Do Attitudes Cause Behaviour or Does Behaviour Cause Attitudes?

Theorists have often concentrated on the effect attitudes have on behaviour, whereas the effect behaviours have on attitudes must also be considered (Insko 1967; Thomas 1984; Zimbardo and Leippe 1991). According to Zimbardo and Leippe (1991, p. 107), people's behaviours can cause a change in their attitudes, especially when behaviours such as role playing or communicating a specific attitude lead them to a new attitude or self-image. The Venture program as stated previously, provides a role play styled experience.

Zimbardo and Leippe (1991) outline experiments using forced compliance which illustrate clearly the effect on attitudes when a person is forced to behave publicly in a manner against his or her current attitudes. The behaviour, although contrary to the person's attitudes, does cause an attitude change in favour of the demonstrated behaviour; the behaviour has affected the attitudes.

The relationship between attitudes and behaviour has thus been described as a two-way process or causal loop by some theorists (Insko 1967; Thomas 1984; Zimbardo and Leippe 1991). People will orientate themselves to their world according to their past behaviours, and act in the future according to

these measures (Thomas, 1984; Zimbardo and Leippe, 1991). As stated by Bem in the works of Thomas,

...our attitudes are no more than often the event inferences about what we have observed ourselves doing (1984, p. 64).

When a person expresses ideas verbally, Thomas (1984) believes these are no more than post hoc rationalisations of what has already been done.

Behavioural Intentions

It is evident that in spite of the attitudes we hold or the behaviours we observe in ourselves, there are other determining factors which ultimately affect the way we behave. A person's intentions must also be taken into consideration. As stated by Krueger in relation to the intentions of a person becoming an entrepreneur:

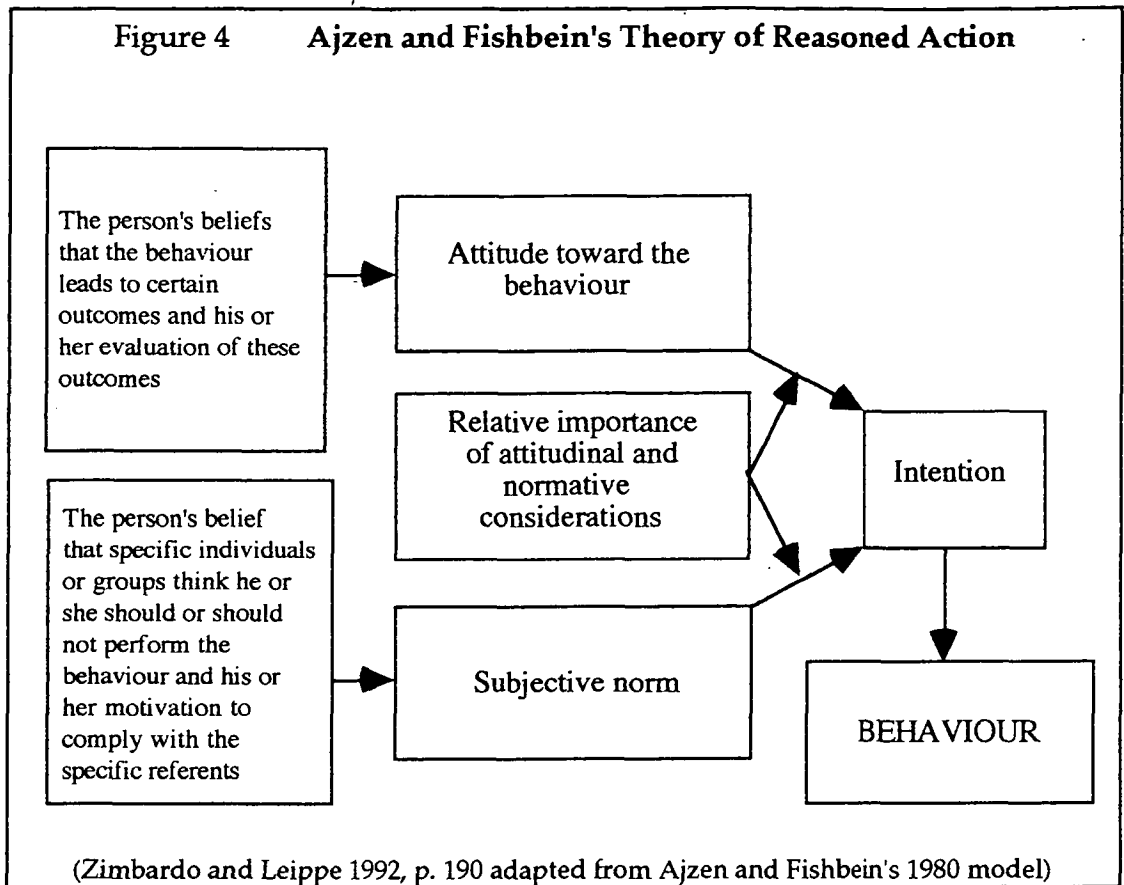
Intentions represent the degree of commitment toward some future target behaviour. Intentions robustly predict and explain that behaviour. In turn, attitudes toward a behaviour will affect intentions (1993, p. 6).

Desire to conform may be one such example of people behaving in a manner contradictory to their attitudes. Peer pressure may explain such contradictory behaviour and the power of situational factors may override personal factors.

Attribution theory can also explain the lack of correlation between attitudes and behaviours which occurs often. According to Zimbardo and Leippe (1991), Kelley listed three factors in deciding whether a person makes a dispositional or situational attribution about an observed behaviour. A person was more likely to blame dispositional rather than situational causes for behaviour when the behaviour is non-normative, frequently observed, and non-distinctive i.e. occurs across many given situations (Zimbardo and Leippe, 1991).

Ajzen and Fishbeins theory of reasoned action outlined in the work of Zimbardo and Leippe (1991) emphasises the role of significant others in the attitude-behaviour relationship and focuses on intention-based reasons which ultimately lead to behaviour. The complexity of events illustrates the

difficulty for researchers trying to identify a direct link between specific attitudes and present or future behaviour.



This model shown above in Figure 4 outlines the many factors affecting the seemingly simple relationship between the attitudes a person holds concerning a behaviour and his or her subsequent actions. Kahle also supports this view and refers to action related to attitude and situation as being 'filtered through the intention' (1984, p. 108).

Thomas (1984) acknowledges the relationship between attitudes and behavioural intentions, however he considers the link to become weak if research methodology is poor. He states:

... it is possible to demonstrate a fairly close relationship between attitudinal and behavioural variables providing they are carefully defined and measured (1984, p. 57).

Measurement of Attitudes

It seems appropriate at this stage to examine attitude measurement techniques. As attitude definitions have evolved over time, experimental modification of attitudes testing techniques and measures have also evolved. Researchers have attempted to examine the attitudinal impact of college courses, radio addresses, motion picture propaganda, and other social influences. This early attitude research, according to Keisler et al. (1969), often contained unsophisticated questions and lacked sound scientific principles such as random selection of subjects and control groups.

One of the first applications of scientific principles was by Saadi and Farsworth in 1934 who, according to Keisler et al. (1969), paired their research statements with descriptors such as "liked"/"disliked" and produced some of the first evidence of research models and worthwhile methodology.

Keisler et al. (1969) believe attitude research consists of infinite uncontrollable variables, unlike scientific research which could, in most cases, be designed to control all but the experimental variable. Isolating attitude variables is an almost impossible task, due to the wide range of uncontrollable stimuli. The longer the duration of the research investigation the more time there was for results to be contaminated by outside influences.

Attitude measurement was to play a significant role in the direction of attitude research, as detailed below, summarised from the works of Keisler et al. (1969). The field was lead by Allport and Hartman in 1925 who were first in a series of researchers developing ways to measure attitudes. They were followed by Thurstone and Chave in 1929 who developed the psychophysical model; Likert in 1929, and the well known and still used Likert scales; and Guttman with scalogram analysis in 1950. In 1964 Coobs described his "unfolding technique"; a way of attitude scaling that 'derives information on the unidimensionality and relative spacing between attitude items' (Keisler et al., 1969, p. 15). Bipolar adjectives such as hot-cold were used by Osgood, Suci and Tanenbaum in 1957. Each adjective was separated by a scale of usually seven intervals along a continuum, on which a subject evaluated directly the attitudinal object. Observation of overt behaviour was also used to gather information on attitudes. This method relies heavily on self-report, as the researcher cannot always be present to observe the subject's actions.

Projective techniques, performance on objective tasks and physiological reactions have all been used as a medium for attitude investigation and measurement (Keisler et al., 1969).

By 1969 Keisler et al. stated:

Social scientists have stopped asking the question: 'Can attitudes be measured?' The standard measurement techniques have been accepted, assumptions and all. This uncritical acceptance of attitude measurement techniques has had a strong impact on the contemporary conceptions of attitudes (1969, p. 21).

Making Attitude Measures more Accurate

The Object of Attitudes

It is important that studies into attitudes outline any direct relationship between the attitude and the object. Robinson et al. elaborate as follows:

Definitionally, every attitude has an object, be it a specific person, place, thing, event, activity, mental concept, cognitive orientation, life style, or even combinations of these categories (1991, p. 17).

Attitudes can exist at general or specific levels for a range of objects. Robinson et al. (1991) refer to the work of Abelson; Ajzen; Ajzen and Fishbein; and Ajzen and Madden who all believe that in research studies, attitude specificity must always be matched with measurement specificity because of the existence of general or specific attitudes to an object. For example, attitudes towards innovation in a general sense (non-specific object) would be different to attitudes towards innovation in an entrepreneurial environment (specific object). Instruments used to measure innovation in an entrepreneurial environment should be designed to tap into those specific innovation attitudes, not innovation attitudes in general. Robinson et al. (1991) claim this increases the accuracy and productive capacity of the instrument.

The accuracy of attitude measurement to predict future behaviours is a key to meaningful results. The relationships between the object of the attitude, which in the case of this study is enterprise, and situational factors must play a part. Robinson et al. (1991) EAO instrument takes into account both of

these factors and therefore has been successful in producing meaningful results when applied to the prediction of entrepreneurship in the general population. The Robinson et al. (1991) study linked behaviour and attitudes successfully to predict entrepreneurship. Robinson et al. model may be useful in predicting entrepreneurial attitudes in groups of Australian people.

Theories of Attitude Change

Many studies have shown clearly that attitudes can be changed. These range from well known studies such as the Yale Communication Research Project in 1950, to numerous studies used to support or negate various attitude theories.

It is well documented that attitudes are open to change, and they are seen as being less stable than other aspects such as personality. Attitudes often change in time and from situation to situation (Robinson et al., 1991). How fast the change occurs depends on '...how deep-seated or fundamental the attitude is to the person's identity and on the intensity of experiences that influence a particular attitude (Robinson et al., 1991, p. 18).

How attitudes are changed has been the centre of controversy for decades, with many researchers attempting to unravel the concepts. In early research, many of the theories 'emphasised reward, reinforcement, or need reduction and the importance of consistency' (Insko, 1967, p. 347). There are, however, many theories of attitude change, too many to be reviewed in this study. It is possible, though, to divide the theories into three classifications. Firstly, there are the theories which concentrate on the role of the person in attitude change. Secondly, there are the theories which focus on all aspects which surround a person e.g. environmental forces. Finally there are the theories which can be described as being interactive as they are a combination of the previous two classifications. Kahle (1984) refers to these classifications as person orientated, situation orientated and interactive respectively. For the purposes of this study a few examples will be considered briefly.

Person Orientated Theories

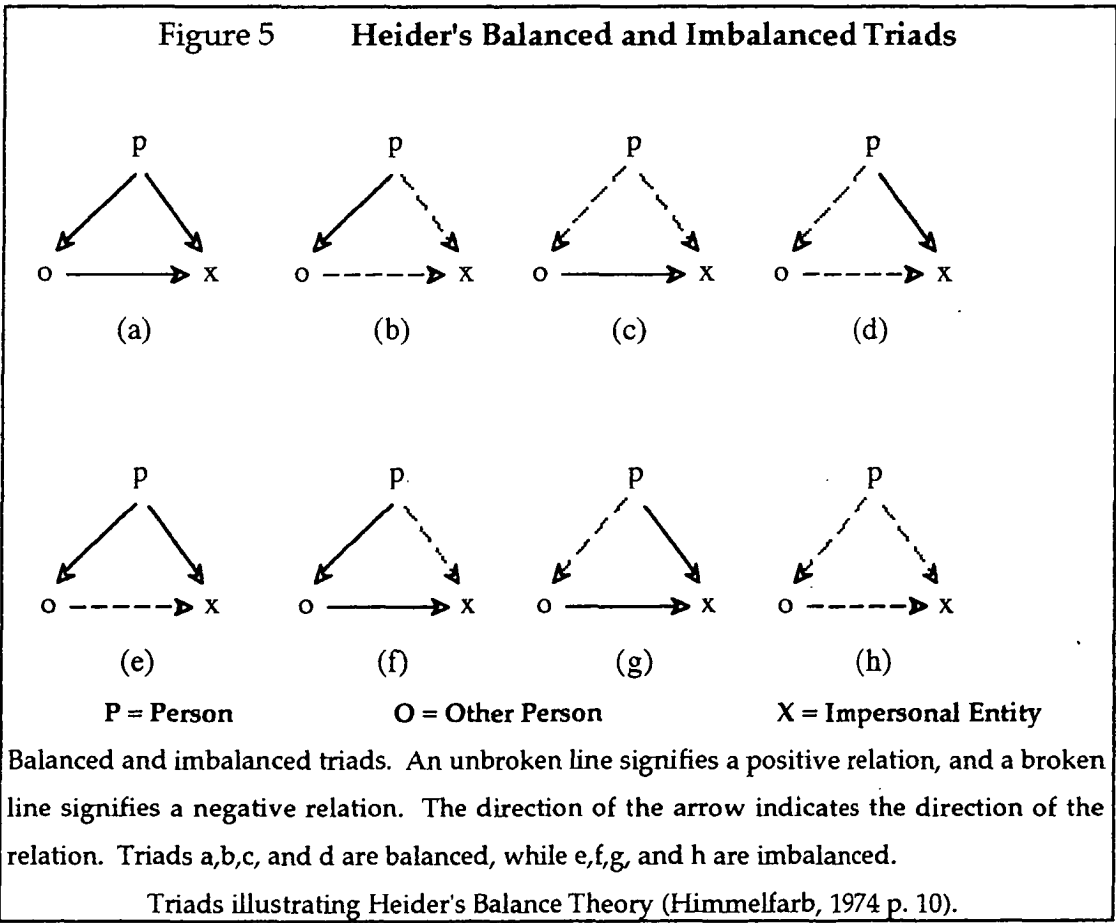
(Change mechanisms which originate inside the person)

Cognitive Consistency Theories

The Consistency theories have one common element, which is described by Himmelfarb and Eagly as follows:

Attitude inconsistency is unpleasant and ...the psychological tension created by this unpleasant state leads to attempts at reducing the inconsistencies (1974, p. 9).

Various models have been used to support this approach to attitude change. Himmelfarb and Eagly (1974) reported on Heider's early theories in this area. In Heider's model shown in Figure 5 below, he was concerned largely with the interrelationship of two persons and their responses to a specific issue.



He referred to these relationships as triads and believed triads existed in either a balanced or imbalanced state. Heider believed imbalanced triads will

try to become balanced through the change of attitudes of one or both of the persons involved.

Himmelfarb and Eagly (1974) and other writers such as Kahle (1984), have criticised Heider's model. They believe the model does not account for the degree of liking or unit relationship, and believe that using only three elements is oversimplifying the relationships/situations which exist.

Attraction and Agreement.

How people feel about the source of an attitude may determine their attitude to the subject. Response to issues may vary, if the source is favoured or disfavoured by a person. Positive attitudes tend to follow the favoured source if their views on a subject are favourable. Negative attitudes tend to follow the favoured source, if their views on a subject are unfavourable (Himmelfarb and Eagly, 1974).

According to Thomas (1984), Frey shows more recently that people seek out information which agrees with their point of view, and avoid the conflicting argument. Of the sources which disagree with their perspective, a person tends to choose those which could be refuted easily (Thomas, 1984, p 61). The thinking, reasoning "model of man" will often perpetuate their existing attitudes, in line with the dissonance theory outlined below.

Dissonance Theory

Himmelfarb and Eagly (1974) refer to Festinger's theory of cognitive dissonance. This refers to the evaluation of choices open to a person based on his or her own attitudes to objects, issues or actions. Festinger believed that 'discrepancies or inconsistencies cause a tension that people try to reduce or eliminate' (Zimbardo, Ebbesen and Maslach, 1977, p.66). For example if a person believes 'animals should not be killed for their fur' one would not expect the same person to state: 'I wear a real fur coat to dances'. The two cognitions are inconsistent or dissonant, and one would not expect these two statements from the same person. If, however, the same person did make these two statements then Festinger believes the person would try to reduce or eliminate the inconsistencies in their attitudes by adding other cognitions for example 'I was given the fur coat by my husband', 'I only wear it to please him'.

Pieces of knowledge can be relevant or irrelevant to each other. If a cognition implies something about the other, it is considered relevant. In the case of the fur coat example 'lamb chops are nice to eat' would be irrelevant while 'fur seals suffer when slaughtered' would be relevant. If the cognitions are considered relevant they may exist in one of two states, either consonant or dissonant.

Dissonance exists when, in the frame of reference of the perceiver, one element does not fit with or follow from the other, or ...when one element implies the obverse of the other (Himmelfarb and Eagly, 1974, p. 17).

A consonant state, on the other hand, means one element does imply the other, it is the opposite of dissonance.

Festinger postulated that dissonance is a state of psychological tension that motivates the organism to reduce dissonance. The amount of pressure to reduce dissonance is a function of the magnitude of the dissonance aroused (Himmelfarb and Eagly, 1974, p. 17).

An individual could reduce dissonance in several ways. The importance of elements could be changed; a consonant element could be added to the elements thus changing the balance; dissonant elements could be made irrelevant to each other. Any of these changes would reduce the cognitive dissonance and thereby reduce psychological tension. According to this theory, by purposely seeking out sources which are in line with one's attitudes, and avoiding sources which are opposing, a person creates less psychological tension and therefore there is less chance of attitude change within the person.

Cognitive Response Theory

Cognitive response theory, according to Kahle, was used by Greenwald in 1968, and Petty, Ostrom and Brock in 1981. The attitude change mechanisms in cognitive response theory result from the thoughts that run through people's minds when they are considering a persuasive situation. The thoughts will either be favourable or unfavourable in attitude change direction.

Kahle (1984) suggests an impact factor as a missing element in this theory, and since not all the influence factors will be seen to be of equal importance,

one factor may override all the others. For example it would be difficult to persuade a person to take poison that will kill him or her even if twenty other relevant factors are of a positive nature.

Functional Theory

According to Kahle (1984), Katz in 1960 claimed attitudes serve one of four functions, each corresponding to one of the major philosophies of psychology: adjustment; ego defence; value expression; and knowledge. Kahle (1984) believes functional theory has little use as a predictive theory but is of significant use in clinical, in-depth research.

Situation Orientated Theories

(Change mechanisms which originate outside the person)

Classical Conditioning

A basic role is played by classical conditioning in our liking or disliking (feelings) for objects or persons (Baron and Byrne, 1981). This is referring to the affective component of attitudes.

Previously neutral feelings towards an object can be affected by various stimuli which in turn can produce long-lasting negative or positive feelings towards the particular object. These negative feelings can later be transferred to the other attitude components. Thus a person who dislikes a minority group, for example, may in time develop reasons (cognitive) for this dislike, which results in them avoiding (conative) this group.

The Venture program has the potential to provide participants with both a negative or positive object-specific experience. This exposure may have an effect on the participants' attitudes towards enterprise.

Instrumental Conditioning

Being rewarded for having a particular attitude is the basis for instrumental conditioning. When behaviours yield positive or negative responses, instrumental conditioned learning occurs (Baron and Byrne, 1981). Teachers, parents, grandparents and other people who interact on a regular basis often play a significant role in the formation of a child's attitudes. This may result in the copying of behaviours as Baron and Byrne (1981) state:

Largely as a result of this process, youngsters often seem to be virtual carbon copies of these adults, at least where attitudes are concerned (1981, p. 95).

Research findings support the important role of instrumental conditioning. Even trivial rewards such as replying "good" to an attitude statement is claimed to be effective (Baron and Byrne, 1981). According to Zimbardo and Leippe (1991), Skinner believed events in the environment could influence behaviour directly by acting as reinforcers. The Venture experience is likely to result in the formation of positive or negative attitudes towards enterprise depending on the conditioning input.

Observational Learning or Vicarious Learning

Modelling, observational or vicarious learning refers to the learning of new behaviours from the behaviours we observe directly in others. Often a person says one thing then practises the opposite, and it has been shown that in such cases of conflicting messages, that *actions speak louder than words*, especially with young children (Baron and Byrne, 1981). In other words having the knowledge may be less powerful than observing the action. For observational learning to occur 'all that is necessary is that the observers pay attention to and remember the act, and be able to perform it' (Baron and Byrne, 1991, p. 50). According to Baron and Byrne (1981) studies by Bandura and Bandura et al. in 1961 and 1963 illustrate this concept clearly.

Self Perception Theory

According to Kahle (1984), balance and consistency theories were challenged by Bem in 1965, 1967, and 1971, who introduced the notion of acquiring attitudes through the observation of our own behaviour, in the same way as one might infer the attitude of others by observing their behaviour. This theory may appear to belong in the person-orientated theories but is situation-orientated. This stems from the belief that people determine their own behaviour from situational cues. The situation plays a key role in how a person behaves and thus ultimately affects the attitudes related to this behaviour. According to Kahle (1984), Bem follows the view that attitudes result from, not cause, behaviour.

Kahle (1984) believes the empirical status of Bem's view is questionable however, due to lack of validity when replicated. According to Kahle (1984), Maslach, and Kiesler and Munson reported several research failures. A large

body of research in the late 70s supports the view that when the attitudes are most important to a person, these attitudes, 'rather consistently cause behaviours' (Kahle, 1984, p. 28).

Interactive Theory

(The person and situation are both considered)

Kahle's (1984) theory of attitude change, is person-situation interactive theory. It encompasses aspects from both the situation- and person-orientated theories, and is based on the cognitive concepts proposed by Piaget. Kahle (1984) views attitudes as unidimensional in construct, but focuses on the cognitive component as the influence component of behaviour in situations.

The processes of adaptation and abstraction are the focus of Kahle's approach to the definition of attitudes. Kahle sees adaptation as a process which involves 'both fitting the person to the environment and fitting the environment to the person' (1984, p. 41). The attitudes people hold are being refined and redefined constantly in order to 'enhance their adaptive worth' (1984, p. 41).

According to Kahle (1984), people reduce the infinite numbers of stimuli they receive to a manageable number of abstract prepositions. People test, refine and clarify these abstract prepositions until they become more stable and begin to dictate the behavioural responses in situations (1984, p. 5). For example 'I like swimming' is an attitude formed following a number of positive, enjoyable experiences. In most cases a person would be unable to name and describe every time he or she had a swimming experience, since they may be too numerous. The attitude about swimming has been formed, stabilised, and is now likely to dictate a person's attitudes towards swimming and related issues. The attitude will continue to develop as the person develops, because it is a constant process (1984, p. 41).

Kahle's attitude definition is lengthy and takes into account many of the aspects discussed. Kahle states:

Attitudes are adaptation abstractions, or generalisations, about functioning in the environment, especially the social environment, that are expressed as predispositions to evaluate an object, concept, or symbol. This

abstraction process emerges continuously from the assimilation, accommodation, and organisation of environmental information by individuals, in order to promote interchanges between the individual and the environment that, from the individual's perspective, are favourable to preservation and optimal functioning (1984, p. 5).

Impact of Attitude Change on Behaviour

As stated previously, there is ample evidence supporting the attitude-behaviour consistency claim, as well as much criticism. Zimbardo and Leippe (1991) support the existence of a relationship between the attitudes a person holds and his or her subsequent behaviour. According to Zimbardo and Leippe (1991), attitudes are open to change if an influence situation occurs. They refer to settings where such a situation may arise. These are, interpersonal settings - one to one; persuasion settings - speaker to audience and mass media settings such as radio and printed publications; and influence agent settings where an agent can set the stage for later change behaviours as described by Zimbardo and Leippe, who state:

A change in beliefs in attitudes may not have a direct effect on changing behaviour but may "set up" the person to be more vulnerable to subsequent sources of social influence (1991, p. 32).

Baron and Byrne comment on the impact of attitude change on the behavioural outcomes of people as follows:

Changing attitudes does not always guarantee corresponding changes in behaviour, but, in many cases, it may represent an important, first step in this process (1981, p. 135).

This implies that changing object-specific attitudes in people could be a positive step towards the changing of object-specific behaviours sometime in the future.

Self-Efficacy

Since attitudes on important topics may serve and sustain one's self-definition and self-esteem, many attitude influence processes involve how people perceive themselves, not just the attitude object (Zimbardo and

Leippe, (1991, p. 36) and successful influence processes must therefore take into account how people perceive themselves, not just the attitude object.

Self-expectations and cognitions in general have a powerful influence on our behaviour. People, it seems,

...develop a sense of the degree to which we are likely to be effective on certain tasks, in certain settings, and with certain people (Zimbardo and Leippe, 1991, p. 46).

This sense is referred to as "self-efficacy". A person with low self-efficacy assumes he or she has less potential and will not succeed, whereas a person with high self-efficacy believes he or she has the potential to succeed. This factor is summarised by Zimbardo and Leippe as follows:

What we do, the consequences we perceive as behaviour-contingent, and how we think and feel about our actions and their consequences form a behavioural system which can work to enhance our personal development or diminish it (1991, p. 46).

An implication of these claims is that enterprising people would need to have high self-efficacy, otherwise it is unlikely they would be personally responsible for creating a business organisation, since confidence and personal control are likely to be linked closely with one's sense of self-efficacy.

SUMMARY

Attitudes have been studied since at least the 1700s. There is a wide range of definitions of attitudes which can be divided into three main categories - those that deal with 'predispositions to respond' to an object, issue or action'; those that deal with the 'tendency to evaluate an object, issue or action'; and those that integrate the two perspectives. These three are known as the conceptual, operational and interactive definitions respectively.

There is continued debate amongst theorists as to the nature of attitudes. Some see the three components of attitudes, affective, cognitive and conative, as separate entities. They believe people always respond to an object, issue or action in three different ways. This view is known as the tripartite theory of attitudes. Other theorists acknowledge the three components but do not

consider them separate entities, and propose a unidimensional construct and believe measurement of the affective component alone will indicate clearly the state of a person's attitude to an object, issue or action.

The attitude-action relationship has strong support but also draws much criticism. Theorists claim attitude-action consistency depends on many factors. The theory of reasoned action gives insight into the many variables which reduce attitude-action consistency. It is thought possible to reduce this inconsistency depending on the state of a person's attitude to an object, issue or action. To reduce inconsistency, the attitudes must be strong and clear, relevant, personally important and have a strong affective or cognitive base.

A second debate focuses on the reverse situation and examines the behaviour-attitude relationship. Experiments such as those involving forced compliance support this relationship. How we observe others and how we perceive ourselves in a given situation may also affect the way we respond to objects, issues or actions.

Numerous theories support the view that attitudes are open to change. Theories of attitude change can be divided into three main categories: situation-orientated theories which examine change mechanisms which originate outside the person; person-orientated theories which examine the change mechanisms which emanate from within the person; and the interactive theories which combine both of the previous two extremes.

Attitude change can be measured in numerous ways. Attitudes can exist at general and specific levels for all objects, issues and actions. If attitude-behaviour or behaviour-attitude consistency is the key focus it is important to use a methodology which is object-specific. Unless measurement techniques take this into account any results may be meaningless.

The literature review provided above forms the basis for the framework used to evaluate the YAA Venture program, and Chapter three deals with the methodology used in this study.

To determine whether or not the attitudes in respect of enterprise change during the course of an enterprise program, an evaluation of the Young Achievers Venture program was undertaken in 1993. The methodology involved triangulation and consisted of both quantitative and qualitative approaches in order to provide a "holistic interpretation" of the effectiveness of the Venture program (Bifano, 1989). Bifano describes this methodology as hybrid in nature, as it links two paradigms. It does, however, give a less skewed approach to both collection and interpretation of data. It was expected that this methodology would provide more detailed and accurate data than if either of the quantitative and qualitative methodologies was used alone.

Byron and Byrne support the use joint use of qualitative and quantitative methods when studying attitudes. They believe that attitudes are,

...often revealed by overt actions, as well as by responses to paper-and-pencil-questionnaires (1981, p. 101).

This suggests that data gathered by observation as well as from written responses could be used to detect attitude changes.

This study can be described best as a triangulation probe involving data pertaining to enterprising attitudes collected from three different perspectives. The fourth perspective provides extensive sample details.

The evaluation was divided into four distinct components, the demographic survey, an attitude test, participant observations and a telephone survey. The attitude test provided the bulk of the data while the demographic survey, participant observations and the telephone survey were used to provide additional perspectives. The four components will be reviewed

below to provide a brief introduction. The methodology of each component will then be reviewed in detail.

THE FOUR EVALUATION COMPONENTS

The Demographic Survey

All 118 participants from the 1993 Tasmanian YAA Venture groups completed a demographic survey in order to gain an accurate description of the sample being investigated and to point to reasons for any attitude changes in specific Venture groups.

The Attitude Test

An attitude test based on the Robinson et al. (1991) EAO instrument was offered (pre and post) to all 118 Tasmanian participants in the 1993 Venture program, in order that any change in the whole group's attitudes as well as any changes in the six individual Venture group's attitudes could be detected.

If enterprising behaviour did take place during the Venture program it is not unreasonable to expect the attitudes of the participants to be affected in some way. Attitudes are open to change, and attitudes affect behaviour as well as behaviour affects attitudes. This research would not be able to assess all the attitude changes which take place in the Venture participants over the course of the program. It may be feasible however to examine some specific attitudes using a previously tested instrument such as the Robinson et al. EAO instrument in conjunction with other techniques.

The EAO instrument has been used successfully by Robinson et al. (1991) to predict entrepreneurs from non-entrepreneurs. It is an object-specific instrument (i.e. innovation in business rather than innovation in general) which, according to attitude theorists, increases its reliability.

The EAO instrument provided a mechanism for the assessment of four entrepreneurial attitudes. It is, therefore, quite narrow in focus. In order to balance the results generated by this instrument, other techniques for gathering data relating to attitudes were used. The original EAO instrument is described in full on pages 69-72.

Participant Observation

Observations of Venture Group 1 (26 subjects) were made over a six month period. Participant observation involved the keeping of diary records by the researcher during and after each weekly session. As the focus of this research is the effect on participants' attitudes following enterprising behaviour, the diary entries relate to various aspects of attitude/attitude change which the researcher believed she detected through observation of overt actions or stated opinions of the participants. Particular attention was given to the identification of those behaviours displayed in the program which are considered to be accepted entrepreneurial behaviours as informed by the literature and which may derive from the characteristics described on page 28.

According to various definitions of entrepreneurs it is imagined that participants in the Venture program will develop new or nurture existing enterprising attitudes. The Venture program allows participants to create a business organisation and produce newly developed goods or services. According to the behavioural viewpoint of entrepreneurship this could involve the participants acting as entrepreneurs to some degree. Behaviours such as innovation, risk-taking, achievement, leadership, perseverance, ownership, and commitment are all common to many entrepreneurs. If such behaviours are displayed by participants in the Venture program, it could be assumed that entrepreneurial behaviour had taken place.

The researcher was involved actively with the Venture program and was considered to be an honorary adviser. In this capacity she developed a close relationship with the participants of Group 1. The researcher was aware of possible data contamination as a result of adopting this role, and thus followed the program as dictated by the Venture manual as closely as possible.

The Telephone Survey

A telephone survey was designed on the basis of the four subscales and three attitude components of the EAO instrument, a total of twelve subscale components. The researcher hoped to complement the results obtained from the attitude test, using another device. The survey was administered on completion of the program to ten of the Venture participants from Group 1. The "Managing Director" was selected, three "Directors" and six "Workers"

were selected randomly and surveyed. Further anecdotal observations were related directly to Group 1.

The results from the telephone survey were mapped using Zimbardo and Leippe's five component attitude system illustrated on page 41. This is a particularly useful model to examine the attitude systems in order to determine the participants' behavioural intentions towards enterprise following their involvement in the Venture program.

The questions in the telephone survey were worded to assess the effect of the program on enterprise attitudes. Leading phrases such as: Do you believe the Venture program has shown you... and, as a result of the Venture program would you... were used to ensure the participants were assessing the impact of the program rather than merely describing previously existing attitudes.

INFORMED CONSENT/CONFIDENTIALITY

Venture advisers were issued with detailed leader instructions relating to all data to be collected from participants (Leader Instructions Appendix B). Personal contact by the researcher with all leaders ensured the instructions were understood fully.

Informed consent of the participants was gained through the reading and signing of the necessary forms (Research Consent Form, Appendix C). Advisers returned these forms to the researcher as requested. In line with the statement on the research consent form, all data were kept under lock and key. At no stage throughout the main body of this research report are names of participants, Venture advisers or guest speakers used and therefore confidentiality and anonymity are maintained. In Appendix K a newspaper article has been included which reveals the name of one participant in Group 1. The researcher sought the signed permission of the person involved before including this information.

DESCRIPTIONS OF THE FOUR EVALUATION TOOLS

The Demographic Survey

The demographic survey was designed with a dual purpose in mind. Firstly, it provided the necessary data to describe the sample at the centre of this

study. Secondly, it provided The Young Achievement Australia (YAA) organisation with feedback regarding the type of participants being attracted to their Venture program. This feedback could assist the Venture program organisers in the recruitment of future participants. Some of the questions used in this demographic survey are of interest only to the YAA organisation and not to the research question at hand.

Survey Design

The demographic survey was designed to provide basic demographic information and attempt to answer some general questions relating to the participants. The questions on the demographic survey were chosen largely because it was felt they may be of use throughout the interpretive, discussion and conclusion stages of the research. In other words the survey provided a mechanism for potentially powerful analysis of results.

Applying Shapero's Model to this Study

Shapero's model of entrepreneurial intentions described in Figure 2 on page 34, provides a useful research tool on which to base some of the questions in the demographic survey. The extent of prior business exposure of Venture participants may have affected their initial interest in the program. When mapping entrepreneurial intentions using Shapero's model it would be necessary to determine the prior exposure of the participants to business. As a group, this could be done to an extent by mapping the occupations of the participants' parents. Mapping of the group's career aspirations could suggest any prior intentions regarding a career as an entrepreneur. Allowing participants to define the term "entrepreneur" could be used to assess the group's familiarity with this term. Questions which provided this information would need to be included in the demographic survey. Several questions relating to Venture participants' knowledge of the term "entrepreneur"; their future career aspirations in relation to business; and their prior exposure to entrepreneurs through parental business ownership were thus included.

Underlying Key Questions such as:

Why did students decide to participate in the Venture program?

Is there a relationship between the Venture participants and the occupation of their parents, with regards to small business ownership/creation?

Do more students from private than public schools join the Venture program?

Do more males than females participate in the program?

Do the participants understand the term "entrepreneur"?

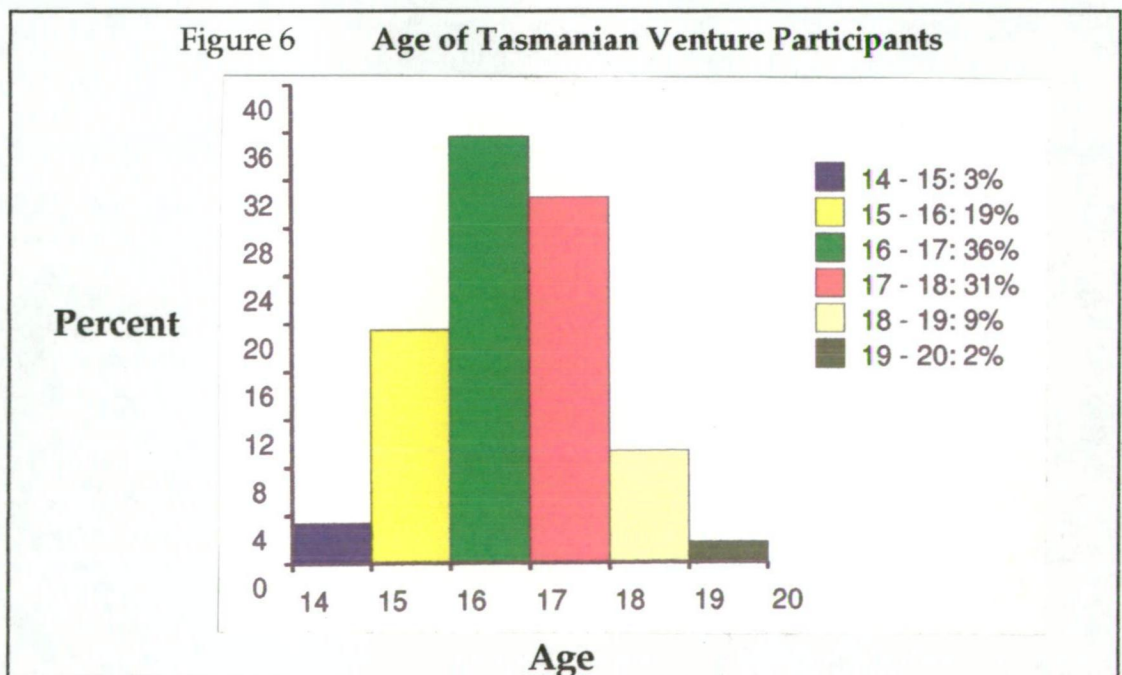
What career path are the participants considering at present? were developed. A draft questionnaire was designed on the basis of these and other questions. Following administration of the draft to several adolescents of a similar age to the Venture participants and two experts in the education and survey design field, a re-draft was produced. The demographic survey was administered during week two of the Venture program. The demographic survey was titled *Entrepreneurs and Education* (Appendix D).

DESCRIPTION OF THE SAMPLE PARTICIPATING IN THE 1993 TASMANIAN VENTURE PROGRAM.

All 118 participants in the 1993 Tasmanian Venture program completed the demographic questionnaire. The results are presented below.

The Sample

One hundred and eighteen people participated in six groups in the Venture program in Tasmania between March and October in 1993. The groups were aligned with business sponsors and each group formed a registered company which was named incorporating the letters YA.



The participants ranged in age from 14 to 20 years. Sixty seven percent of students were between 16 and 18 years of age. The ages of the participants are outlined in more detail in Figure 6 on page 63. Sixty percent of students participating in Venture in 1993 are female and 40% are male.

The participants were mainly from the southern region of Tasmania 65% with 35% from the north and north west. No participants were from the west or east coasts of Tasmania. Participants were distributed throughout Tasmania as indicated below in Table 3. Suburbs where participants reside are also displayed at Appendix E.

Table 3 Distribution of Tasmanian Venture Participants n = 118	
Tasmanian Region	Percentage
North	19
South	65
North-West	17
West	0
East	0

Forty seven percent of participants attended private schools, and 53% attended state schools when they were in grades 7-10. In total, 35 schools were represented by the sample.

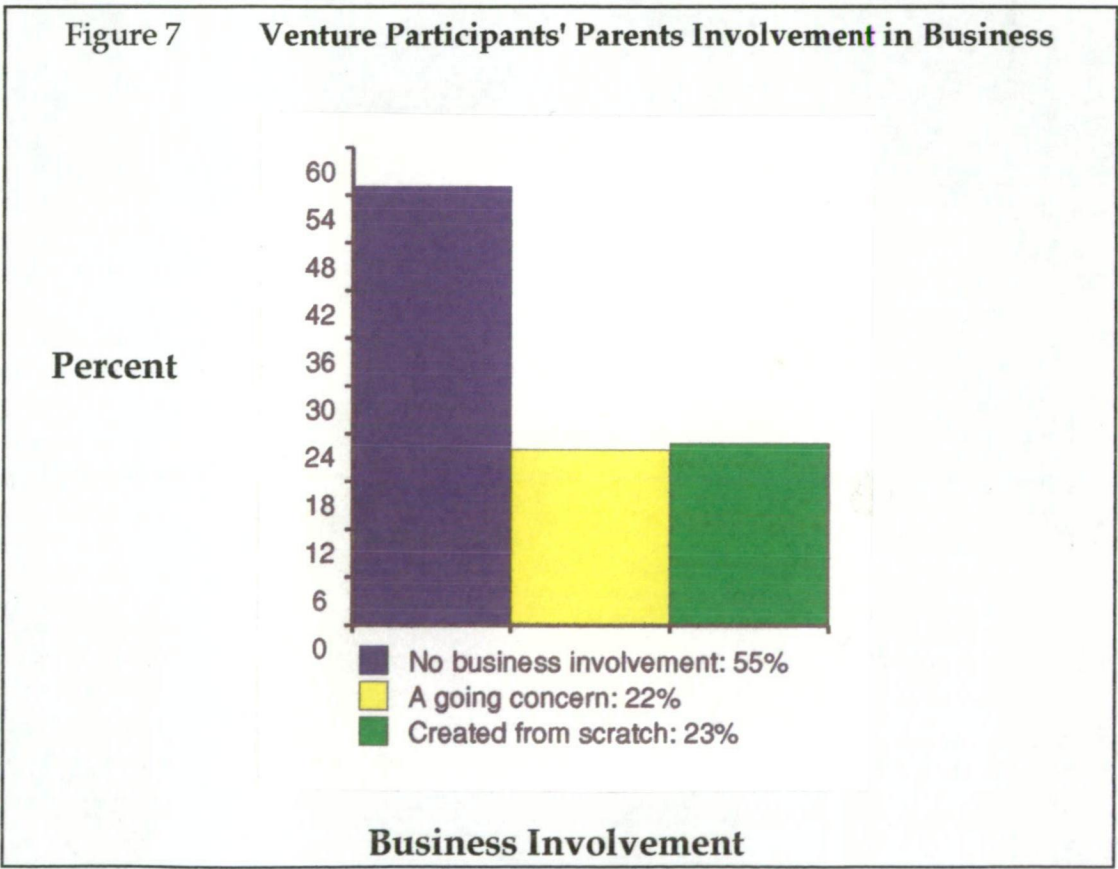
Seventeen percent of the participants were still attending high school (grades 7-10), but the remainder were enrolled in eight private schools at the year 11-12 level (44% of the sample) or in seven state senior secondary colleges (39% of the sample).

Nearly half (47%) of participants had been educated in the private high school system (years 7-10), and 44% were currently attending private colleges (years 11-12). By examining The Tasmanian Year Book statistics (1994, p. 127) it can be seen that the 1993 Venture group is biased in favour of the private education sector when compared with the general population. Twenty five percent of Tasmanian students (years 7-10) attended private schools, compared with an average of 46% (years 7-10) of Venture participants.

The occupation of participants' parents at the time of the study can be summarised as follows. Thirty two percent of mothers were home makers, 40% were judged to be "white collar workers", 20% were judged to be "blue collar workers", three percent were unemployed, two percent were retired, two percent are deceased and one percent were students.

Seventy three percent of participants' fathers were judged to be "white collar workers", 15% were judged to be "blue collar workers", five percent were unemployed, four percent are deceased, two percent were students and one percent were retired.

Forty five percent of parents of Venture participants had operated their own business at some time during their working lives. The businesses owned by the parents were largely retail outlets, food chains, and providers of a service such as doctors, lawyers, builders and appliance repairs. Figure 7 below outlines the business involvement of the parents of Venture participants.



Of the 45% of parents who had operated their own business, only eight percent of businesses were based on a new and innovative idea. The

remaining 37% operated a business based on similar existing ventures. Approximately half of the businesses were purchased as a going concern, with the remainder being created from scratch, and the average number of years that the businesses have/had been operated by the parents was 3.26 years.

Figure 8 below indicates the reasons offered by the participants for joining the Venture program. Twelve percent indicated their desire to be self-employed in the near future. In the "other reasons" category, the participants joined Venture mainly for the interest and experience. Some joined because it was part of a subject at their school, namely business studies. Only four participants referred to enterprise experience as a reason for joining. Table 4 on page 67 provides details of the "other" reasons offered by participants for joining the Venture program.

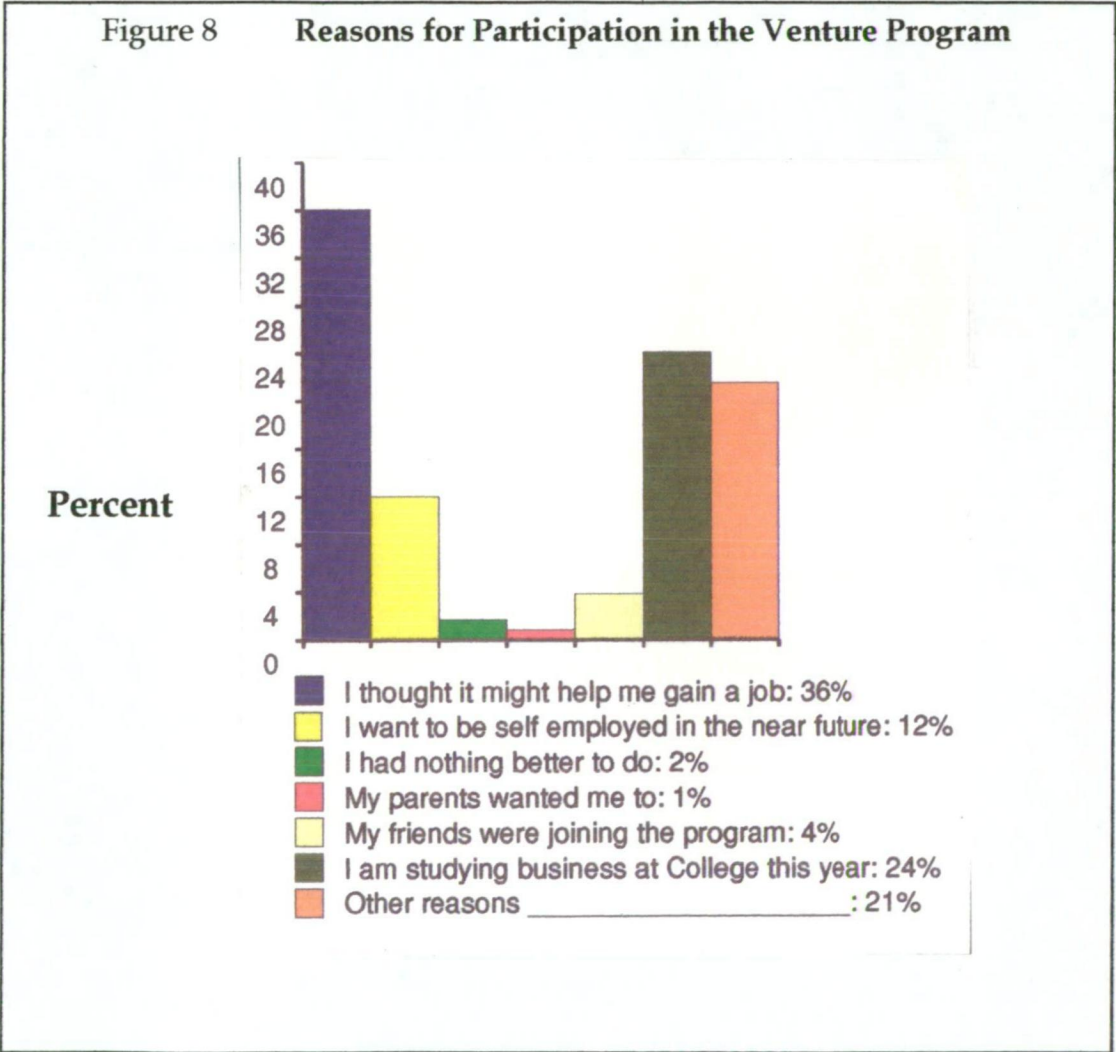
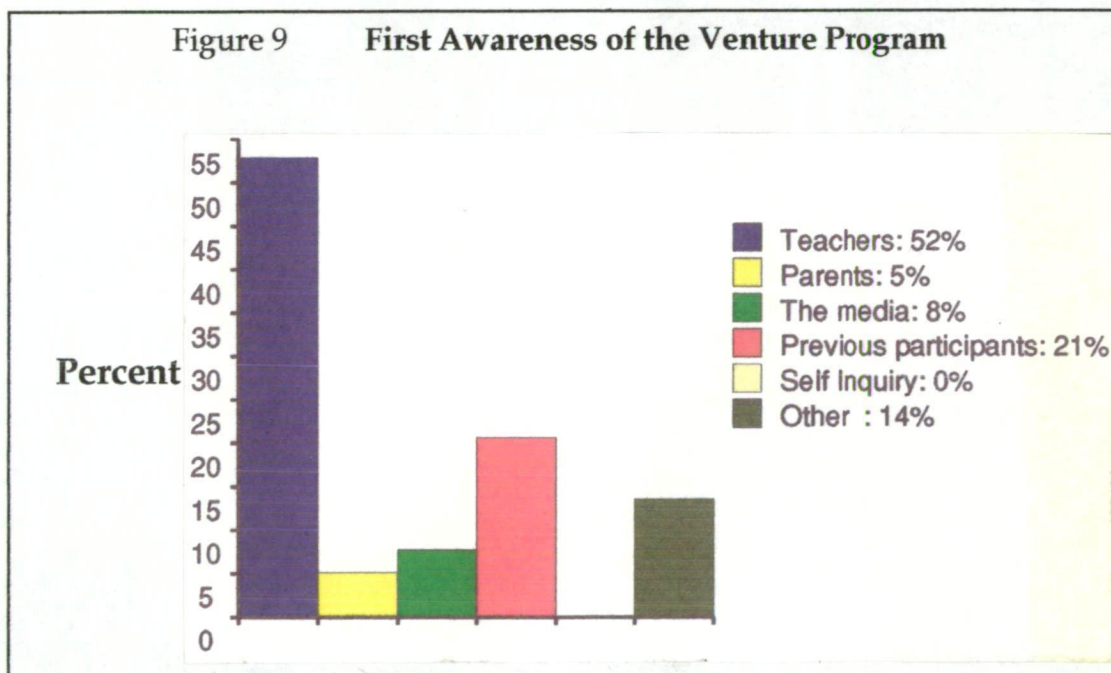


Table 4 Responses in the "other" Category			
Response	No	Response	No
Interest and experience	16	Business knowledge	2
School subject	11	Gain confidence	4
Chose enterprise as an option	4	Interest in YAA	1
Broaden my horizons	4	Want to be self employed in future	1
Challenge	3	Problem solving/ fun	1
Gain skills	3	Good start in life	1
Have fun	3	Learn organisational skills	1
Meet people	2		
Repeating from last year	2		

The Venture participants first became aware of the program from a variety of sources. Fifty three percent learned of the program from their teachers; 21% from former participants; eight percent from various media output and 14% from other sources. Figure 9 below, details how the Venture participants first became aware of the program.



Participants had various expectations of the Venture program as outlined in Table 5 on page 68. Over 70% of Venture participants expected to gain business knowledge and experience that might help them to start-up or operate a successful small business in the future.

Table 5 Program Expectations of Venture Participants					
Response		%	Response		%
Business/ knowledge/ experience		55	Management skills		2
Run a successful small business.		13	Leadership skills		2
Make friends		5	Self confidence/ retail/ marketing		2
Team/ communication skills		4	Gain enterprise skills		2
Don't know		3	Profit		1
Job prospects		3	Benefits of business ownership		1
Start my own business		2	Certificate		1
Business skills		3	Business of owning a business		1

Most students (71%) believed they understood fully the aims and objectives of the Venture program. Those who were unsure of the aims understood that the program involved the start up and running of a business venture. Only two percent of participants seemed to require more information as to the aims and objectives of the Venture program.

Participants were asked to state what they understood by the term "entrepreneur". When asked if they could define the term "entrepreneur" 23% could not give an answer and 25% of participants thought an entrepreneur was a person who started a business from scratch. Responses were categorised and are detailed in Table 6 below.

Table 6 Defining the Term "Entrepreneur"					
Response		%	Response		%
Starts a business from scratch		25	New product developer		3
Don't know		23	Person with initiative		3
Business tycoon		8	Supplier of skills and money		3
Enterprising person		7	Making a living from an idea		3
Organiser of events		5	Risk-taker		2
A managing director		5	Promotes business ideas		1
Person who makes money		3	Self-made person		1
Business owner		3	Person from France		1
Operator of a company		3	Ambitious, good business ideas		1

Of the careers chosen by participants, only one had decided to become an entrepreneur, however, ten participants were opting for alternative careers in

business. The career aspirations of the Venture participants are detailed further at Appendix F.

The implications of the data obtained pertaining to the Venture sample and this study will be discussed in further detail in chapter 5.

THE ATTITUDE TEST

The attitude test used in this study was based on a modified version of Robinson et al. EAO instrument, the original of which can be found at Appendix G. The EAO instrument was designed to predict entrepreneurial people in the general population according to their attitude differences. Rather than distinguishing entrepreneurs by personality theory which emphasises personal dispositions or traits, or by using demographic information such as gender, birth order, race, etc, Robinson et al. worked on the theory that entrepreneurs are attitudinally different from the general population, and as a result the EAO instrument was based on attitude theory.

Design of the Original EAO Instrument

The original EAO Instrument was based on the tripartite theory of attitudes described in chapter 2. In the tripartite theory of attitudes the components as described by Robinson et al. (1991, p. 17) are:

Affective - consisting of positive and negative feelings towards the attitude object;

Cognitive - regarding the beliefs and thoughts an individual has about the object; and

Conative - consisting of behavioural intentions and predispositions to behave in a given way toward the object.

Rather than focussing purely on the affective component of attitudes as many researchers had done in the past, Robinson et al. felt all three components must be used in the design of their prediction instrument.

Robinson et al. believed if the attitudes towards entrepreneurship of entrepreneurs and non-entrepreneurs could be measured accurately, there would be a detectable attitude difference between the two groups. Robinson and his colleagues used the three components of attitudes and combined these with 'four highly relevant areas relating to entrepreneurship' to

produce what they considered a well balanced instrument (Robinson et al. 1991, p. 20).

Robinson et al. (1991) chose the four subscales they considered highly relevant to entrepreneurship, realising these areas were not the only ones, but considered them a suitable starting point for the design of their instrument. They referred to these four areas as the subscales of the EAO instrument. The four subscales in the EAO instrument are:

Achievement in business;

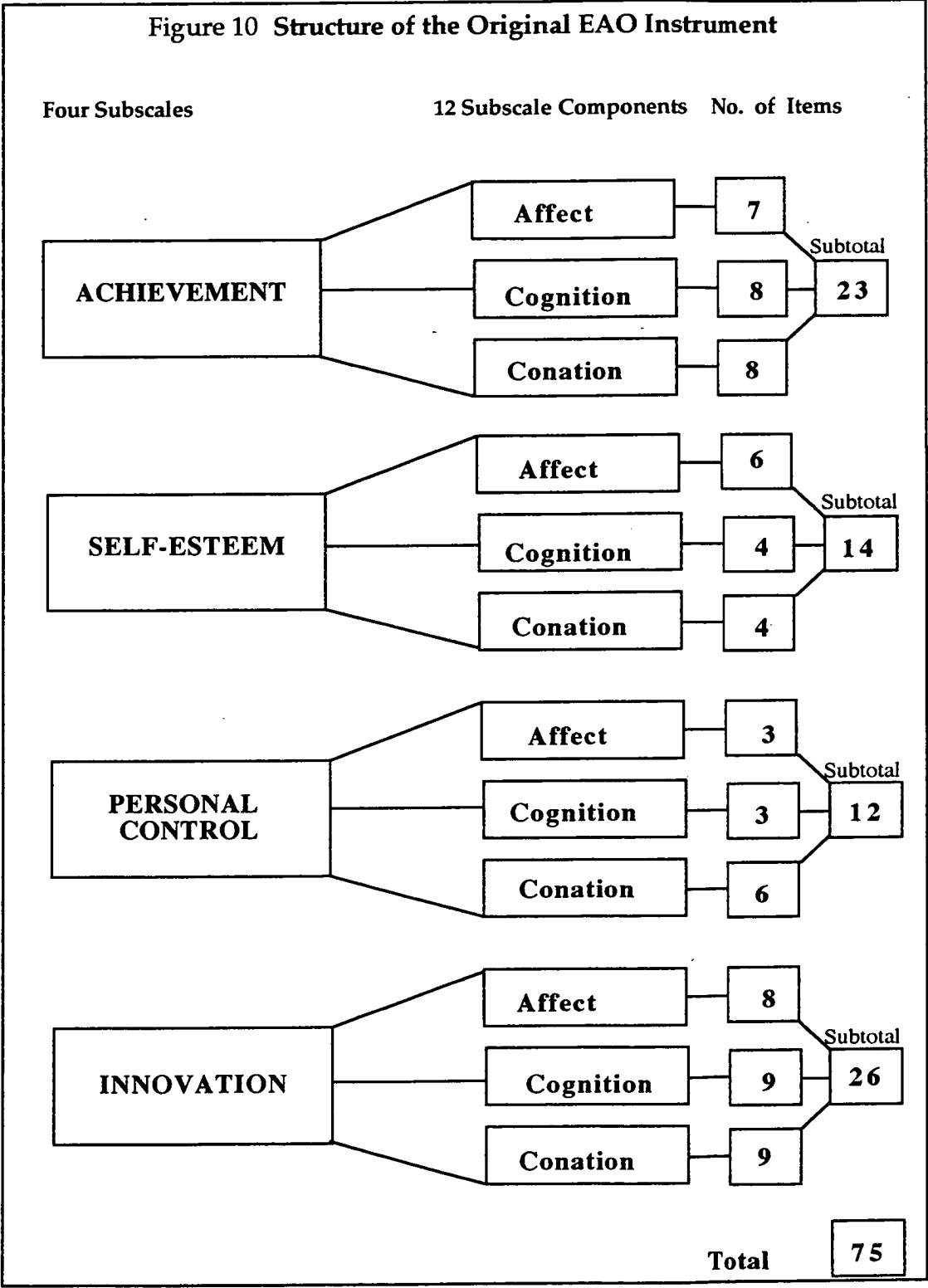
Perceived self-esteem in business;

Perceived personal control in business and

Innovation in business.

Robinson and his colleagues generated over 200 question items which were categorised into one of the four subscales and one of the three components of attitudes. These items were reduced to 75 in number following evaluation and validation procedures by both expert and psychology student judges. Figure 10 on page 71 illustrates the final structure of the original EAO instrument. No attempt was made to validate this instrument further.

Robinson and his colleagues applied their attitude test to two groups of people in order to assess group attitudinal differences. One group consisted of fifty four entrepreneurs while the other group consisted of fifty seven non-entrepreneurs. For the study Robinson et al. made sure the two groups were easily distinguished by their definition of an entrepreneur, which they took to be an individual who had started more than one business, the last being within the past five years, using some type of innovation. The non-entrepreneur group was also screened to ensure no one had ever been any type of entrepreneur. In the screening process Robinson et al. used Schumpeter's 1934 definition of an entrepreneur. Schumpeter, according to Robinson et al., believed an entrepreneur was an innovator who 'introduces new goods or services; introduces new methods of production; operates new markets; finds new sources of raw materials; and/or carries out new organisation of any industry' (1991, p. 20).



The two groups completed the 75 item questionnaire, responding to the questions items on a scale of one to ten. The instrument was validated firstly by administering to a group of university psychology students on two separate occasions, and secondly following administration to the two research groups using the Cronbach Alpha coefficient (described on p. 77). The EAO instrument was considered to be sufficiently valid as an instrument to predict entrepreneurs in the general population by their attitude differences.

Following analysis of the data, Robinson et al. found the EAO instrument was successful in the prediction of entrepreneurs in the general population. The entrepreneurs had higher means than the non-entrepreneur group for all subscales and attitude components.

The EAO instrument provided the starting place for the measurement of entrepreneurial attitudes of adolescents participating in enterprise programs. The EAO instrument was modified subsequently for administration to the Venture participants. The EAO instrument was adapted to ease interpretation of the items; point the focus directly to the Venture business context, and remove those items which appeared unsuitable. An example of the instrument changes are described below. The items have been coded as shown below to explain any changes from the original EAO instrument (see Appendix I). The questionnaire administered to the participants did not contain the codes outlined. These have been added for ease of interpretation of persons reading this study (Appendix H).

Definition of Codes used to Identify Changes according to the Modified EAO Instrument

S = same as the item in the original EAO instrument

V = the word Venture has been used to replace a word or added to focus the question e.g.

Original wording

I feel like a total failure when my business plans don't turn out the way I think they should.

Reworded

I feel like a total failure when my "venture business" plans don't turn out the way I think they should.

R = item removed as the question was judged to be inappropriate or too difficult for participants to answer. Only two items were removed. These are shown below.

I create the business opportunities I take advantage of.

I take an active part in community affairs so that I can influence events that affect my business.

SM= slight modification of wording to ease interpretation e.g.

Original wording

I make a conscious effort to get the most out of my business resources.

Reworded

I make a conscious effort to get the most out of my resources.

D = definition of word used in the item is supplied e.g.

Original

I believe that one key to success in business is not to procrastinate.

Reworded to include definition

I believe that one key to success in business is not to procrastinate.

(procrastinate means - to waste time and put off till later, dilly, dally etc.)

The modified EAO instrument consisted of 73 items due to the removal of two items. The item numbers on the original and modified EAO instruments, thus, do not correspond exactly due to the removal of items 8 and 60 from the original EAO instrument. The modified EAO instrument is described in Table 7 below.

Table 7 Description of the Modified EAO Instrument			
Subscales and attitude components	Question Numbers	Items	Totals
ACHIEVEMENT			
Affect (Ach-aff)	1, 30, 34, 56, 59, 63, 65.	7	
Cognition (Ach-cog)	7,10, 23, 25, 29, 33, 39, 58	8	
Conation (Ach-con)	3, 8, 19, 22, 26, 43, 47, 68	8	
			23
SELF-ESTEEM			
Affect (Se-aff)	5, 13, 20, 27, 32, 52	6	
Cognition (Se-cog)	15 [*] , 21 [*] , 24 [*] , 54 [*]	4	
Conation (Se-con)	11, 17, 28, 49	4	
			14
PERSONAL CONTROL			
Affect (Pc-aff)	35 [*] , 44 [*] , 46 [*]	3	
Cognition (Pc-cog)	9 [*] , 14 [*] , 41 [*]	3	
Conation (Pc-con)	4 [*] , 36 [*] , 50 [*] , 62 [*] ,	4	
			10
INNOVATION			
Affect (In-aff)	6, 12, 16, 18 ^{**} , 60, 66, 70, 73,	8	
Cognition (In-cog)	31, 40, 45, 51, 53, 55, 61, 64, 67	9	
Conation (In-con)	2 [*] , 37 [*] , 38 [*] , 42 [*] , 48 [*] , 57 [*] , 69 [*] , 71 [*] , 72 [*]	9	
			26
		Total	73
** = eliminated following calculation of correlation matrix (page 76)			
* = eliminated following internal consistency reliability calculations (page 78)			

The modified EAO instrument was based on the same structure as the original EAO instrument outlined in Figure 10 on page 71, i.e. four subscales, consisting of three attitude components each, a total of 12 subscale components. Factor analysis, from one to eleven clusters was conducted. However, there was no clear indication that 12 clusters was inappropriate. All of the 73 items belonged to one of the three attitude components within the major subscales. The two items removed had belonged to the personal control conation component of the original EAO instrument.

The modified EAO instrument was administered initially during week four of the 24 week Venture program. It was decided that by week four sufficient time had elapsed for participants to be thinking in a business context, but insufficient time for a major change in attitudes to have taken place. The instrument was re-administered at the end of the program, during week 24.

The attitude test was administered by group advisers to all Tasmanian participants in each Venture group during session four of the program. The completed forms were then mailed to the researcher for scoring and analysis. The same procedure was used in week 24 when the second administration of the modified EAO instrument took place.

Although 118 participants completed the demographic survey, as can be seen in Table 8 below, 91 of them completed and returned the attitude pre-test, and 89 completed and returned the attitude post-test. The non-returns

Table 8 Attitude Test Pre- and Post- State Groupings		
Venture participants who completed the modified EAO instrument pre- and post-test.		
Group	Pre-test	Post-test
1	23	22
2	20	11
3	17	16
4	20	19
5	6	21
6	5	NIL
Totals	91	89

were from two groups (five and six) who failed to administer, collect and mail part or all of the surveys to the researcher. The attitude test could not be re-administered pre- and/or post- to these two groups as the precise timing of administration was crucial to the results.

As can be seen in chapter 4 on pages 92-93, data from group six were ignored when intergroup comparisons were made. Data from group five were considered to be of limited use in intergroup comparison. Two calculations of total group means and t-tests were made, one with the groups five and six in the data set, the other with the two groups removed.

Validity and Reliability of the Modified EAO Instrument

In order to assess the validity and reliability of the components within the four subscales, a correlation matrix and associated p values were calculated. Both pre- and post-subscale components were analysed. Negative correlations between items and the other items in their scales were checked for statistical significance, resulting in the elimination of question 18 from further analysis. This reduced the modified EAO Instrument from 73 to 72 items. Table 9 lists all items which showed one or more significant negative correlations on either the pre- or post-tests. Question 18 showed

Table 9 Testing Validity of Items Using Correlations		
Test	Question Number	Number of significant ($p < .05$) negative correlations between items and other items in its scale
Pre-test	2	2
Post-test	2	0
Pre-test	11	0
Post-test	11	1
Pre-test	18	4
Post-test	18	0
Pre-test	36	2
Post-test	36	0
Pre-test	40	0
Post-test	40	1

four significant negative correlations with other items in its scale therefore it was eliminated from the data set. The remaining questions, 2, 11, 36, and 40 were considered to be of questionable validity but were retained in the data set.

Internal Consistency Reliability

A second test of internal reliability is customary when items within subscales are used, therefore Cronbach's alpha coefficients were calculated. Cronbach alpha gives an indication of each scale's internal consistency reliability. In brief, this process compares variance in the part scores (in this case ranging from 1-9) with the variance in the sum of those part scores. This allows an estimate to be made of how well scores obtained by a single administration of an instrument represent universe scores.

Brown (1978), outlines the formula for Cronbach's alpha coefficient which is:

$$\alpha = \frac{k}{k-1} \left[1 - \frac{\sum s_i^2}{s_x^2} \right]$$

where k represents the number of part scores within each individual subscale component, $\sum s_i^2$ is the sum of the variances of the item scores, and s_x^2 is the variance of the test scores (that is, the scores on all k items). For example the Achievement affect component contains seven parts or questions, therefore k in this case equals seven. As can be seen in Table 10 on page 78, the variance for each question within each subscale was used to calculate the sum of the variances in the part scores for each of the 12 pre- and post-components. This calculation was known as the sum of the variances for use in the formula. An example of this calculation is shown in Table 10 on page 78. An example of the calculation of Cronbach's alpha for the pre-test achievement affect component is:

$$\alpha = \frac{7}{6} \times \left[1 - \frac{23}{73} \right]$$

$$\alpha = .79$$

Table 10 Calculating the Variance of the Pre-test Achievement Affect Component	
Pre-test Scale Achievement Affect Question Number	Variance scores
1	4
30	2
34	2
56	7
59	2
63	3
65	3
Sum of variances on the 7 item scores =	23
Variance on total of the 7 item scores =	73

Table 11 below shows Cronbach alpha for the four subscales and the three attitude components on the 72-Item instrument excluding item 18.

Table 11 Internal Consistency Reliability of the 12 Subscale Components		
Cronbach alpha		
Component	Pre-test scores	Post-test scores
Achievement affect	.79*	.71*
Achievement cognition	.57*	.70*
Achievement conation	.73*	.65*
Self esteem affect	.67*	.66*
Self esteem cognition	.37	.37
Self esteem conation	.55*	.49*
Personal control affect	.11	.37
Personal control cognition	-.09	.18
Personal control conation	-.17	.25
Innovation affect	.81*	.74*
Innovation cognition	.62*	.54*
Innovation conation	.37	.47

Alpha coefficients marked with an asterisk are those considered to be large enough to indicate sufficient internal consistency reliability of the subscale components on the basis of this test. The use of an instrument designed for American entrepreneurs with Tasmanian adolescents proved to have sufficient internal consistency reliability on seven of the 12 subscale components. The complete subset of personal control items appeared invalid.

In the original Robinson et al. administration of the EAO instrument Cronbach alpha scores of .70 or above were reported for all components. Non-entrepreneurs were distinguished from entrepreneurs on all four subscales. They claimed that

...each of the subscales **alone** is adequate for discriminating between entrepreneurs and non-entrepreneurs groups, the use of more than one subscale in a discriminant analysis increases the power of any resulting discriminant function (Robinson et al. 1991, p. 22)

Seven subscale components, including one complete subscale (achievement) were retained for further analysis as a consequence of the α values. Table 12 below, details the remaining and eliminated components.

Table 12 Retained and Eliminated Subscale Components of EAO	
Retained Components	Eliminated Components
Achievement Affect Achievement Cognition Achievement Conation	
Self Esteem Affect Self Esteem Conation	Self Esteem Cognition
	Personal Control Affect Personal Control Cognition Personal Control Conation
Innovation Affect Innovation Cognition	Innovation Conation

The seven remaining subscale components involved 49 of the 72 questions on the modified EAO instrument. The eliminated items are shown by an asterisk in Table 7 on page 74.

The reasons for the poor internal consistency of the five eliminated subscale components shown in Table 12 on page 79, is probably due to transfer of the instrument from American adult entrepreneurs to Australian adolescents. The cultural differences between these two groups, as well as the age and maturity differences, could have adversely affected the transfer of certain instrument items.

PARTICIPANT OBSERVATIONS

The researcher attended the Group 1 Venture program for two hours each week for a six month period in 1993 and helped with various group activities.

Various anecdotal pieces of information and observations were recorded to give the researcher an insight into the program from a "hands on" basis, thus enabling better interpretation of the results. The observations provided a semi- structured style of gathering evaluative material. It was not a fully focussed evaluation which targeted only enterprising behaviour. A fully focussed approach could have resulted in the loss of valuable information. It could not however, be described as a "goal free" evaluation, an approach described by Scriven in 1989 as less blinkered than a fully focussed evaluative study (Lokan and McKenzie, 1989, p. 92).

As enterprising attitudes were to be measured in the attitude test (achievement, personal control, self-esteem and innovation), the researcher did focus particularly on observing what was judged to be the development of these attitudes in participants in Venture. However, the researcher also recorded any information which might be of use in the interpretive discussion phase of this study.

In particular the researcher:

recorded behaviour which may be considered recognised to be entrepreneurial behaviour, for example risk-taking;

noted entrepreneurial behaviour indicators, for example, buying of shares which could result in a financial loss; and

made interpretations and observations of these indicators in light of the noted behaviours (for example, risk-taking was deemed to be cushioned/safety-netted by the structures in place).

The results were tabulated where possible and examined to identify changes in participants' attitudes.

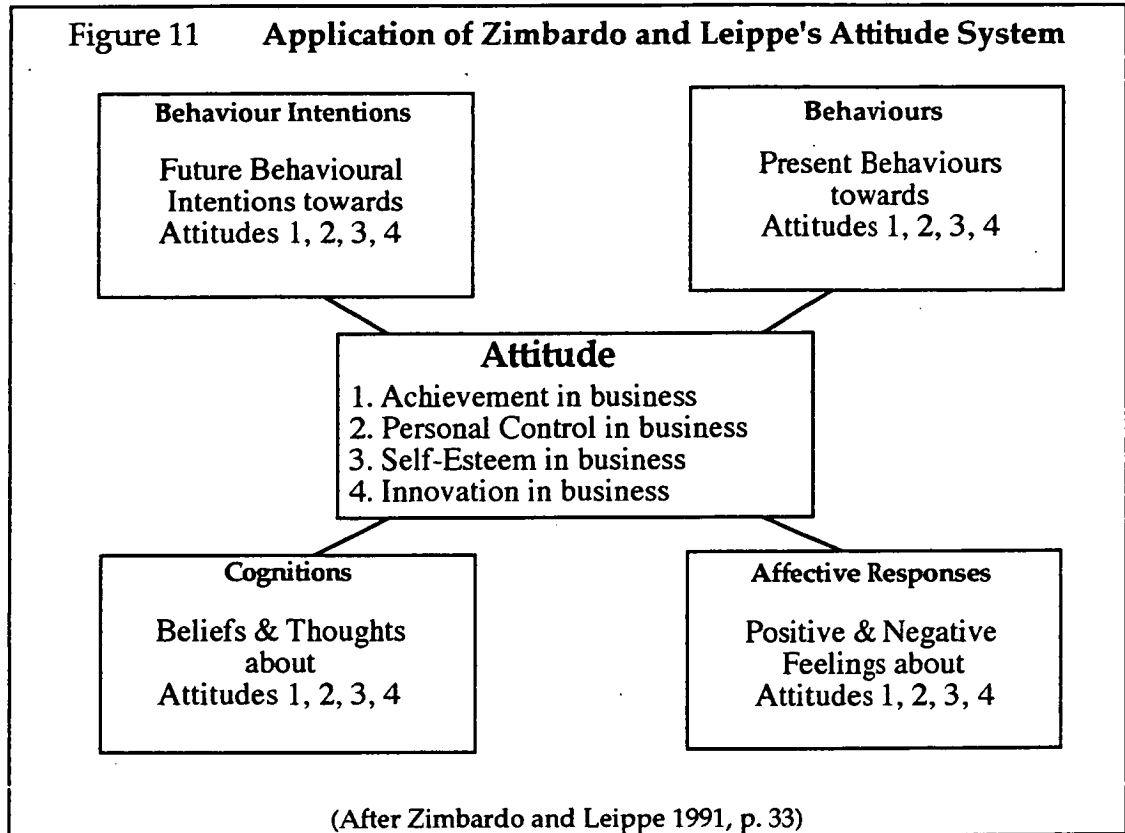
THE TELEPHONE SURVEY

A telephone survey was designed on the basis of the four subscales and the three attitude components of the modified EAO instrument. Each of the 12 sub components was thus assigned one question, to which the interviewees responded Yes, No or Unsure. The survey items could be described best as a distillation and interpretation of the original items on the modified EAO instrument. The questions were designed to enable easy mapping of the responses using Zimbardo and Leippe's (1991) five component attitude system. This mapping system allowed easy identification of behavioural intentions related to enterprising attitudes.

The four enterprise attitudes which were examined by the Telephone Survey have been placed in the central attitude cell in Figure 11 on page 82. The attitude system of each participant is examined separately in the results chapter, to build a map of the participant's attitude towards this aspect of enterprise. By examining the attitude systems of the ten participants surveyed, any changes in their attitudes following their involvement in the Venture program it was thought would be detected. Validation of the telephone survey was based on the opinion of a small expert panel in both the enterprise and education fields.

This panel agreed that the questions fitted the affect, cognition and conation components and that there was a consistency between similar components, for example, the affect component of each of the four subscales. It was also agreed that the items were reasonable interpretations and distillations of the original EAO items.

For administration of the survey the Managing Director was chosen, while three of the six directors were selected through the use of a table of random numbers as were six of the 18 workers. The telephone survey is displayed at Appendix J.



SUMMARY

This methodology centred on the study of attitude change, in particular the change in attitudes towards enterprise following enterprising behaviour displayed by participants throughout the Venture program.

The methodology can best be described as a triangulation design with three components: an Attitude test, Participant Observations and a Telephone Survey. A fourth component, the Demographic Survey provided a detailed description of the sample undergoing investigation.

The Demographic Survey

The survey provided extensive sample details, which it was hoped could be used during the discussion chapter as an interpretive device. Gender, age, and geographic location information regarding the participants, was amongst some of the data collected. The relationship of the participants'

parents to business ownership and creation, was also investigated. It was hoped this information would provide clues to determine participants' previous exposure to business activities. Data pertaining to the participants' career aspirations and participants' definitions of entrepreneur was also collected. All 118 participants completed the demographic survey titled: *"Entrepreneurs and Education"*.

The Attitude Test

The tripartite attitude theory, described on page 39, was used by Robinson et al. as a basis for the instrument design used in this study. The instrument used (Robinson et al. EAO instrument) was modified to suit the sample under investigation. The attitude test was offered to all 118 participants in the Venture program pre- and post-test. Ninety one participants completed the pre-test in week four of the program, 89 participants completed the post-test in the last week of the program.

The modified EAO test was then tested using both correlations and Cronbach's alpha. The modified EAO instrument was found to be wanting in several areas, and as a consequence five of the twelve subscale components of the modified EAO instrument were eliminated from the data set. In addition one item, question 18, was eliminated because of its significant negative correlation with other items in its scale.

Participant Observations

In 1993 Group 1 (26 subjects) was observed by the researcher for the duration of the program, which operated for two hours per week for six months. The researcher recorded behaviours which are considered to be accepted entrepreneurial behaviours. Innovation, risk-taking, achievement, personal control were among the qualities common to entrepreneurs observed by this researcher. A diary was kept in order to record the type and extent of the entrepreneurial behaviours observed and other anecdotal information which may be of use in the interpretation section of this study.

The Telephone Survey

A telephone survey was designed on the basis of the four subscales and the three components of attitudes used in the modified EAO instrument. The researcher hoped to complement the results of the attitude test, using another probe. The Managing Director and nine other participants were selected

randomly from Venture Group 1 to complete the telephone survey. The results of the telephone survey were designed to be mapped using Zimbardo and Leippe's five component attitude system.

The results of this study are described in three sections:

THE ATTITUDE TEST

statistical analysis

- data description
- differences indicated by t-tests
- direction of attitude changes

PARTICIPANT OBSERVATIONS

tabulated participant observations

- observed accepted entrepreneurial behaviours
- description of behaviour indicators
- interpretations of the entrepreneurial behaviour

program organisation

general observational discussion

THE TELEPHONE SURVEY

data description

attitude system maps

- managing director
- three directors
- six workers

THE ATTITUDE TEST

As a result of the validation process in chapter 3 it will be recalled that 49 of the original items on the 73 item questionnaire were retained. The description of the data given below is concerned with these 49 items.

Data Description

The questionnaire items were scored on a scale of 1-10. In order to determine which type of statistics were most appropriate for this data set, the skewness, kurtosis and standard deviations were calculated. Generally the skewness and kurtosis values were not too far distant from zero, while standard deviations were generally not much greater than 2. Consequently the data can be regarded as being reasonably normally distributed. Hence, parametric statistical tests are judged to be appropriate for use here. Table 13 on page 87 outlines the means and standard deviations for the 49 remaining question items. These have been arranged under subscale component headings, with the pre- and post-test scores of each item displayed together in a single cell.

The mean values ranged from 4.17 to 9.08 (pre-test) and from 4.11 to 8.18 (post-test). The means fall mainly in the upper half of the ten point scale.

The standard deviation measures the extent to which a set of measurements varies about the mean of the set. The standard deviation increases in size as the variability of the data increases.

**Table 13 Means and Standard Deviations for the 49 retained items
pre- and post-test within the seven subscale components**

Subscale	Mean	SD	Subscale	Mean	SD	Subscale	Mean	SD
<i>Ach-aff</i>			<i>Ach-con</i> (con't)			<i>In-aff</i>		
Q 1	8.03	2.05	Q 19	5.88	2.32	Q 6	8.07	1.79
Q 1b	7.88	1.76	Q 19b	6.61	2.22	Q 6b	7.40	1.74
Q 30	8.18	1.41	Q 22	8.24	1.52	Q 12	7.14	1.82
Q 30b	8.18	1.58	Q 22b	7.14	2.04	Q 12b	6.93	2.01
Q 34	7.66	1.51	Q 26	7.39	1.58	Q 16	7.40	1.63
Q 34b	7.66	1.69	Q 26b	7.39	1.79	Q 16b	6.89	1.95
Q 56	6.31	2.59	Q 43	7.11	1.85	Q 60	8.35	1.64
Q 56b	6.18	2.24	Q 43b	6.39	2.11	Q 60b	7.52	2.15
Q 59	8.33	1.51	Q 47	6.77	2.01	Q 66	7.96	1.78
Q 59b	7.52	1.82	Q 47b	6.61	2.02	Q 66b	7.49	1.71
Q 63	7.56	1.72	Q 68	7.17	2.16	Q 70	6.90	1.93
Q 63b	7.30	1.74	Q 68b	7.18	2.05	Q 70b	6.93	1.86
Q 65	8.29	1.63				Q 73	7.80	1.86
Q 65b	7.60	1.79				Q 73b	7.51	1.99
<i>Ach-cog</i>			<i>Se-aff</i>					
Q 7	6.37	2.30	Q 5	4.60	2.36			
Q 7b	6.34	2.30	Q 5b	5.21	2.48	<i>In-cog</i>		
Q 10	7.90	2.00	Q 13	6.20	2.21	Q 31	6.78	2.14
Q 10b	7.44	1.89	Q 13b	5.67	2.43	Q 31b	6.78	2.19
Q 23	9.08	1.15	Q 20	6.24	2.52	Q 40	6.26	2.78
Q 23b	8.05	1.95	Q 20b	5.74	2.67	Q 40b	5.58	2.16
Q 25	7.70	1.90	Q 27	5.97	2.45	Q 45	7.20	2.19
Q 25b	7.71	1.93	Q 27b	5.97	2.66	Q 45b	6.94	2.01
Q 29	7.80	1.72	Q 32	4.17	2.57	Q 51	7.35	1.82
Q 29b	7.80	2.25	Q 32b	4.17	3.00	Q 51b	7.05	1.62
Q 33	7.21	1.73	Q 52	3.88	2.24	Q 53	8.09	1.46
Q 33b	7.21	1.97	Q 52b	5.10	2.50	Q 53b	7.19	1.98
Q 39	7.78	2.03				Q 55	6.40	2.53
Q 39b	7.44	2.05	<i>Se-Con</i>			Q 55b	6.33	2.31
Q 58	7.21	1.64	Q 11	7.73	1.39	Q 61	6.14	2.09
Q 58b	6.85	2.03	Q 11b	7.23	1.52	Q 61b	6.56	2.08
			Q 17	3.48	2.20	Q 64	7.70	1.72
<i>Ach-con</i>			Q 17b	4.11	2.34	Q 64b	7.03	2.01
Q 3	6.29	2.47	Q 28	4.33	2.29	Q 67	7.43	1.81
Q 3b	5.75	2.97	Q 28b	4.33	2.55	Q 67b	7.34	1.85
Q 8	7.11	1.80	Q 49	3.41	2.32			
Q 8b	6.89	1.90	Q 49b	4.46	2.64			

SD = standard deviation
b = post-test questionnaire item

Minimum and maximum scores of each item were 1 and 10 respectively

Pre-test and Post-test Comparisons

In order to gauge changes in participants' attitudes as revealed by pre- and post-test administration of the modified EAO instrument, an unpaired t-test was performed for each of the questionnaire items relevant to the seven subscale components which remained in the battery. Given that 91 participants returned the pre-test and 89 returned the post-test an unpaired t-test was judged to be appropriate. Table 14 below outlines the statistically significant results of these comparisons.

Table 14 Statistically Significant Pre- and Post t-test Differences					
Question Item	t-value	Direction of mean shift	Question Item	t-value	Direction of mean shift
30 (Ach-aff)	2.20*	negative	52 (Se-aff)	-3.46***	positive
34 (Ach-aff)	3.17**	negative	11 (Se-con)	2.31*	negative
59 (Ach-aff)	3.27**	negative	28 (Se-con)	-2.49*	positive
65 (Ach-aff)	2.71**	negative	49 (Se-con)	-2.85**	positive
23(Ach-cog))	4.34***	negative	6 (In-aff)	2.51*	negative
29 (Ach-cog)	2.89**	negative	60 (In-aff)	2.93**	negative
33 (Ach-cog)	2.02*	negative	53 (In-cog)	3.46***	negative
22(Ach-con)	4.15***	negative	64 (In-cog)	2.40*	negative
26(Ach-con)	2.63**	negative			
43 (Ach-con)	2.42*	negative			
* p < .05 ** p < .01 ***p < .0001					

Eighteen items showed a significant difference in the means pre- and post-test. The seven retained subscale components are all represented, and most of the items indicate a negative shift.

The subscale component items were then "grouped" to provide the basis for a total subscale component t-test analysis. For example, the achievement affect subscale component consisted of seven questionnaire items. These seven items were combined into one group for analysis and coded TAAF which stands for total achievement affect. Table 15 on page 89 shows the t-values for the seven subscale components and illustrates the usage of abbreviations.

When t-values were calculated for all seven "grouped" valid subscale components, five showed a significant difference before and after respondents participation in the Venture program.

Table 15 Total Subscale Components Pre- and Post t-tests			
Total Subscale Component for pre- and post-tests	Abbreviation	t-value	Direction of mean shifts
Achievement affect	TAAF	2.87**	negative
Achievement cognition	TACG	3.46**	negative
Achievement conation	TACO	2.23*	negative
Self Esteem affect	TSAF	-.60	positive
Self Esteem conation	TSCO	-2.52*	positive
Innovation affect	TIAF	2.29*	negative
Innovation cognition	TICG	1.75	negative
* p < .05		** p < .01	

These five subscale components which demonstrated statistically significant differences pre and post-test were: Total achievement affect (TAAF); total achievement cognition (TACG); total achievement conation (TACO); total self-esteem conation (TSCO); and total innovation affect (TIAF). Two subscale component groupings total self-esteem affect (TSAF) and total innovation cognition (TICG) showed no significant difference between pre- and post-tests. The only complete subscale (containing all three original subscale components) which could be tested for a shift was *achievement*, and each scale showed a negative change.

The Five totalled subscale components which showed a significant shift, were the only ones to be considered in any further analysis.

Direction and Statistical Significance of Attitude Shifts in the Whole Group and the Six Venture Groupings Individually.

The six individual groups were examined to determine the location of the group differences. The means were calculated to assess the extent of the shifts detected and the direction of these shifts, and a t-test applied to

determine the significance of the results obtained. Tables 16-20 outline the results of these calculations.

For the achievement affect component shown in Table 16 below, the group as a whole showed a negative shift. Within the groups the greatest negative shift was located in group 3. Individual groups one and three showed significant negative shifts. Group 6 analysis was incomplete due to lack of post-test results.

Table 16 Pre and Post t-tests for TAAF (Achievement Affect Component)					
Venture Group	Mean Pre-test	Mean Post-test	Mean Difference	Direction of mean shift	t-value
Total group	55.74	52.32	3.42	negative	2.87**
1	58.30	53.09	5.21	negative	2.25*
2	50.25	46.91	3.34	negative	1.37
3	58.53	49.44	9.09	negative	3.22**
4	54.65	54.53	.12	negative	.05
5	60.67	54.52	6.14	negative	1.95
6	54.80	No results	-	-	-
* p < .05			** p < .01		

In the achievement cognition component shown in Table 17 below, the whole group recorded a significant negative shift. Individual groups one and three

Table 17 Pre and Post t-tests for TACG (Achievement Cognition Component)					
Venture Group	Mean Pre-test	Mean Post-test	Mean Difference	Direction of mean shift	t-value
Total group	63.13	58.83	4.30	negative	3.46**
1	65.09	61.05	4.04	negative	2.35*
2	57.50	53.36	4.14	negative	1.55
3	65.77	52.69	13.08	negative	4.74***
4	65.75	64.21	1.54	negative	.65
5	59.17	59.19	.02	positive	-.01
6	62.00	No results	-	-	-
* p < .05		** p < .01		*** p < .0001	

In the innovation affect component shown in Table 20 below, the whole group shift was negative. Individual groups three and five recorded a significant negative internal shift. Group 6 results were not used due to no post-test data.

Table 20 Pre and Post t-tests for TIAF (Innovation Affect Component)					
Venture Group	Mean Pre-test	Mean Post-test	Mean Difference	Direction of mean shift	t-value
Total group	53.62	50.69	2.92	negative	2.29*
1	55.30	50.55	4.76	negative	1.88
2	47.10	46.55	.56	negative	.21
3	57.29	47.50	9.79	negative	3.40**
4	53.50	54.26	-.763	positive	-.26
5	59.83	52.05	7.79	negative	3.00**
6	52.400	No results	-	-	-
* $p < .05$			** $p < .01$		

The total group means were recalculated with the individual Venture groups 5 and 6 scores included firstly, then excluded, as shown in Table 21 on page 93. As stated in Chapter 3 these two groups had not been administered the attitude tests correctly, therefore to increase the accuracy of the total group mean results they were eliminated from the data set. Removing these scores only affected the total group means, the individual group pre- and post-test means remained unaltered. The direction and significance of whole group attitude shifts for each of the subscale components remained the same.

Comparing Attitude Shifts within the Venture Groups.

In order to compare individual Venture groups, unpaired t-tests were run for five (group 6 was eliminated as no post-test results were available) of the Venture groups for each of the five subscale components which showed a statistically significant difference in both pre- and post-tests. This determined the significant attitude differences between groups which existed before the program began. Those attitude differences which existed after the program were also detected. Tables 22-26 show all the statistically significant attitude differences for each Venture grouping and each of the five valid subscale components.

program. Grouping 2&3 possessed significantly different attitudes before the program, but after participating in the program their attitudes were not significantly different. Groupings 4&3, 4&2, and 3&5 attitudes were not significantly different before the program, however on completion of the program significant attitude differences were evident.

Achievement Cognition Component

As can be seen in Table 23 below, attitude differences before participation in the Venture program were evident in groupings 4&5, 2&3, and 1&5. Following completion of the program no significant differences in these groupings could be found. In groupings 3&4, 1&3, and 3&5, the picture was reversed. For these three groupings no significant differences were evident before the program, however, on completion of the program significant attitude differences were detected. Groupings 4&2 and 1&2 showed attitude differences before and on completion of the Venture program.

Table 23 Statistically Significant Unpaired Group t-tests for Pre and Post TACG (Achievement Cognition Component)		
Venture Groups	Pre-test t-value	Post-test t-value
4 & 5	2.17*	-
2 & 3	-3.57**	-
1 & 5	2.14*	-
3 & 4	-	3.96**
1 & 3	-	3.56**
3 & 5	-	-2.03*
4 & 2	4.08**	3.43**
1 & 2	4.07*	3.13**
* p < .05 ** p < .01		

Achievement Conation Component

As shown in Table 24 on page 95, only one of the groupings at the beginning of the program showed a significant difference in attitudes related to this subscale component. Following participation in the Venture experience this difference was no longer evident.

Table 24 Statistically Significant Unpaired Group t-tests for Pre and Post TACO (Achievement Conation Component)		
Venture Groups	Pre-test t-test	Post-test t-test
2 & 3	-3.28**	-
* p < .05 ** p < .01		

Self-Esteem Conation Component

As can be seen in Table 25 below, one grouping 2&4 showed a significant difference in attitudes at the beginning of the program. On completion of the program however, this difference was no longer evident. Two groupings, 4&3 and 1&3, showed no significant differences at the beginning of the program, however on completion of the program statistically significant differences were evident.

Table 25 Statistically Significant Unpaired Group t-tests for Pre and Post TSCO (Self Esteem Conation Component)		
Venture Groups	Pre-test t-test	Post-test t-test
2 & 4	-2.32*	-
4 & 3	-	-2.15*
1 & 3	-	-2.30*
* p < .05 ** p < .01		

Innovation Affect Component

Significant attitude differences were detected in groupings 2&4, and 2&5 both on commencement of the program and on completion. Grouping 3&4 were not significantly different when the program commenced, however, on completion of the program attitude differences were found. The reverse position was found in groupings 1&2 and 2&3. These groupings were different at the commencement of the program, however on completion of the program these differences were not detected. Table 26 on page 96, details these results.

Commitment

Attendance varied throughout the program. Towards the end more participants missed sessions. In order to gain the YAA Venture participation certificate, participants could miss only two sessions without providing a

Table 27 Tabulated Participant Observations		
Accepted Entrepreneurial Behaviour	Group 1 Behaviour Indicators	Direct observations and interpretations
Creating a new business where previously non existed	Created "WHY AY AY", a fully registered company	A very structured procedure, directed by the advisers. Participants suggested name ideas and voted. Not all participants actively took part in suggesting names, some appeared more confident. Clearly the intention was to form a business before any idea of the type of business was established.
Risk Taking	Buying of shares which could result in a financial loss.	All Venture participants as owners had to buy at least a \$2.00 share in the company. Risk Taking was highly controlled. Maximum number of shares was 10. Twenty dollars was the highest financial risk which could be taken.
Innovation	Designed products for the retail market.	A wind chime and cookbook were designed. These products are not "new", however a new concept within the cookbook framework was evident. Innovation was limited within the Venture framework, it depended on individuals and group dynamics.
Owner/Boss (Personal Control)	One Managing Director Five Directors All participants were considered owners of the company by purchasing a share. Participants were elected by group vote to managerial positions based on speeches observed by the whole group. Participants could quite easily opt out of a managerial position. All the remaining participants were given specific company roles.	The Six participants in managerial Director positions shouldered the burden of responsibility for the others. They attended separate board meetings and were responsible for the majority of the decision making. The Managing Director appeared stressed on several occasions. She later referred to the amount of work outside session time which had been necessary to keep the company running smoothly.
Perseverance	A six month commitment. Repetitive boring work once original manufacturing processes were established.	Absenteeism increased with the length of the program. Participants did not appear to always enjoy working hard in cold often uncomfortable premises.
Achievement	Successful design and manufacture of products. Successful sale of products. Whole group achievement at the Tasmanian Trade Fair. Value of shares rose from two to eight dollars each.	Sense of achievement was difficult to gauge as individuals express this in many ways. The participants seemed very thrilled with the success at the Trade Fair and when they received their share dividends following company liquidation.

doctor's certificate or legitimate reason for absence. This factor provided a realistic work environment, encouraging personal responsibility.

A special seminar was held three months into the program. This was a three hour seminar with various experts addressing the group on many aspects of the business environment. Specific topics included communication, leadership, financial issues, marketing, selling and promotion. The speakers were experts in their fields, and both genders were represented. Less than half the participants attended this session, however the Managing Director and Directors were all present.

Leadership

Leaders emerged naturally in the group. The structure of the organisation was not conducive to all participants becoming formal leaders as the positions were finalised in the first few weeks. At a prescribed time in the program, however, participants could vote in new Directors if the original Directors were "not doing their job". This exercise resulted in the replacement of one of the Directors with one of the participants who had emerged as a leader in this field. The Director replaced was in charge of finance.

During the re-election procedure many participants spoke out about the leadership failings of the Directors (they were not present in the room at the time). Many complained of being "bossed around" or treated as incompetent. They agreed unanimously that the Director involved was "efficient" and the "best person" for the position. However, they wanted this particular Director to treat them with "more respect". The matter was resolved effectively, and the Managing Director agreed to consult with the Director concerning communication styles. As a result, this Director retained her position of authority with guidance on conflict management techniques from the Managing Director.

THE TELEPHONE SURVEY

The telephone survey was conducted at the completion of the Venture program. The questions were worded to assess the effect of the program on enterprise attitudes rather than previously existing attitudes by the use of leading phrases as described in chapter 3 page 61. The telephone survey can be seen at Appendix J.

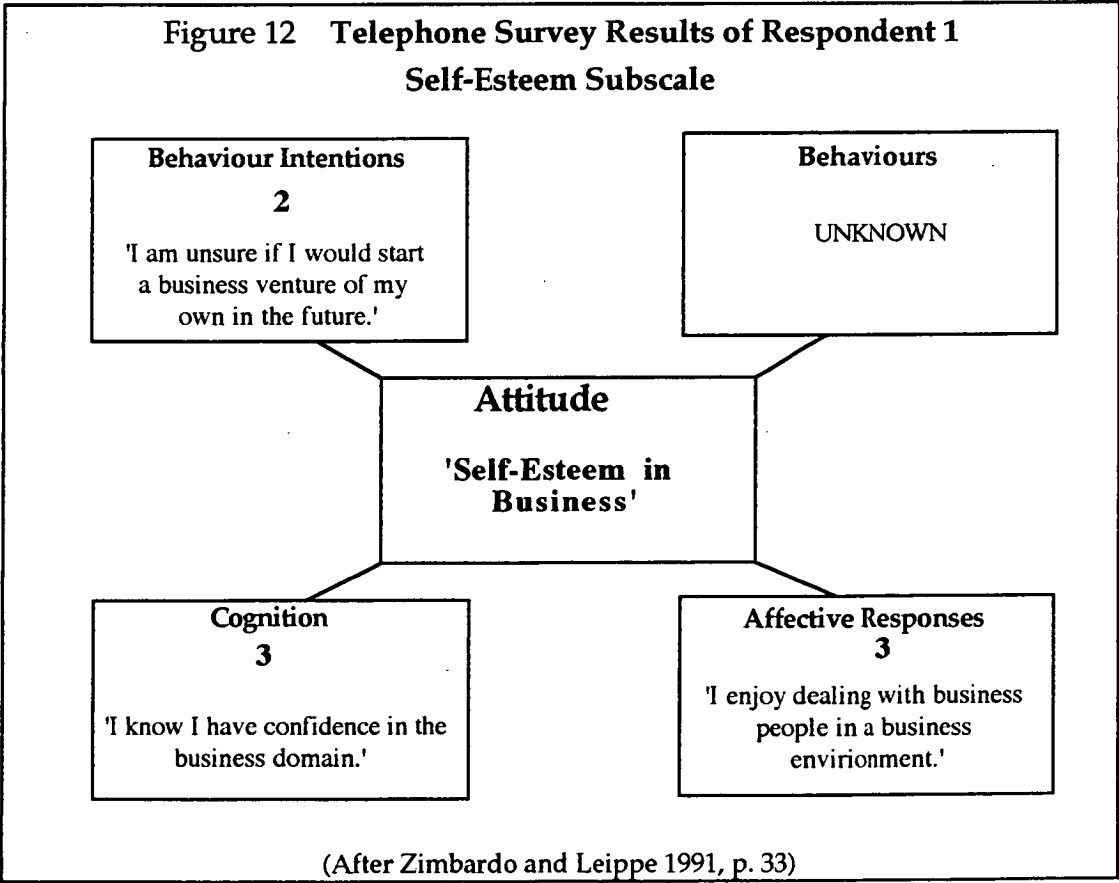
Table 28 below outlines the scores for the ten participants regarding the 12 questions on the telephone survey. As stated in chapter 3, a score for each response was calculated as follows: Yes = 3, No = 1, Unsure = 2. A "yes" response indicates the participant believes the Venture experience has affected this particular enterprise attitude in a positive manner. A "no" response indicates the participant believes the Venture program has affected this enterprise attitude in a negative manner, and an "unsure" response, recorded shows the participant is undecided as to the effect of the Venture program on this particular enterprise attitude.

Table 28 Participants' Scores for the 12 Item Telephone Survey											
Q No.	Sub-scale component	Respondents									
		1	2	3	4	5	6	7	8	9	10
1	Achievement Affect	3	3	3	3	3	3	3	1	3	3
2	Achievement Cognition	3	3	3	3	3	3	3	3	3	3
3	Achievement Conation	3	3	3	3	2	2	1	1	1	3
4	Personal Control Affect	3	1	3	1	1	1	3	1	3	1
5	Personal Control Cognition	3	1	3	2	3	3	3	1	3	3
6	Personal Control Conation	3	1	3	3	3	3	3	3	3	3
7	Self-Esteem Affect	3	1	3	3	3	3	3	1	3	2
8	Self-Esteem Cognition	3	1	3	3	3	3	3	1	3	3
9	Self-Esteem Conation	2	1	3	1	3	3	3	1	3	3
10	Innovation Affect	3	1	3	3	3	3	3	1	2	3
11	Innovation Cognition	3	3	1	1	3	2	1	1	3	1
12	Innovation Conation	2	1	3	1	2	3	3	1	3	3

For example, respondent one believes the Venture program has impacted positively on ten of the twelve subscale components associated with the survey questions, while she is unsure of the impact on two of the subscale components. Respondent two on the other hand, feels the Venture program impacted negatively on eight of the twelve subscale components and positively on four.

The results displayed in Table 28 on page 99, can be used to give a quick overview of the impact of the program on individual participants' attitudes. This does not, however, show clearly the specific attitudes tapped by the telephone survey, or the interrelationship of the three components of each attitude within the individual's attitude system. The data are presented therefore in another format using Zimbardo and Leippe's attitude system model.

The data are interpreted on the basis of Zimbardo and Leippe's five-component attitude system described in Figure 3 on page 41. An example of the application of this model for interpretation of the telephone results is given below in Figure 12. This model represents respondent 1's responses to the questions in the self-esteem subscale. The telephone survey scores are illustrated within each cell. Respondent 1 enjoyed dealing with business people; felt she had more confidence in the business domain; however was unsure if she would start a business venture in the future.



The results of the surveys of the ten participants can be seen in the following Figures 13-22. For each respondent the attitude systems corresponding to the

four subscales have been mapped in a one page format. These results will be discussed further in chapter 5.

The Results of the Attitude System Maps from another Perspective.

The attitude maps are detailed on pages 106-115. The following codes are used for ease of reference when describing the attitude maps.

Achievement Subscale	= A
Personal Control Subscale	= B
Innovation Subscale	= C
Self-Esteem Subscale	= D

Respondent 1 - Managing Director

Based on the attitude system maps, the researcher would argue that this individual's attitudes to enterprise moved in a positive direction during the course of the Venture program. Out of the four attitude maps, A & B showed positively balanced systems. Attitude systems C & D were slightly unbalanced as each contained one unsure response. According to attitude theory it is most likely that these attitude system components responses would move in a positive direction at some time in the future depending on further exposure to enterprise. In the other comments section the Managing Director made an interesting statement: 'The Venture company has taught me the importance of a structured company, the importance of organised records and how to manage other people'.

Respondent 2 - Director 1

The Venture experience according to Director 1 had changed his attitudes towards enterprise in a negative way. Of the four attitude systems analysed, A was balanced in a positive direction, and B & D were both balanced in a negative direction. Attitude system C was unbalanced as it contained one positive response and two negative responses.

This individual clearly did not appear to enjoy the leadership role he had sought at the beginning of the program. He did not see himself pursuing a future business career which entailed establishing a business of his own or the designing of new goods or services. On a positive note this director had

realised that achievement in business relied on the completion of tasks on time and in a thorough fashion.

In the other comments section this respondent stated: 'Mum owns a small business, so I know how much work it is. Venture has taught me about the structure of an organisation as well as business knowledge, marketing and competition in the business world'.

Respondent 3 - Director 2

The attitudes of director two painted a different picture. This individual had balanced positive attitudes systems to three of the attitudes to enterprise A, B, & D. In attitude system C she felt that she could not see the solution to business problems from many perspectives, this was the only negative attitude component in this attitude system. She commented further 'The Venture experience has given me lots of confidence'.

Respondent 4 - Director 3

Attitude system A was the only completely balanced positive attitude system for this respondent. Attitude systems B, C & D all contained inconsistencies. Attitude system B & C were largely negative, whereas system D was largely positive. This Director had not enjoyed being in a position of control even though he had enjoyed the Venture experience. He commented further 'I thought running a business would be easier, there was far more work than I expected'. He did not feel the Venture program had taught him how to see problems from different perspectives, and did not feel confident to design new goods or services or start a business venture of his own.

Respondent 5 - Worker 1

This respondent displayed several inconsistencies in her attitude systems. Attitude system D was positive and balanced. Attitude systems A, B & C were largely positive however they contained some uncertain views.

Overall it could be argued that the Venture experience had affected the attitudes of this individual in a positive way. She felt the Venture program had helped her see solutions to problems from different ways. She may like to start a business venture in the future, but had made the decision that being the boss was not for her.

In the other comments section of the survey she stated: 'Venture has helped me meet people. express my ideas in different ways, and taught me new business knowledge'.

Respondent 6 - Worker 2

Worker 2 was the only participant to have already displayed a positive behaviour as a result of the Venture program. He had already started a business venture shortly after completing the program. Attitude system D was completely balanced in a positive direction. There was a contradiction however in the Achievement mapping A. Even though he knew it was important to handle business decisions immediately, he was undecided if the business or leisure activities would win if time was limited. Attitude systems B & C contained inconsistencies negative and unsure respectively. Despite these inconsistencies, the attitude systems were largely positive in nature. The individual was not keen to be the boss in a business situation. It appeared he enjoyed working in a business, designing and creating new goods and services, but did not want the responsibility of decision making and complete commitment as may be required of the boss. This respondent commented ' Venture has taught me heaps, how to run a business, and the importance of being responsible and meeting deadlines'.

Respondent 7 - Worker 3

This respondent's attitude systems were largely positive. Systems B & D were completely positive and balanced. Regarding system A, worker 3 acknowledged the importance of dealing with business matters immediately, however she was not able to place other activities before business commitments. In relation to attitude system C she felt she could not see the solution to business problems from many perspectives.

Worker 3 would consider starting a business in the future, and would try to design new goods or services, therefore it could be argued the program had a positive impact on this person's attitudes towards enterprising behaviour.

This respondent stated 'At Venture I learnt about running a small business. I now understand accounting and have more business knowledge'.

Respondent 8 - Worker 4

This respondent's attitude systems were largely negative. Attitude systems C & D were both balanced and negative. In attitude systems A & B the responses were largely negative with one inconsistent positive component evident in each system.

Worker four displayed very negative attitudes towards the starting of a business venture based on new goods or services. He did not appear to have enjoyed the Venture experience and had no intention of displaying entrepreneurial attitudes towards business in the future. He did not provide other information which may have explained these extremely negative attitudes. Once again the participant acknowledged the importance of working hard to achieve future career goals. This respondent stated: 'I have learnt how to run a business'.

Respondent 9 - Worker 5

Worker 5's attitudes towards business were generally very positive. This is indicated by completely balanced and positive systems B, C & D. She considered starting a business in the future, and would try to design new goods or services, if the opportunity arose. Once again, however, she was not prepared to sacrifice leisure time in order to achieve better business results. This aspect was the only negative response in attitude system A. This respondent stated: 'Venture has given me a bigger outlook on business. It has increased my job prospects because the business community recognises Venture'.

Respondent 10 - Worker 6

Worker 6 displayed very positive attitudes to towards enterprise. Attitude systems A & D were balanced and positive in nature. He may start a business Venture of his own in the future. He was willing to try to design new goods or services for the retail market. He recognised the importance of sacrificing personal leisure time if important business matters arose. Surprisingly, he would not like to be the boss of his own business, the only negative component of attitude system B. This worker felt he could not see the solution to business problems from a range of perspectives, thus attitude system C contained this one inconsistency. It could be argued that this worker's attitudes towards enterprise had changed in a positive direction.

This respondent stated: 'I have gained experience, confidence and friendship from Venture. In the future I will know how to handle certain situations'

The attitude system maps detailed on pages 106-115 revealed further unbalanced attitude components within the examined attitude systems. However, as a group, the positive components of attitude out-numbered the negative attitude components. Out of a possible total of 120 responses, 81 were positive, 30 negative and 9 unsure.

FIGURE 13

Attitude System Map - Respondent 1 - Managing Director

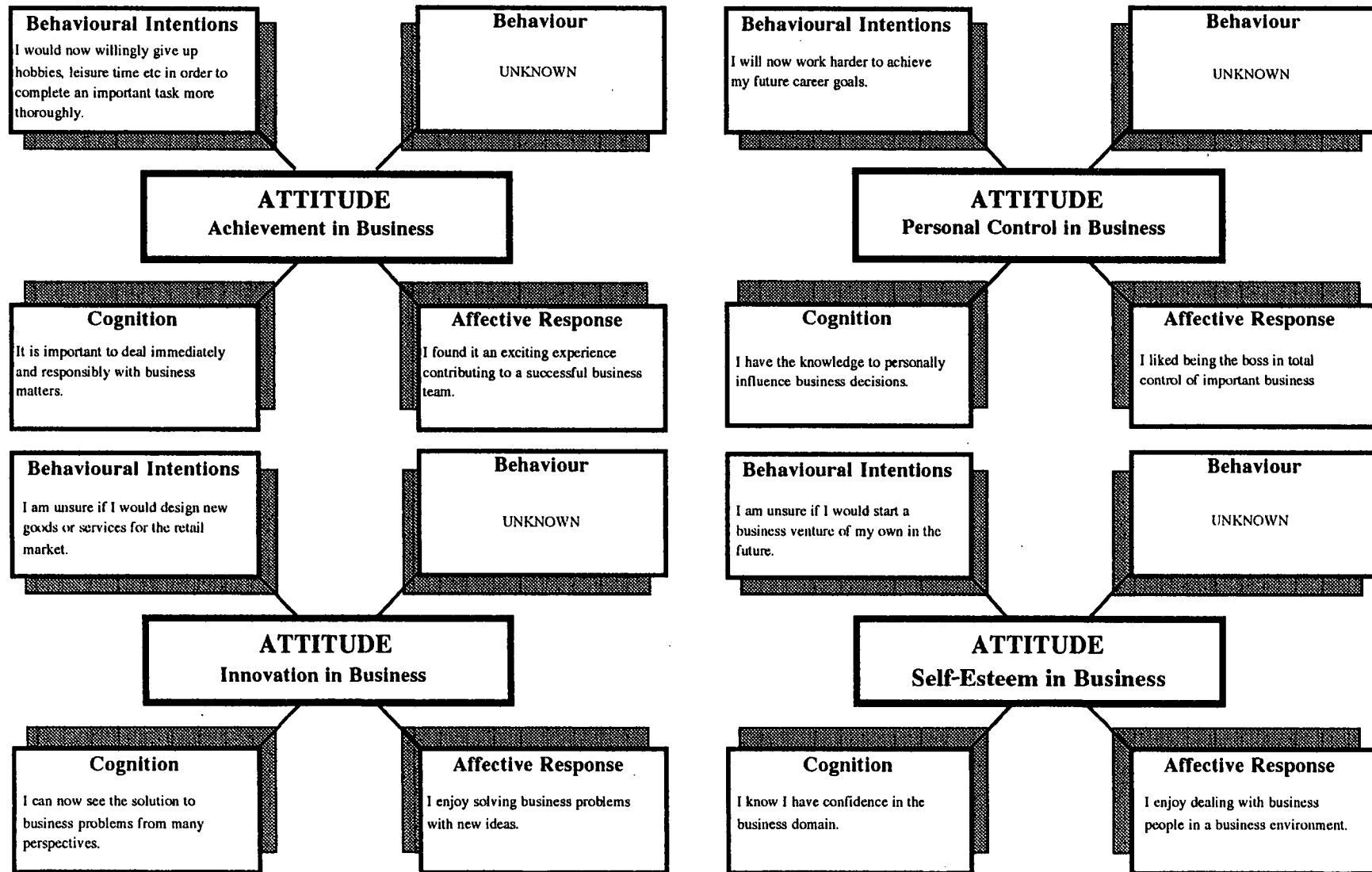


FIGURE 14

Attitude System Map - Respondent 2 - Director 1

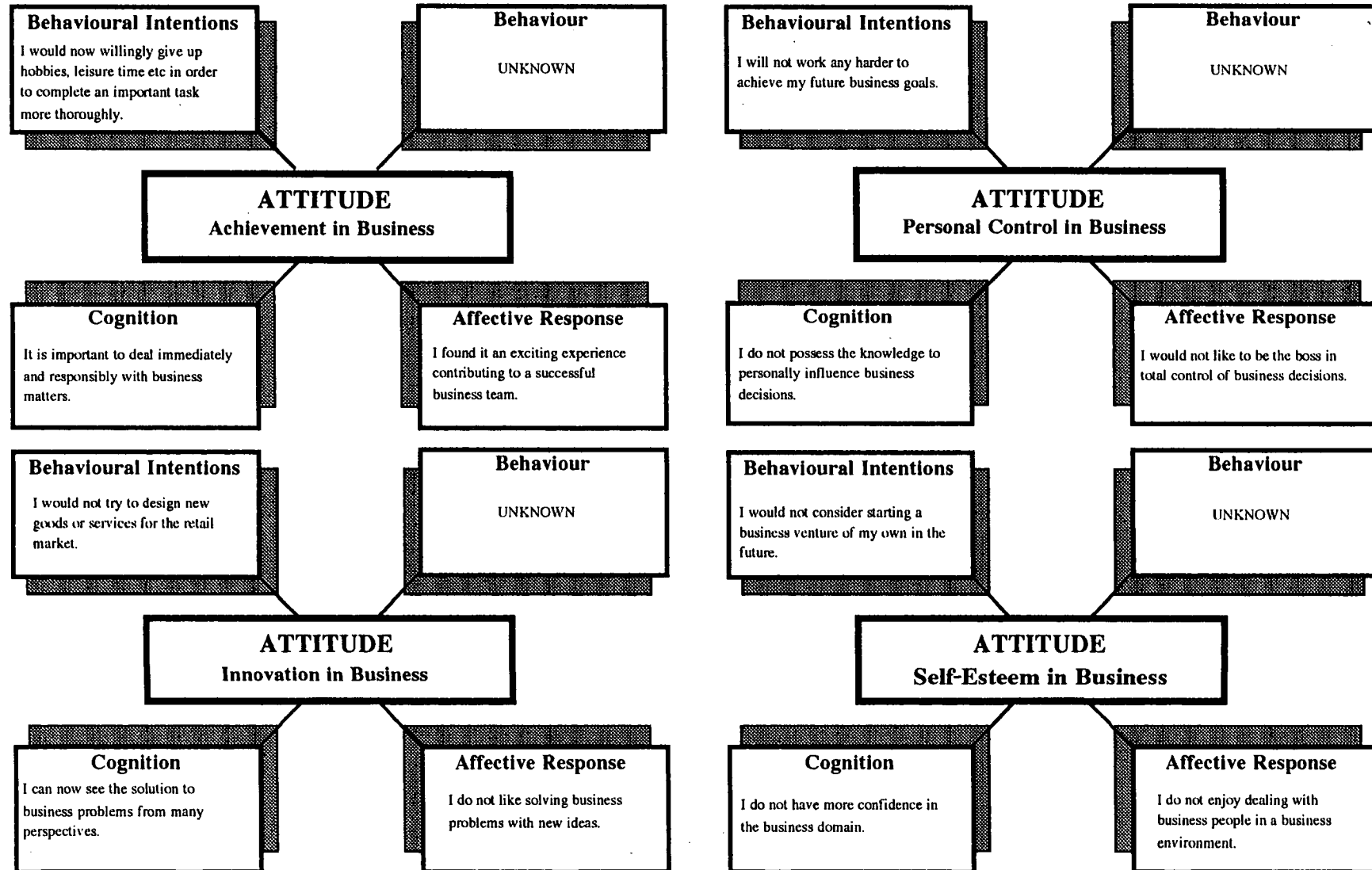


FIGURE 15

Attitude System Map - Respondent 3 - Director 2

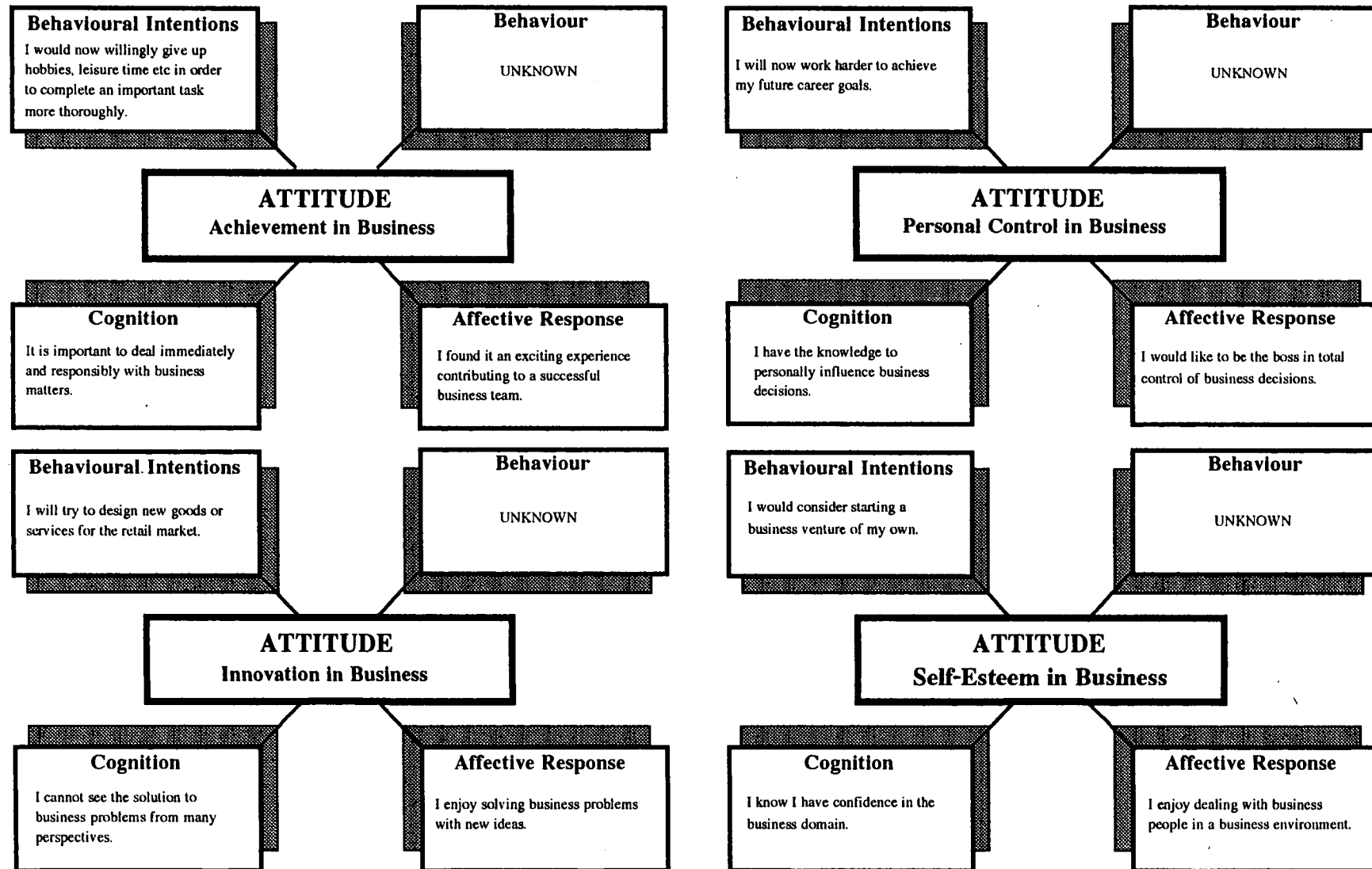


FIGURE 16
Attitude System Map - Respondent 4 - Director 3

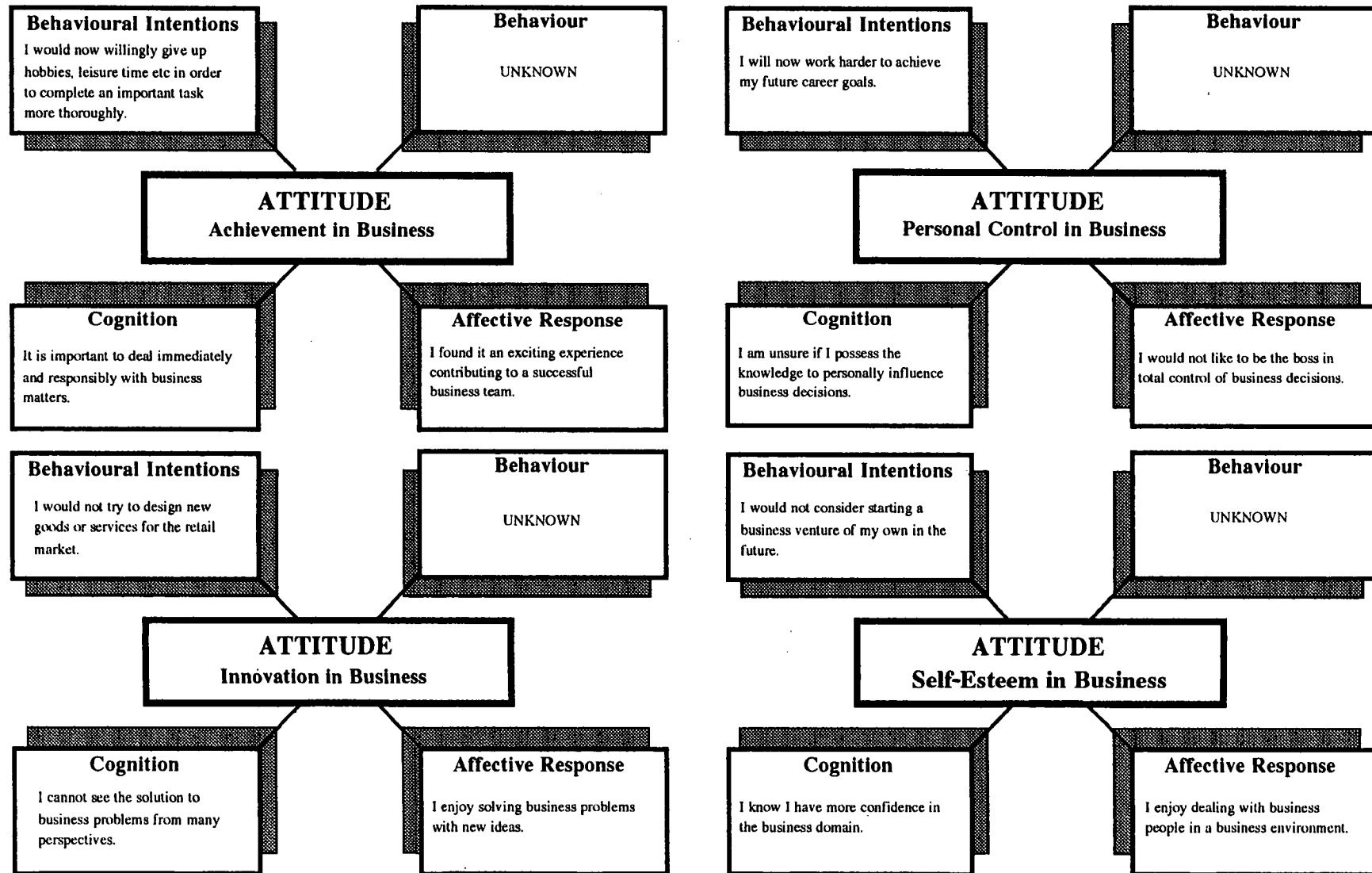


FIGURE 17
Attitude System Map - Respondent 5 - Worker 1

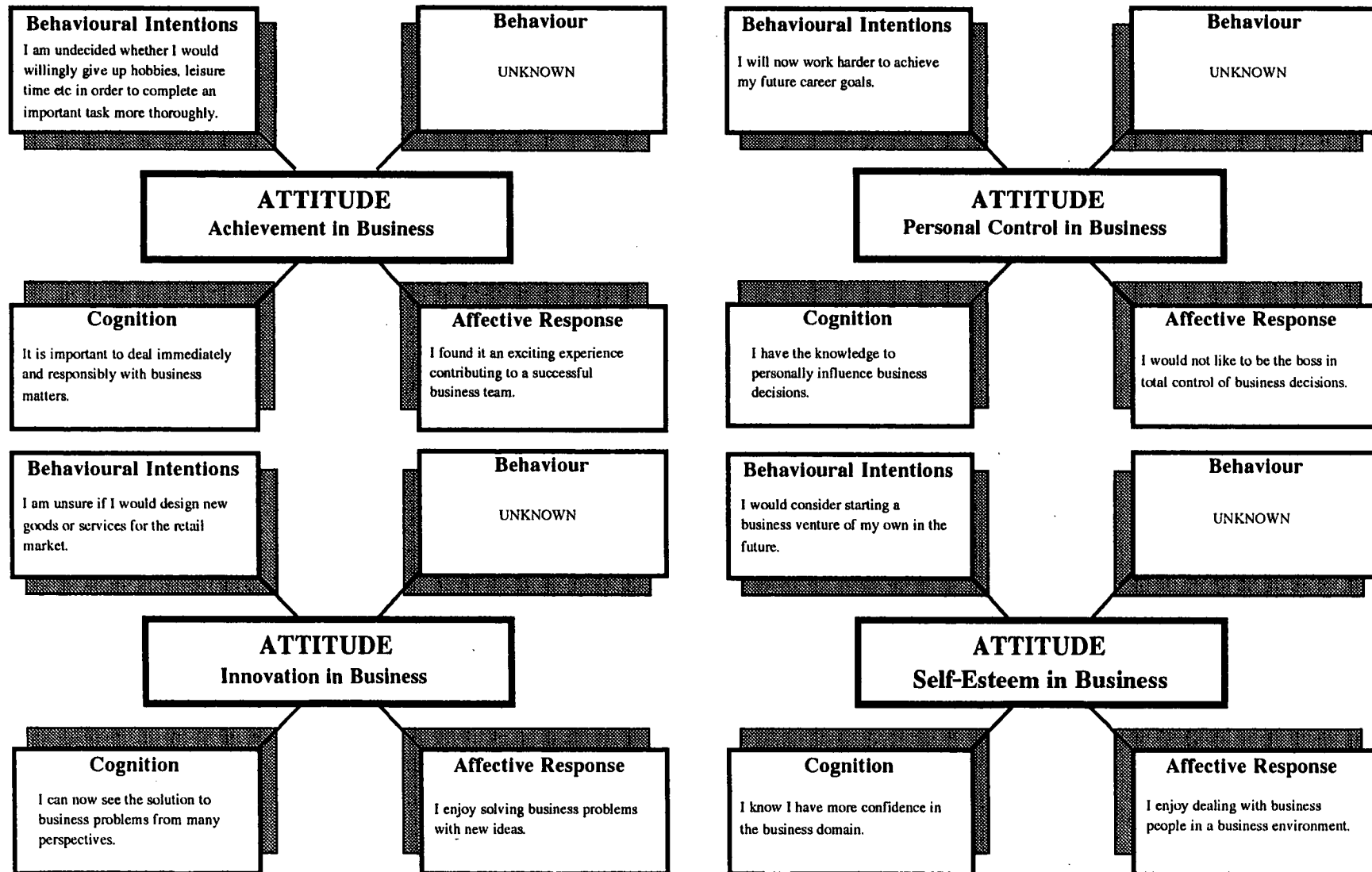


FIGURE 18
Attitude System Map - Respondent 6 - Worker 2

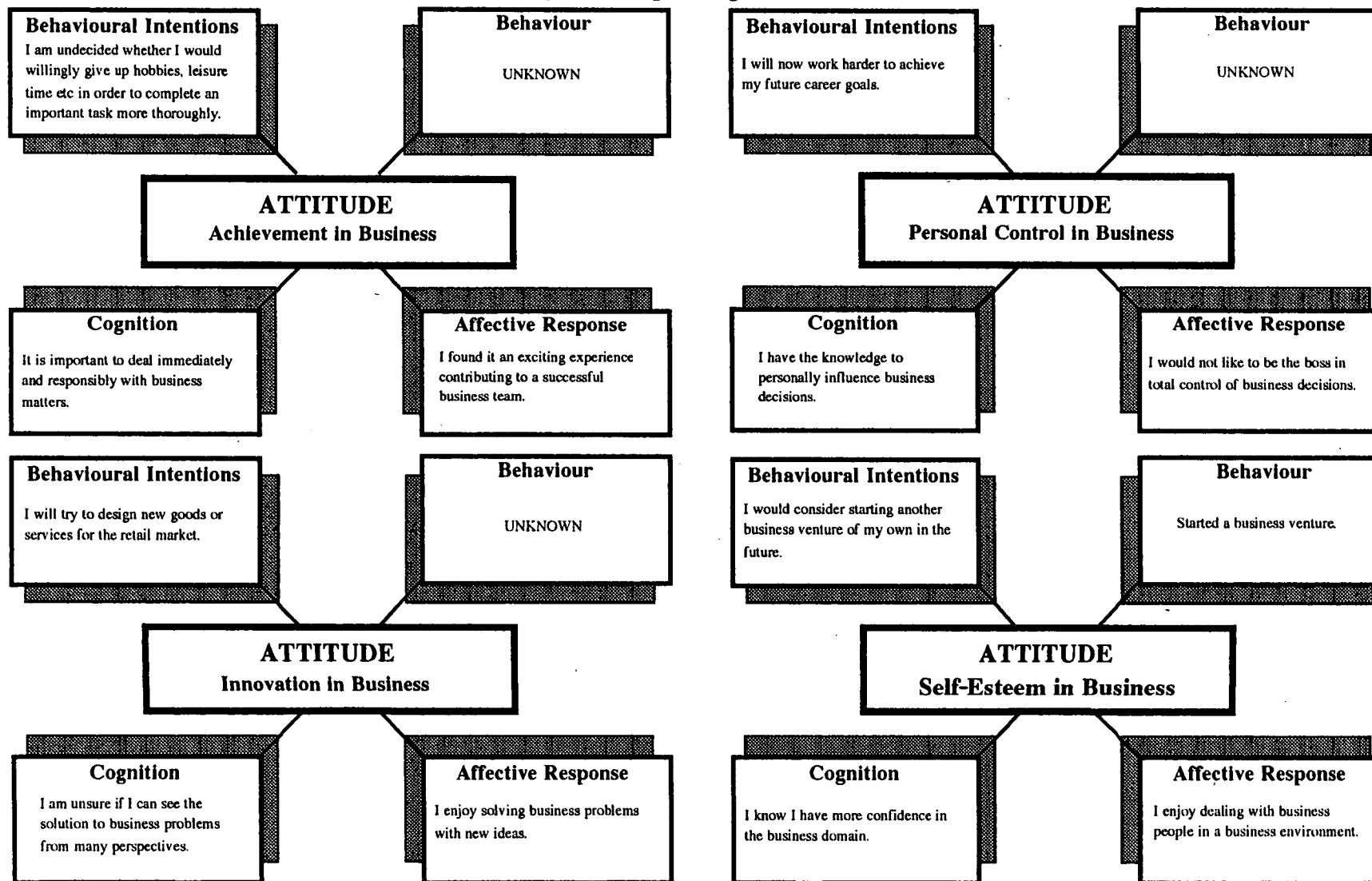


FIGURE 19
Attitude System Map - Respondent 7 - Worker 3

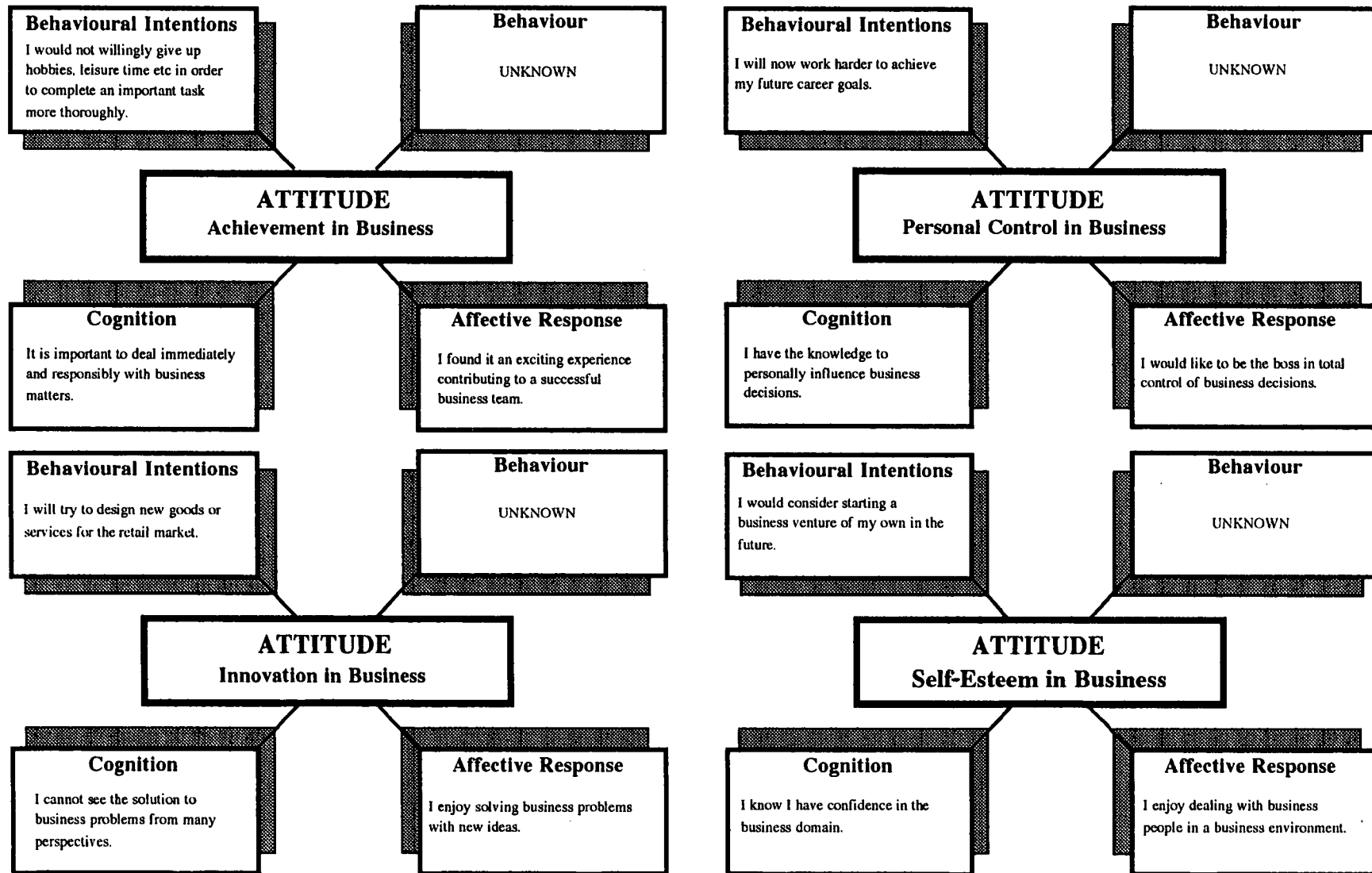


FIGURE 20
Attitude System Map - Respondent 8 - Worker 4

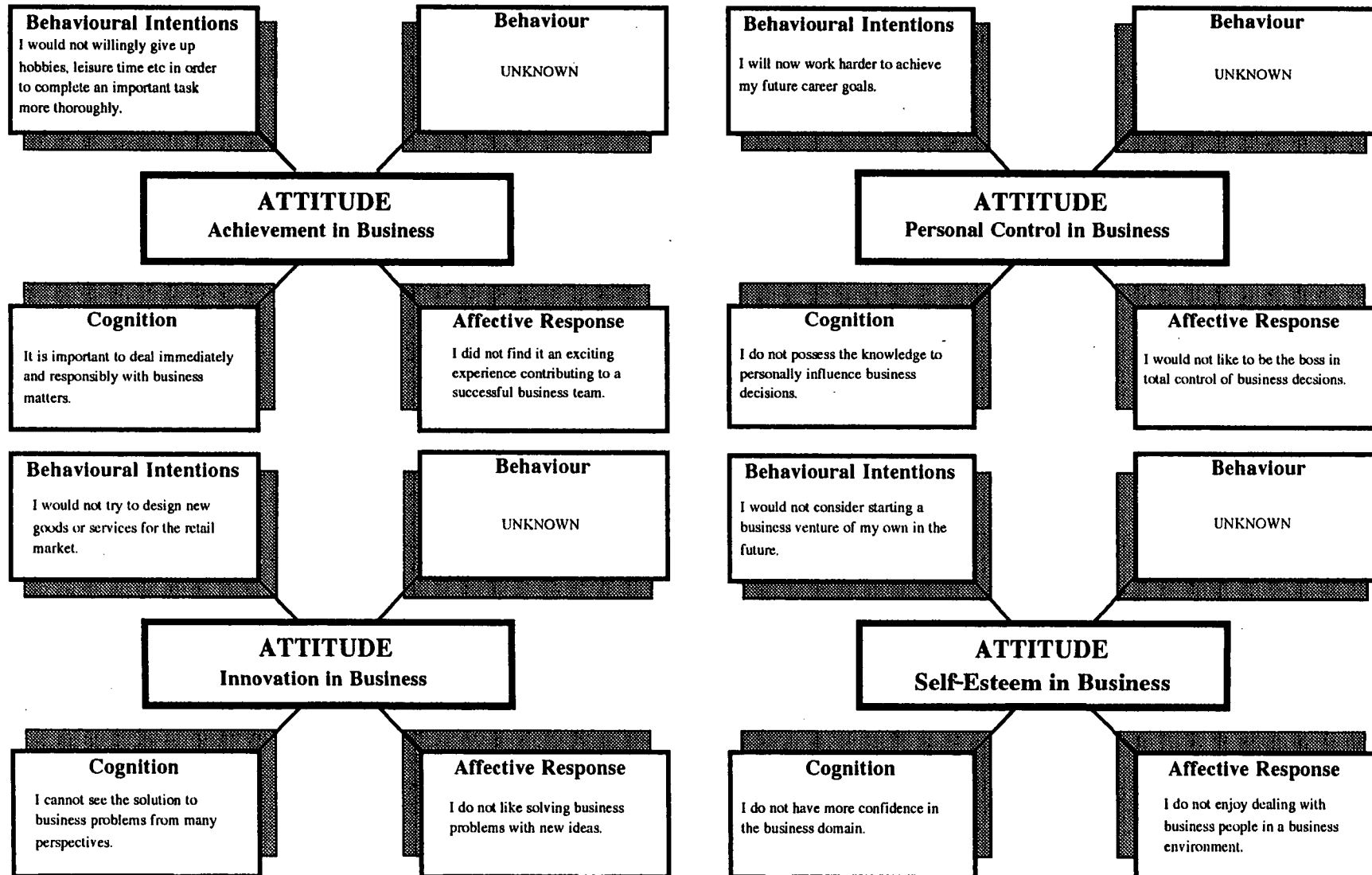


FIGURE 21

Attitude System Map - Respondent 9 - Worker 5

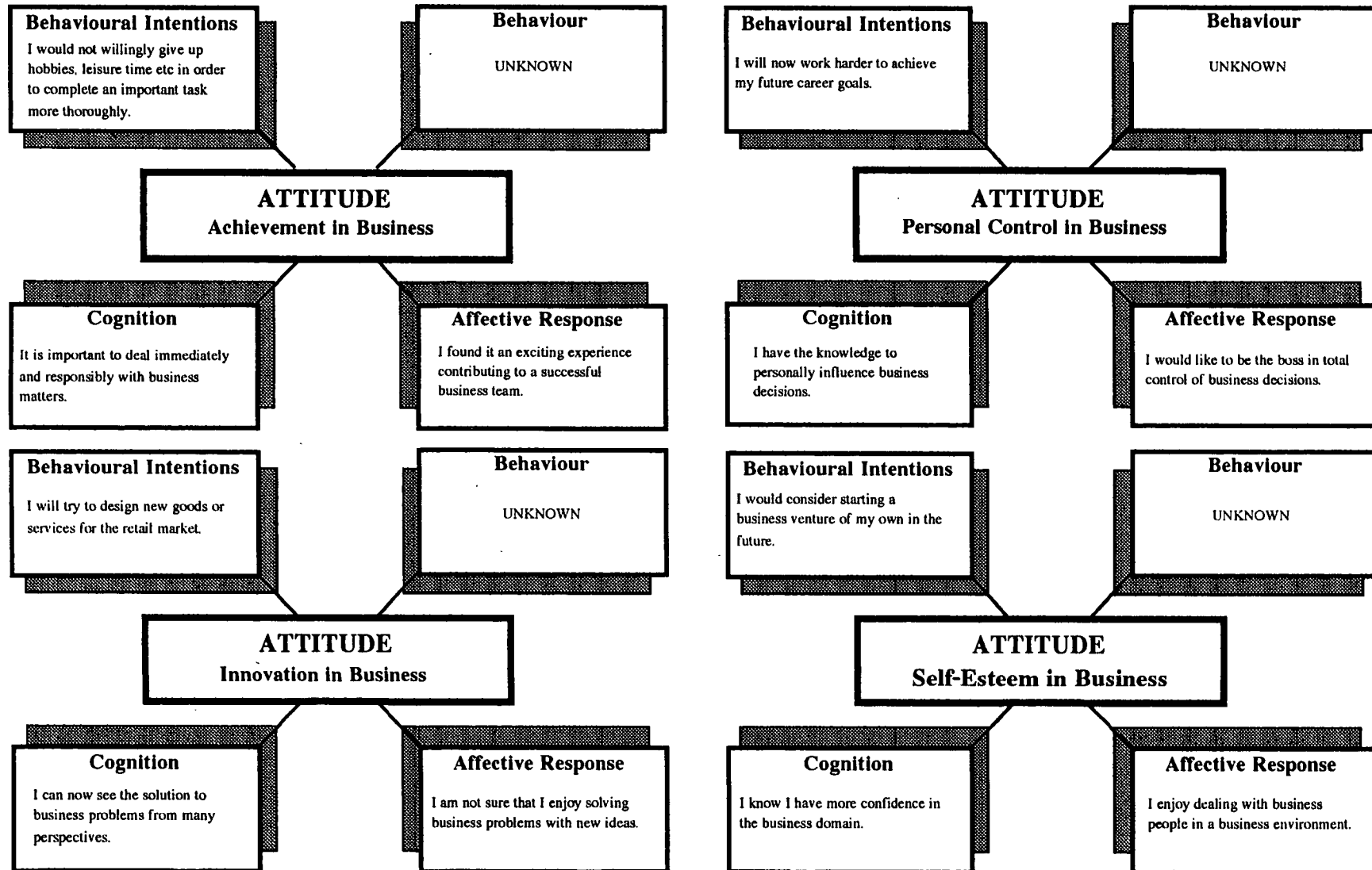
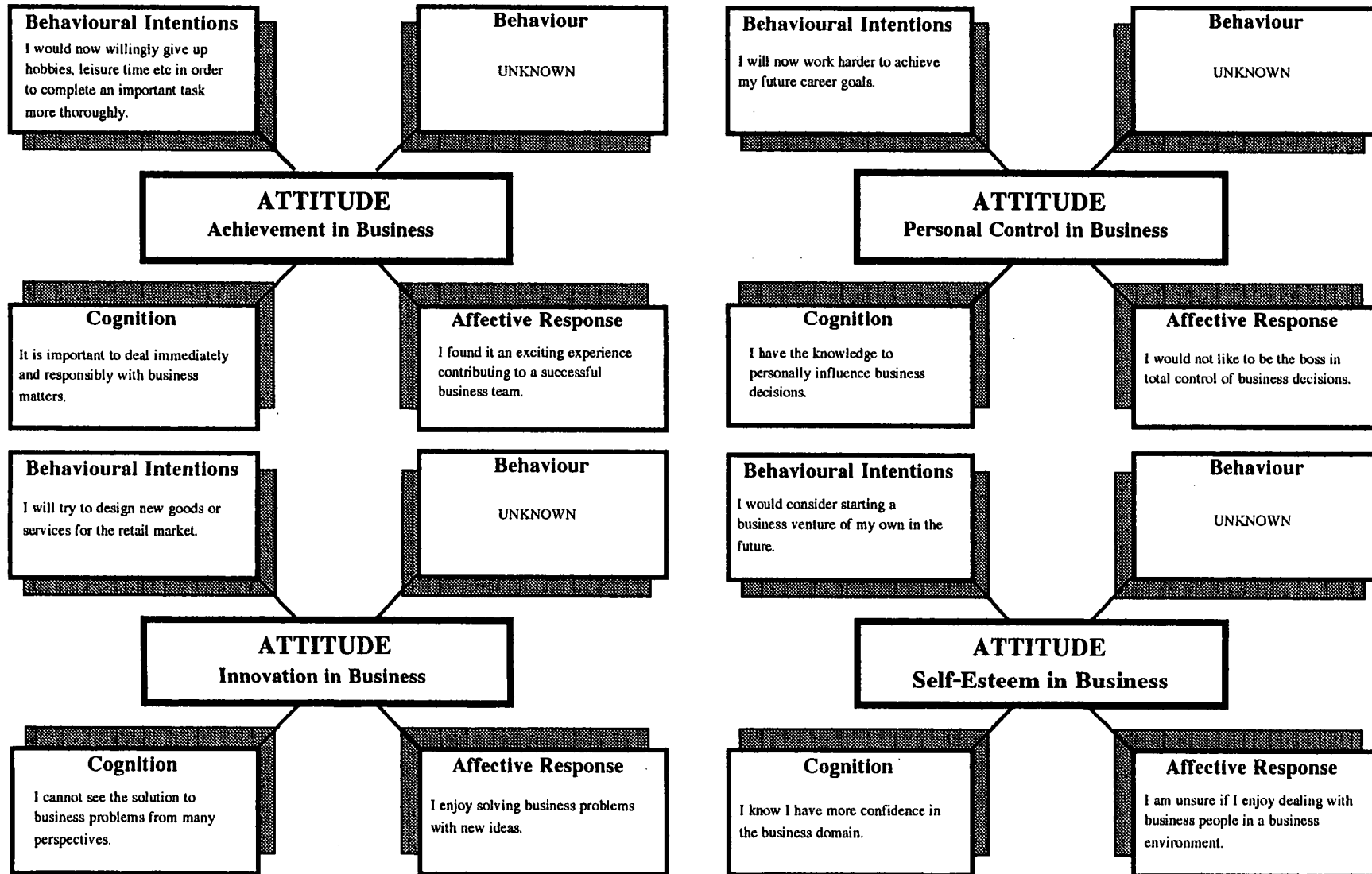


FIGURE 22

Attitude System Map - Respondent 10 - Worker 6



SUMMARY

The Attitude Test

The attitude test (modified EAO instrument) provided interesting results. As may be recalled, the EAO instrument had originally contained four subscales which were divided into the three components of attitudes to give a total of twelve subscale components. The EAO instrument with its twelve subscale components was administered, however only seven of these proved to be sufficiently valid and consequently only these seven were retained in the analysis. These seven were TAAF (achievement subscale), TACG (achievement subscale), TACO (achievement subscale), TSAF (self-esteem subscale), TSCO (self-esteem subscale), TIAF (innovation subscale) and TICG (innovation subscale). Consequently aspects of the three of the four subscales, namely achievement, self-esteem and innovation were tested through the EAO instrument, but the fourth, namely personal control, was not assessed.

Statistically significant changes were noted on five of the subscale components, these being total achievement affect (TAAF), total achievement cognition, (TACG) total achievement conation (TACO), total self-esteem conation (TSCO), and total innovation affect (TIAF).

On examination of the five subscale components which showed statistically significant changes, the whole group attitude shifts were negative on four of them. These were TAAF; TACG; TACO and TIAF. One positive attitude shift, was indicated in the whole group, this being in TSCO.

Individual Venture group results

When the five individual Venture groups results were examined, (group six results were excluded) in most cases they followed the whole group attitude change tendency, though the majority of the individual group results were not statistically significant.

Groups 1, 3 and 5 all showed statistically significant attitude changes in some or all of the five subscale components.

Group 3 showed statistically significant negative attitude changes which followed the whole group tendency for four of the subscale components, TAAF, TACG, TACO and TIAF. This was the only individual Venture group

to display a statistically significant positive attitude shift in the self-esteem conation component TSCO, which also followed the whole group tendency.

Group 1 showed statistically significant negative shifts in two subscale components TAAF and TACG. Group five showed a statistically significant negative shift in the TIAF subscale component.

Individual participant attitude shifts were not calculated using the modified EAO instrument, therefore the number of individuals with attitude shifts was not detected using this instrument.

Participant Observations

Participant Observations revealed a range of enterprising behaviour displayed by the participants. There was evidence of leadership, risk-taking, innovation, achievement and other enterprising behaviours. However, these behaviours were judged by the researcher to be limited/watered down, and therefore unlikely to impact significantly on the enterprising attitudes of participants.

The Telephone Survey

The results of the telephone survey showed clearly that participants' enterprise attitudes had been affected in both negative and positive ways. The results of the telephone survey were mapped using Zimbardo and Leippe's attitude system model to allow discussion relating to each of the surveyed respondents. Each of the respondent's four attitude systems were displayed on a single page to allow ease of interpretation. The maps were displayed on pages 106-115 of this document.

This chapter is divided into four sections:

The research question is answered based on the results described in chapter 4. How these findings relate to the field of enterprise education is discussed. The methodology of this study is reviewed and suggestions for improvements and future research options are outlined.

ANSWERING THE RESEARCH QUESTION.

As will be recalled, the research question is:

What change in attitudes towards enterprise occur in adolescents who participate in the YAA Venture program?

This question is answered on the basis of data gathered from three probes, namely, an attitude test (EAO instrument), a telephone survey and participant observations.

When interpreting the results of these three probes, appropriate theories relating to attitudes, entrepreneurs and enterprise which were reviewed in chapter two are addressed.

Summary to-date

According to the results relevant to the seven valid subscale components of the EAO instrument, the Venture program appears to be related to largely negative changes in the whole-group's attitudes to enterprise, specifically in terms of the subscales achievement and innovation. The one significant positive whole-group attitude change was detected in the self-esteem conation subscale component.

The telephone survey was designed to collect valuable information relating to individual rather than whole-group attitude changes, and the responses to the telephone survey were "mapped", in order to allow the examination of the individual participant's attitude components, within their attitude systems. Zimbardo and Leippe (1991) provided this useful model, which was illustrated in Figure 3 on page 41. The model allows examination of the components of attitudes, (affect, cognition, conation) by unravelling the attitude systems of the individual, thus enabling the application of attitude theory to explain or predict present or future attitude changes in Venture participants. How have the participants' attitude components within their attitude systems changed? Are these new attitudes systems balanced? Is it likely that further attitude changes will continue to take place in the future? Attitude system interpretation can provide a clue to answering the research question from an individual participant's perspective. Future behavioural intentions towards enterprise may also be revealed in the attitude maps.

The attitude maps were shown on pages 106-115. In general the responses to the questions on the telephone survey were largely positive, and thus the telephone survey did not support the results generated by the EAO instrument.

The participant observations were designed to provide possible explanations for any changes detected by either the EAO instrument or the telephone survey and to assess the type and extent of enterprising behaviour which occurred. The observational procedures used detected limited evidence of true entrepreneurial behaviours.

Brief Review of Theories used in the Interpretation of Results

For some attitude theorists, particularly those who support the unidimensional definition of attitude, for example Fishbein and Ajzen (refer page 39), changes to the affect component of attitude alone are thought to be sufficient to indicate changes in a person's attitude to an object, issue or action. Thus an examination of the affect subscale components of the EAO instrument and the affect attitude components of the telephone survey may provide insight as to any attitude changes of the Venture participants.

In line with the consistency attitude theories, which were outlined on pages 49-51, changes to one component of an attitude system may result ultimately

in changes to the other components of that attitude system. This implies that participants whose attitude systems have become unbalanced by the Venture program, may experience further attitude changes to re-stabilise their attitude systems. In other words, it is thought that balance and harmony between attitude system components tend to prevail. The attitude maps of the telephone survey can be examined to assess the balance of the attitude systems of the ten Group 1 participants surveyed.

Behavioural intentions are probably the best predictors of future behaviour. Do the participants intend starting a business venture using newly developed goods or services, following their Venture experience? For Bird (1992) and Kruegar (1993) this behavioural intention was regarded as a key factor to future enterprise behaviour. Bird (1992) and Kruegar (1993), as discussed on pages 33-35, described entrepreneurs on the basis of behavioural intentions. They believed that intention to start a business was often evident well before individuals knew what type of business they would create. By examining the conation components of the Group 1 participants selected in the telephone survey, the level of intention to display enterprising behaviour can be determined.

Interpreting the EAO Instrument Results

It would be easy to examine the results of the EAO instrument and come to the conclusion that the Venture program affected adolescents' enterprise attitudes in a negative manner, and therefore is not a "good" program. This, however, would be too harsh an evaluation. After all, the EAO instrument was designed specifically to detect only enterprise attitude changes as a result of enterprising behaviour. Many other aspects of the program may be worthwhile. However as far as being related to changes in enterprise attitudes in a positive direction, according to the EAO instrument, this does not appear to have taken place, other than in the area of self-esteem conation.

This positive attitude change in the self-esteem conation subscale component was not unexpected. One of the Venture program objectives stated that participants would develop a 'sense of pride and self-assurance', as referred to on page 23, and the single positive attitude change appears to relate to this stated YAA objective.

The Subscale Components

All three attitude subscale components (affect, cognition and conation) within the achievement subscale were tested, and all of these showed significant negative attitude changes in the whole-group. The achievement subscale was the only complete EAO subscale which was tested, and the results obtained were clearly negative.

The innovation affect subscale component also recorded a significant negative attitude change in the whole-group. As this is the "affect" component of attitudes, many theorists would view this result as being indicative alone of a negative attitude change relating to innovation, and thus the Venture program does not appear to nurture innovation according to this probe. For attitudes to impact on "behaviour", according to Zimbardo and Leippe (1991), they must have a strong affective or cognitive base. The results obtained suggest the participants would not display future innovative behaviour as a result of the Venture program.

Before jumping to possibly unwarranted conclusions, it is important to examine the results obtained by the other two probes, namely, the telephone survey and the participant observations. Do these probes support or negate the results applicable to the EAO instrument?

Interpreting the Telephone Survey Results

Did the telephone survey results point also to the attitude changes detected in the attitude survey? The test sample taken by the telephone survey involved around 10% of participants, whereas, the attitude test involved the majority of participants. This must be kept in mind when interpreting and drawing conclusions from these results.

What Information do the Attitude System Maps Reveal?

From the individual attitude system maps, it becomes clear that some individual attitude components, have changed in both positive and negative directions, depending on the respondents, during the period of the Venture program.

Firstly, the attitude system maps were examined for changes in the affect component of the attitude, as this alone may indicate a positive or negative attitude change, which could impact on future enterprising behaviour. Three

of the ten respondents showed positive responses on all four affect components of the four subscales; four respondents showed positive responses on the affect components of three of the subscales; while two respondents showed positive responses on three affect subscale components and were unsure about the fourth. Only one respondent showed negative responses on all four subscale affect components.

According to the telephone survey, the responses regarding the affect component of attitudes were overwhelmingly positive. This does not support the EAO instrument findings which indicated negative changes on two affect components (TAAF and TIAF).

As the attitude maps refer also to future behavioural intentions regarding enterprise, they allow the prediction of enterprising behaviour, based on the responses to questions number 9 and 12, namely:

Question 9

As a result of the Venture program would you consider starting a business venture of your own sometime in the future?

Whether or not this business would be based on a new or innovative idea is revealed by responses to question number 12.

Question 12

As a result of the Venture program would you personally try to design new goods or services for the retail market?

If the participants answered positively to both questions 9 and 12, it could be argued that the chances of them intending to display enterprising behaviour in the future, using some form of innovation, has increased as a direct result of the Venture program. The results in Table 28 on page 99 show this occurred in five of the ten participants surveyed (respondents 3, 6, 7, 9 and 10).

When the same five participants' attitudes systems involving questions 9 and 12 are examined further, it seems that the attitude systems within the self-esteem subscale (relating to question 9) were in all five cases completely balanced. The attitude systems which contained question 12 relating to the

innovation subscale, contained one consistently unbalanced component. Four of the five respondents felt they 'could not see the solution to business problems from many perspectives'. This was the only negative component of these five attitude systems. This response is judged to support the negative response to the process of innovation detected by the EAO instrument. Does this mean the participants could not see solutions from different perspectives or could this be simply a lack of self-confidence? If Venture organisers had incorporated more activities designed to nurture innovation, creativity, imagination, would the responses to question 11 on the telephone survey have been different?

The attitude system maps detailed on pages 106-115 revealed further unbalanced attitude components within the examined attitude systems. However, as a group, the positive components of attitude out-numbered the negative attitude components considerably. Out of 120 responses, 81 were positive, 30 negative and 9 unsure. As stated previously, five of the respondents believed that, as a result of Venture, they would start a business venture sometime in the future using goods or services they had designed.

According to attitude theory the unbalanced attitude systems described above may change in a further positive or negative manner depending on the negative or positive state of the attitude system and future exposure to enterprise. Future attitude change may occur as the attitude systems strive to achieve a more balanced state.

The Personal Control Subscale

The personal control questions must be examined in some detail, as this aspect was not tapped effectively by the EAO instrument. According to the results shown in Table 28 on page 99, four participants liked the idea of being "the boss" in total control. Two of the Directors who had elected to be in a managerial position did not like the idea of being in total control, whilst three of the workers felt they would like to be "the boss" in total control. It is clear that the Venture structure offers some participants the opportunity to find out what it is like to be in control, while others can only imagine possessing this power. This illustrates one of the varying experiences of different managerial positions within Venture.

Other Generalisations

The attitude maps seem to highlight several additional factors relating to enterprise behaviour. Firstly the participants were divided as to whether they would place business before pleasure in their priorities. The participants in "managerial" positions within Venture indicated unanimously that Venture had shown them the importance of placing business before hobbies/leisure. Of the "workers" on the other hand, all but one indicated he or she would place hobbies/leisure before business. This is not unexpected as the participants who applied for "managerial" positions probably expected to work harder, and these participants may have been more committed at the outset of the Venture program. It is imagined that a lack of maturity would have contributed to the others' attitudes towards hobbies and leisure. Perhaps unemployed persons who really needed to create employment for themselves may see the program from a different perspective than participants who have never experienced personal unemployment.

Despite the whole-group tendencies, it appears that some positive and negative attitude changes were detected in individual program participants within Group 1. Perhaps some individuals did display positive attitude changes as a result of the Venture program, however they were too few in number to affect the whole-group attitudes tapped by the EAO instrument.

Interpreting the Participant Observations

Enterprising Behaviour

Enterprising behaviour such as risk-taking, innovation, perseverance, and achievement were all displayed to a limited extent throughout the program. Although many "enterprising behaviours" were evident, these were "watered down", and therefore one would expect their effect on participants' attitudes to be limited. As enterprising behaviour is thought to be crucial to the development of enterprising attitudes (Gartner, 1988 p. 29-31) this could provide one of the reasons for a lack of positive attitude changes detected by the attitude test. For example, although a new and innovative product could have been designed, the process of innovation was not actively encouraged. A safe marketable product which would create a high profit margin was valued above innovation, and the subsequent financial risk-taking involved. This view illustrates sound business concepts, and helps to distinguish the role of an educator whose main aim is to develop personal qualities in

students, from the role of a business person, whose main aim is to develop a profitable successful business. Teachers and business personnel appear to have very different agendas, perhaps these two professions need to liaise more closely in order to achieve a more balanced perspective.

Organisational Structure

The structure of the Venture organisation may not have been conducive to the development of qualities such as innovation in individuals. The Venture program is very structured, although perhaps not as structured as Morgan's (1986) machine metaphor outlined on page 31 would indicate. As stated by Morgan (1986), a structured organisation could in fact stifle innovation, and thus contribute to the emergence of negative attitudes detected by the EAO instrument.

The Venture structure is spoken of favourably in the Managing Director's comments on page 101. She emphasises that Venture has taught her '...the importance of a structured company'.

The set structure of the Venture program does provide some certainty for program organisers as it applies throughout Australia and is to be followed by all Venture groups. The advisers are provided with detailed guidelines they can follow, and since most of these advisers are not teachers, weekly guidelines are helpful. It also allows participants to feel organised by the Venture program providing a "secure" operating environment. Unfortunately these structural qualities could be ones which are stifling the enterprising attitudes of the participants.

Fostering Innovation

Limited time was given to the design phase of the products, and thus innovation was not nurtured intentionally in participants. Motivation and stimulation of the participants was limited during sessions when ideas were being "developed" by the small range of teaching strategies used, as well as other restraints outlined below.

The limitations were based on a several factors. The original products had to be decided upon as soon as possible, therefore time was restricted. There were 10 restrictions on the product development listed in the Venture

manual, these were in place to ensure the safety of the participants from health and legal perspectives however they were restrictive in essence.

Brainstorming was the only activity used to generate ideas. Other activities which may encourage creativity were not evident even though the statement "be creative" was made in the company manual. This comment suggests that the participants already know how to be creative, without being shown; however this would most likely not be the case.

Teaching Strategies

Atkin (1992) outlines teaching strategies which she believes promote better learning in an enterprise educational setting. These strategies denote the teacher's part in the overall "big picture". According to Atkin (1992), teacher as a facilitator rather than expert is considered an important factor. The participants in enterprise programs should be responsible for their own learning, and the teacher facilitates this process. Atkin (1992) lists other factors: mistakes are seen as something to be learnt from rather than never to be made; practice to theory replaces theory to practice; collaboration rather than competition is nurtured; lessons are flexible and opportunistic rather than programmed.

In this researcher's opinion the Venture program in most cases used teaching strategies opposing those suggested by Atkin (1992). Although Venture program advisers did act as facilitators; theory came before practice; competition at a state and national level was encouraged; and the program was largely inflexible in terms of content to be covered each week.

This may have been one of the reasons for a less effective program and highlights the possible differences between school-designed and industry-designed enterprise programs.

Multiple Intelligences

As flagged in the introduction, Armstrong (1994) offers another possible reason for the results obtained if the multiple intelligence theories (MI) first proposed by Gardner in 1983 are examined and applied to educational settings. Gardner (1983) outlines seven intelligences, these being: linguistic, logical-mathematical, spatial, bodily kinaesthetic, musical, interpersonal and intrapersonal, and believes each person possesses all of the seven

intelligences. The average person is "highly developed in some intelligences, modestly developed in others and relatively underdeveloped in the rest" (Armstrong, 1994, p. 11). Armstrong (1994) feels these intelligences may be only the tip of the iceberg with others being included such as creativity. Could innovation in fact be an intelligence category?

It is of interest to this study that Armstrong (1994) feels most intelligences are nurtured directly by specific school subjects. He feels however that interpersonal and intrapersonal intelligences are not aligned to subject areas to date. Interestingly he discusses careers which are based on a person possessing primary intelligence in each of these intelligence categories. Intrapersonal intelligence is possessed by "entrepreneurs" and is known as the "self smart" category. If we delve a little further into his theories surrounding the nurturing of intrapersonal intelligence, Armstrong (1994) mentions design concepts and principles as a key factor. He also discusses the need for this type of person to work alone, and to have topics related directly to their own lives as well as to develop high self-esteem. Interpersonal intelligence on the other hand is nurtured through group work, simulations, group cooperation and collaboration.

This study appears to relate to these theories. Self-esteem was nurtured by the "Venture" program, therefore from the MI theory this aspect developed an intrapersonal intelligence aspect. The structure of the program would develop more interpersonal rather than intrapersonal intelligence due to the group cooperation, collaboration and simulation of a business enterprise. This could be one of the reasons why entrepreneurial attitudes were not developed. The primary intelligence possessed by entrepreneurs was not nurtured actively thus associated attitudes were also less affected.

The Venture participants in managerial positions may have experienced more intrapersonal work than the other participants. The responsibilities they needed to complete between each session offered possible time for them to work alone, plan and design. As this aspect of the program was not measured it is impossible to know what occurred in these targeted Venture participants.

Additional Participant Observations

It seems that many of the participants of Group 1 enjoyed the Venture experience and that they gained skills and knowledge concerned with the management of a small business enterprise. The ten Group 1 respondents surveyed through the telephone survey appeared to support the gaining of business knowledge and skills.

Many aspects of the evaluation of Venture undertaken by DEET and discussed in the *Connections* document appear to be accurate, although, this study did not set out to evaluate Venture from the same perspectives. The objectives are broad in nature and limited evidence of the attainment of these objectives was observed by the researcher during the course of the program.

Additional Factors which may have Contributed to the Results

The demographic survey provides information which may indicate other reasons for the results obtained.

Forty five percent of the Venture participants had parents who were or had been involved in the operation of a real-life business venture. These participants may have possessed positive attitudes towards enterprise before they entered the program, but the participants' attitudes may have changed in a negative direction if operating a business was not what they expected from their observation of their parents in business.

Participants may have found the Venture experience more work than anticipated, and as a consequence the enterprising attitudes measured showed an overall group change in a negative direction. It was noted that some Group 1 participants seemed overawed with the amount of work required to run a successful business venture, making such comments as 'I never realised the amount of work involved'.

Group 3 showed the most statistically significant negative attitude shifts for four of the five components tested (refer pages 90-92). Group 3 was less successful than the other groups in terms of running their business venture. The YAA state coordinator used the term 'fell apart towards the end of the Venture program' when describing Group 3. Thus, a negative experience can impact negatively on the attitudes of adolescents, as supported by Kruegar's work with Shapero's Model of Entrepreneurial Intentions shown on page 34.

CONCLUSIONS

It is unrealistic to expect all individuals participating in enterprise programs to become entrepreneurs in the future. However, if enterprising people are valued in this country then every Australian adolescent should have the chance to participate in a sound enterprise education program, which incorporates the development of enterprising attitudes in the objectives, and adopts teaching strategies to achieve this goal. This will ensure adolescents view enterprise as a feasible and possibly desirable career option, and understand the close relationship between enterprising people and entrepreneurs. The nurturing of intrapersonal intelligence may also be a significant factor, this could be achieved by using the appropriate teaching strategies.

Well formulated and organised enterprise programs, it is hoped, would achieve the program objectives and possibly "awaken" participants to a career as an entrepreneur, creating their own business venture, involving design of new goods and services for sale. Some participants will discover they possess powers of leadership or innovation they were unaware of previously, while many will learn that starting an enterprise is something they don't enjoy. Armstrong (1994) would view this as an awakening and development of the interpersonal and intrapersonal intelligences of the individual.

Perhaps the value of enterprise education is underestimated as the search for ways to alleviate unemployment and decrease the failure rate of small business enterprises continues.

It is interesting to note that according to the demographic survey, twenty three percent of the Venture participants could not define the term 'entrepreneur'. Could this be due to the separation of the business domain from the school domain? One would expect adolescents aged 14-20 years to have some concept of an entrepreneur if they are such a valuable part of a successful economy.

Nurturing Positive Enterprise Attitudes.

In order to nurture future enterprising people, those Venture participants who show positive attitudes to enterprise could be identified and offered the opportunity to participate in programs designed specifically to change these

attitudes positively. In this case, perhaps a "Venture 2" would be appropriate in order to continue fostering and nurturing the positive attitudes they have developed.

Importance of Success

Adolescents' attitudes are still forming and are highly susceptible to change. A negative enterprise experience will probably result in the development of negative enterprise attitudes, as indicated clearly by the results of Venture Group 3. Kruegar (1993) refers to the need for the enterprise experience to be positive in nature, if the intention to behave as an entrepreneur is to be positive. This study supports the work of Kruegar.

This produces an ongoing dilemma for enterprise educators in general. How do enterprise educators create an educational environment which promotes and nurtures qualities such as innovation, creativity and self-esteem, whilst incorporating a safety net? How is this balance achieved?

It is extremely difficult to ensure enterprise education is always positive. The philosophy surrounding enterprise is to build on a "learn from your mistakes" approach. Enterprise education will not always ensure the success vital to the development of positive enterprising attitudes. Enterprise educators must therefore find other mechanisms which cope with negative outcomes, such as positive de-briefing, or making sure the participants can be part of another positive enterprise activity.

Another possible solution requires a cross-curricular approach. Perhaps it is a positive attitude to mistakes and failure in general which needs to be nurtured in children in the K-12 range if positive enterprise attitudes are to be fostered in our society. If this is true, an individual needs to be able to make mistakes, but not see these as personal failures. Educational practices which encourage forms of risk-taking and do not eliminate the possibility of failure but provide adequate support of various kinds, may then produce positive rather than negative enterprise attitudes.

Perhaps all teachers need to develop fresh attitudes to mistakes and perfection. Until we all understand the value of learning from mistakes, and practise rewarding process as well as product we may never encourage the risk-taking strategies people need to become more enterprising.

The Venture Program

It could be argued that the Venture program did not foster the development of enterprise attitudes. The program is highly structured, and innovation (one of the attitudes under investigation) therefore, would be less likely to be promoted than in a program which devoted attention to lateral thinking techniques, and encouraged the development of new ideas and ways of solving problems.

Despite enterprise attitudes not being developed generally by Venture, there is little doubt that the Young Achievement Australia Venture program is a worthwhile program. The business knowledge and management skills the respondents referred to in the telephone survey is clear evidence of some positive outcomes. These were not unexpected as the objectives of the program stated that the participants would gain business knowledge and skills. Many of the expectations of the Venture participants appear to have been realised, particularly if the responses to the last question on the telephone survey are indicative of the whole-group.

Venture may have a number of positive attributes but it could be made a more powerful educational tool if mechanisms for increasing the development of enterprising attitudes were built into it. The development of enterprising attitudes would need to be a stated objective, and the program content and processes would need to be reviewed.

Recommendations Concerning YAA

- ❖ More design work in the original phase of product development should be included. The design process is a well documented teaching strategy designed to produce many desirable qualities in students. Enterprise is one of the qualities the design process is said to nurture. By including more design concepts and principles the intrapersonal intelligences of the individual should be developed further.
- ❖ Activities which are designed to encourage lateral thinking skills and other forms of creativity should be provided. This would need to be done in the initial stages of the program, before product development.

- ❖ A "Venture 2" program should be considered for those participants in Venture 1 who indicated they would intend to start a business using newly developed goods or services. In Tasmania if numbers allowed, this could consist of a Northern, Southern and North West group.
- ❖ The awards given to Venture participants should be broadened in their scope and nature. Educators should acknowledge many forms of excellence. This includes those qualities which are desired in enterprising people. If innovation to a level of excellence is shown by participants this should be rewarded. If high levels of initiative, leadership, creativity and other enterprising qualities are shown to a level of excellence these should be acknowledged also. Venture groups which take larger risks and succeed or fail should be acknowledged appropriately. Furthermore, individuals who take risks outside their personal comfort zone should be encouraged and rewarded also.
- ❖ Attempts to attract a larger percentage of state school children should be made. In 1993 nearly half of the Venture participants were being educated in the private school sector. People on the West coast of Tasmania did not have the opportunity to participate in a Venture program in 1993.
- ❖ The structure of the Venture organisation at present fosters a hierarchy, of which a limited few participants experience the feelings of personal control and power. A possible levelling process in a "Venture 2" project could help to allow more participants to experience the burdens and joys which are part of being in control situations.
- ❖ Successful local entrepreneurs could be invited to speak to the participants about their activities. Entrepreneurs who have started successful businesses from scratch could provide realistic role models for the participants, as well as motivation. YAA does provide some positive business role models already. The people who act as Venture advisers are both successful in their field, and motivated enough to participate voluntarily in the program.

REVIEW OF THE METHODOLOGY USED IN THIS STUDY

The demographic survey provided appropriate data concerning the sample. The participants had little difficulty interpreting and responding to the questions.

The participant observations and telephone survey results illustrate clearly that the EAO instrument merely throws more light on one perspective of program evaluation. These other two probes helped to detect attitude changes in individual participants which the EAO instrument failed to detect, and suggested possible reasons for the attitude changes.

The modified EAO instrument was found to be useful in investigating seven attitude subscale components. However, the personal control subscale was not represented with any subscale components. Re-examination of the statements within the personal control subscale reveal the difficult interpretation level of the items when compared with the items in the achievement subscale. To illustrate the difference in interpretation level a comparison of questions from the two subscales is given below.

Personal Control Statement

I know that social and economic conditions will not affect my venture business success.

(may have been difficult to interpret)

Achievement Statement

To be successful I believe it is important to use your time wisely.

(straightforward, easy to interpret)

In any future work employing the EAO instrument with similar populations, some rewording along the lines suggested below will be required.

Innovation Conation Statement

I rarely question the value of established procedures.

(difficult language)

Reworded Statement

I readily accept the usual ways of doing something without asking questions.

(simplified language)

To improve the validity of the EAO instrument for future research, further rewording would be required. The researcher believes this would be an achievable and desirable further research option. The 18 items outlined in Table 14 on page 88 could provide a starting point for a new instrument, as all of these items were retained following satisfactory internal reliability consistency findings and showed statistically significant differences on the pre- and post-test administrations.

More powerful data analysis could have been achieved if individual as well as whole-group attitude changes had been examined through EAO. It is possible that individuals in different managerial positions within the Venture company structure may have experienced positive attitude changes. This conclusion is based on the information collected through the telephone survey and participant observations. Individuals from various managerial levels showed different commitment to the program as indicated by their attendance at special training sessions. They were also treated differently regarding workload and salary within the Venture organisation.

Participant observation allowed a 'big picture' view of the Venture program. Following the six month period the researcher was able to make informed statements about some of the attitudinal changes towards enterprise which appeared to result from participation in the Venture program. Without these observations, the results could only be interpreted from a quantitative point of view. As can be seen in the attitude map discussions, reasons for the changes to the attitude system could be probed in a more informed way.

The telephone survey was the final device used in this study. The researcher believes the telephone survey was easily understood by respondents, and provided valuable information concerning the research. The telephone survey detected changes within individuals' attitude systems.

IMPLICATIONS FOR FUTURE RESEARCH

This study opens many doors regarding future research in the area of enterprise education.

Firstly, the extent and type of simulated enterprise experience must be considered. If the students are to be exposed to entrepreneurial behaviour,

then this should be more realistic and less watered down than in the Venture program as it exists currently, otherwise attitudes will not be impacted upon.

If more enterprising qualities are to be nurtured in individuals, courses must set out with these goals firmly in mind, and produce hard evidence of successful results. Present enterprise programs may achieve good results but not develop enterprise attitudes specifically.

The development of interpersonal and intrapersonal intelligences as a focal point could also be considered. For example do the learning areas such as Technology, Science, English and so on within the Nationally Developed Curriculum Framework nurture these intelligences and associated attitudes? The Technology learning area, for example as stated previously (refer page 5) involves individual and collaborative group design, making and appraising. If, then, Technology develops the primary intelligence associated with entrepreneurs, then enterprising attitudes may also be nurtured.

Instruments must be designed which are appropriate to test for enterprising attitudes. The EAO instrument and the telephone survey structure provide starting points for this development process. The telephone survey structure was particularly useful and could be developed further.

The question of timing could be examined. At what age do enterprise programs impact most on enterprising attitudes? Traditionally, upper secondary students have been targeted. Perhaps younger children's attitudes are more receptive to change in the necessary direction. Unemployed school leavers may be a better target group for changing attitudes, as they will be able to relate the experience to themselves, which in turn may nurture intrapersonal intelligence.

The type of teacher who is most able to foster and nurture enterprising attitudes should be identified. Does the teacher need to possess enterprising attitudes for the program to be a success? Role modelling could impact far greater than we realise in enterprise programs.

To the extent this is important teacher training institutions should consider recognising and nurturing enterprising qualities in future teachers, and offer courses for those in-service.

CODA

It is clear Australian society values enterprising people; we must, therefore, modify our present educational programs and search harder for a more complete answer to the development of such people.

The Venture program provides young Australian's with a positive business experience which may impact positively on future career goals. The modified EAO instrument and telephone survey used in this study, showed that the enterprising attitudes of the Venture participants are affected in both negative and positive ways. The modified EAO instrument has therefore provided a sound starting point for the measurement of enterprising attitudes. With further modification and testing this instrument will help educators (K-12 and business) to design more effective enterprise programs, by measuring accurately the success of present and modified programs in terms of enterprise attitudes.

If an entrepreneur's primary intelligence is intrapersonal, why are their no subjects presently in our school system which specifically nurture this intelligence and associated attitudes? Perhaps developing the intrapersonal intelligence of individuals needs to be prioritised if we want individuals to become more "self smart". Could present business enterprise programs be made more powerful by incorporating the elements which nurture intrapersonal intelligence, as well as providing a less watered down "hands on" enterprising experience which impacts on enterprise attitudes.

Many school timetables are based around school subjects, others are based around the eight Nationally Developed Curriculum learning areas. Perhaps basing a school around the development of all seven intelligences is an option worth reviewing. Each intelligence could be integrated across the curriculum in much the same way as literacy is cross curricula. Why is linguistic intelligence seen as cross curricula, and intrapersonal intelligence in many schools largely ignored?

Our rapidly changing society demands ever increasingly more of its members. Educators have a responsibility to prepare people for a more flexible lifestyle, which may incorporate periods of unemployment or extended leisure. Individuals must therefore gain the personal qualities, concepts, principles and attitudes to make them more productive members of

society. Developing enterprising attitudes in adolescents will ensure Australia nurtures individuals who are more productive at a range of operating levels. Some of these will be the business leaders and entrepreneurs of the future.

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Appendices

Appendix A

Hobart Declaration

The Hobart Declaration on Schooling

The State, Territory and Commonwealth Ministers of Education met as the 60th Australian Education Council in Hobart, 14-16 April 1989, chaired by the Minister for Education in Tasmania, Hon Peter Rae, MHA. Conscious that the schooling of Australia's children is the foundation on which to build our future as a nation, Council agreed to act jointly to assist Australian schools in meeting the challenges of our times. In reaching agreement to address the following areas of common concern, the State, Territory and Commonwealth Ministers of Education made an historic commitment to improving Australian Schooling within a framework of national collaboration.

Common and Agreed National Goals for Schooling in Australia

Ten national goals for Schooling will, for the first time, provide a framework for co-operation between Schools, States and Territories and the Commonwealth. The goals are intended to assist schools and systems to develop specific objectives and strategies, particularly in the areas of curriculum and assessment.

The Agreed National Goals for Schooling include the following aims:

1. To provide an excellent education for all young people, being one which develops their talents and capacities to full potential, and is relevant to the social, cultural and economic needs of the nation.
2. To enable all students to achieve high standards of learning and to develop self-confidence, optimism, high self-esteem, respect for others, and achievement of personal excellence.
3. To promote equality of educational opportunities, and to provide for groups with special learning requirements.
4. To respond to the current and emerging economic and social needs of the nation, and to provide those skills which will allow students maximum flexibility and adaptability in their future employment and other aspects of life.
5. To provide a foundation for further education and training, in terms of knowledge and skills, respect for learning and positive attitudes for long-life education.
6. To develop in students:
 - the skills of English literacy, including skills in listening, speaking, reading and writing;
 - skills of numeracy, and other mathematical skills;
 - skills of analysis and problem solving;
 - skills of information processing and computing;
- an understanding of the role of science and technology in society, together with scientific and technological skills;
- a knowledge and appreciation of Australia's historical and geographic context;
- a knowledge of languages other than English;
- an appreciation and understanding of, and confidence to participate in, the creative arts;
- an understanding of, and concern for, balanced development and the global environment; and
- a capacity to exercise judgement in matters of morality, ethics and social justice.
7. To develop knowledge, skills, attitudes and values which will enable students to participate as active and informed citizens in our democratic Australian society within an international context.
8. To provide students with an understanding and respect for our cultural heritage including the particular cultural background of Aboriginal and ethnic groups.
9. To provide for the physical development and personal health and fitness of students, and for the creative use of leisure time.
10. To provide appropriate career education and knowledge of the world of work, including an understanding of the nature and place of work in our society.

Providing a sound basis for a collaborative effort to enhance Australian Schooling, the agreed national goals will be reviewed from time to time, in response to the changing needs of Australian society.

Annual National Report on Schooling

An annual National Report on Schooling in Australia will be produced for the 1990 school year, marking the beginning of a process of national reporting to the Australian people.

The annual National Report on Schooling will monitor schools' achievements and their progress towards meeting the agreed national goals. It will also report on the school curriculum, participation and retention rates, student achievements and the application of financial resources in schools. The annual national report will increase public awareness of the performance of our schools as well as make schools more accountable to the Australian people.

In the history of Australian education there has never been a single document which informs the citizens of Australia about the nation's education systems and the performance of our schools.

The annual National Report will, for the first time, provide a true and comprehensive account of Australian schooling to the nation. The Australian Education Council (of Ministers) will co-ordinate its publication.

National Collaboration in Curriculum Development

Work has been proceeding through the Australian Education Council (AEC) Working Party for the past four years to seek to attain the highest standards of national curriculum, common principles and agreed areas for national collaborative action. These will now be defined for the mathematics curriculum taught in Australian schools. The statement of common principles will identify the knowledge and skills to which all students are entitled, recognise areas of strength and weakness in the mathematics curriculum and develop recommendations for future collaborative action.

The findings of this process will be presented for public discussion at a broadly representative national workshop to which the wider Australian education community will be invited.

Their use will not be compulsory but where agreement is reached after full consideration then it is likely that government and non-government systems and schools will use them.

It was also agreed that mapping work will continue to be undertaken in the key curriculum areas of Science, Technology and English Literacy.

Establishment of the Curriculum Corporation of Australia

To strengthen the collaboration which has occurred to date, through the AEC, and to facilitate greater efficiency and effectiveness in curriculum development through the sharing of knowledge and scarce resources, a company known as the Curriculum Corporation of Australia will be established.

The Curriculum Corporation of Australia will have a board of management whose directors are nominees of State, Territory and Commonwealth Education Ministers, a nominee each from the National Catholic Education Commission and the National Council of Independent Schools, if desired, and representatives of parents and of teachers. It is intended that the Curriculum Corporation of Australia will, eventually, become the major vehicle for collaborative curriculum development throughout Australia. Again its work will be available but no system will be bound to use it.

Developing an Appropriate Handwriting Style for Australian Schools

All Australian government school systems will now accept that a child taught a handwriting style in one State will not have to change it on transfer to another State which teaches a different style. A report on handwriting styles will be presented to the 61st meeting of the Australian Education Council with a view to removing unnecessary differences between States.

The Goal of a Common Age of Entry for Australian Schools

While working towards the long-term goal of a common age of school entry, State education systems will recognise the differences between States in school starting ages and will ensure that no child is disadvantaged because of interstate transfer. For example, where it can be demonstrated that a child has been enrolled in a formal educational program in another system and would be disadvantaged by not being permitted to continue at a similar level the student may be permitted to enrol at such a level.

Improving the Quality of Teaching

In recognition of the importance of the quality of teaching in assisting schools and systems to meet the educational challenges of our age, strategies to improve teacher education, particularly in science and mathematics, will be developed with a view to endorsement at the 61st meeting of the Australian Education Council.



This declaration represents a major advance in developing a national collaborative approach to schooling in Australia.

The vision of Australia's Education Ministers in adopting this historic program of national collaborative action will serve to enhance the capacity of all Australian schools to meet the challenges of the 21st century.

In agreeing to address the above areas of common concern, the State, Territory and Commonwealth Ministers of Education have indicated their long-term commitment to strengthen Australian schooling.



Appendix B

Leader Instructions

LEADER INSTRUCTIONS

In order to complete valuable research on education for future entrepreneurs in Tasmania. Two surveys need to be administered to all the students participating in Young Achievement Australia's "Venture" project throughout the state. University procedure requires that all individuals participating in research, understand the research, and agree to be participants. You will need to read the Research Consent Form to the group, and sign on behalf on your group. Naturally any students who do not want to participate cannot be made to do so. Hopefully all will see the educational benefits to be gained from this research .

1. Entrepreneurs and Education

This is a demographic survey that will provide myself and the YAA program with valuable information concerning the participating students .

Such questions as :-

Do more boys than girls participate in YAA?

What is the ratio of private to public school student participation?

Do students have any expectations when joining the program?

Do children of successful business persons make up a large percentage of the YAA participants?

These questions and many others will be answered by this questionnaire.

- ✎ Please administer this survey in the first session of the Venture program.
- ✎ No names are necessary but it is essential that the name of the Venture group be placed on the top of all questionnaires.
- ✎ Read the instructions to the students and point out that in questions 15 and 16 they can choose more than one answer, but in the other multiple choice questions they must choose only one.
- ✎ If students are having difficulty with some of the questions, they may need to find out information from their parents. If this occurs keep the surveys until session 2, then complete them.

When ALL the questionnaires are completed post them to the address over the page.

PTO

2. ATTITUDE TEST 1

This test determines a persons attitudes towards business. It has been proven that entrepreneurs have different attitudes towards business than non-entrepreneurs. In brief I am trying to determine if students behaving as entrepreneurs in programs such as "Venture" change their attitudes towards business.

This test needs to be administered at the beginning of session 4, and repeated at the end of the program. All participants throughout the state must complete this test at the same time in order to gain valid results. The two set of test results will be compared and hopefully positive changes towards entrepreneurial attitudes will be the result.

- ✎ please administer this attitude test at the beginning of session 4. (Another set of Attitude test 1 papers will be sent to you for completion at the end of the program.)
- ✎ No names are necessary but it is essential that the name of the Venture group be placed on the top of all questionnaires.
- ✎ read through the instructions with the students and help them to complete the sample statement.
- ✎ when the attitude tests are completed please post them to the address shown below.

Ms Julia Edwards
Centre for Technology and Vocational Education (F Block)
School of Education
University of Tasmania at Launceston
P.O. Box 1214,
Launceston,
Tasmania.

Thankyou greatly for your cooperation. Business and Education must work together for the future employment of all Australians.

J. M. Edwards.

Appendix C

Research Consent Form

Research Consent Form

The purpose of this investigation is to assess your personal attitudes towards business ownership and how the 'Venture' program affects your attitudes towards this subject. In order to do this you will need to complete two 72 item tests which consist of statements. There are no right or wrong answers to the statements . For each statement you are expected to agree or disagree to some extent . Your answers will be recorded on a ten point scale and analysed.

The questionnaire will take approximately 15 minutes to complete and will be administered during weeks 3 and 24 of the venture program. You will need to supply your name, age and gender purely for statistical analysis. All documents will remain confidential and will be destroyed when analysis is complete.

Your participation would be greatly appreciated as this research will be used to enhance school curriculum with regards to youth unemployment and education for small business entrepreneurs. Participation is not compulsory but would be greatly appreciated. Any further questions about this project may be directed to your venture project co-ordinator or from Julia Edwards lecturer in the School of Education at the University of Tasmania at Launceston. Telephone 003) 243289.

I the participant have read the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in this activity realising that I may withdraw at any time.

I agree that research data gathered for the study may be published provided my name is not used.

Participant or Authorised Representative

Date

Investigator

Date

Appendix D

Demographic Survey: 'Entrepreneurs and Education'

ENTREPRENEURS AND EDUCATION

Please answer all the questions which apply to you as accurately as possible. Unless indicated tick only one response for the multiple choice questions. This is not a test of your abilities in any way, and all information will remain confidential.

1. What is the name of your venture group? _____

2. Please give your age. _____

3. Are you

- ☐ Male
☐ Female

4. City/Town of residence _____

5. Which suburb do you live in ? _____

6. Which high school/s did you attend from grades 7-10 ? _____

7. Which College are you presently attending ? _____

8. What is your Mothers occupation? _____

9. What is your Fathers occupation? _____

10. Have either of your parents ever operated their own business?

- ☐ Yes
☐ No

*if you answered 'Yes' go to question 11
if you answered 'No' go directly to question 15*

11. If so, which of your parents operated their own business and what was the nature of this business ? eg Father - Restaurant

12. Was this business

- ☐ based on a new and innovative idea or,
☐ did it follow other similar businesses that already exist.

For example a restaurant franchise or a newsagency.

13. Was this business ?

- ☐ a going concern or,
☐ created from scratch

14. For how many years did/have your parents operated their business as a profitable concern? _____

15. Why did you apply to join the Young Achievers 'Venture' program?

- ☐ I thought it might help me gain a job
☐ I want to be self employed in the near future
☐ I had nothing better to do
☐ My parents wanted me to
☐ My friends were joining the program
☐ I am studying business at College this year
☐ Give any other reasons _____

*Tick ✓ all
the choices
that are
applicable
to you.*

16. How did you first become aware of the 'Venture' program?

- ☐ Teachers
☐ Parents
☐ The media (newspaper, T.V. radio etc)
☐ Previous participants
☐ Self Inquiry
☐ Other _____

*Tick ✓ all
the choices
that are
applicable
to you.*

17. What do you hope to gain from participation in the YAA program.

18. Do you understand the aims and objectives of the venture program?

- ☐ I am fully aware of the aims and objectives of the venture
☐ I do not know any of the aims and objectives of the project
☐ I know that you start up and run a business venture
☐ I read the information but the aims & obje.. are not clear

19. What do you understand the term ENTREPRENEUR to mean?

20. Which career path do you hope to pursue in the future?

Thankyou for your cooperation.

Appendix E

Venture Participants Suburbs of Residence

Venture Participants Suburbs of Residence

Magra	Dynnyrne	Midway Point
Granton	Lenah Valley	Penna
Claremont	Baskerville	Dunalley
Glenorchy	Battery Point	Sorell
Molesworth	Moonah	Carlton Beach
West Moonah	Gagebrook	Forcett
New Norfolk	Blackmans Bay	Kingston
Austins Ferry	Taroona	Runnymede
Oyster Cove	New Town	Orielton
Dysart	Howrah	Bellerive
Sheffield	Rose Bay	Dodges Ferry
Berriedale	Fern Tree	Mornington
Devonport	Bridgewater	Primrose Sands
Ambleside	Kingsmeadows	Riverside
West Ulverstone	Deloraine	West Devonport
Forth	North Motton	Quamby Bend
Ulverstone	Quoiba	

Appendix F

Career Paths of 1993 Tasmanian Venture Participants

Career Paths of 1993 Tasmanian Venture Participants

5 Undecided	4 Lawyer	2 Army
12 Accountant	7 Hospitality	2 Airforce
1 Office Worker	2 Horticulturist	1 Entrepreneur
2 Chef	1 Builder	1 Hairdresser
1 Flight Attendant	3 Scientist	3 Management
1 Dentist	1 Pharmacist	5 Teacher
1 Florist	1 Ecologist	1 Physiotherapist
1 Vet	10 Business	2 Advertising
2 Marketing	2 Challenge	3 Mechanic
2 Electronics	5 Electrician	1 Process Worker
2 Public Relations	1 Welding	3 A Trade
1 Theatre	1 Personnel	2 Agriculturalist
2 Tourism	4 Computers	1 Salesperson
1 Footballer	1 Systems Analyst	1 Fashion Designer
1 Nurse	1 Archaeologist	1 Architect

Appendix G

Robinson et al. Entrepreneurial Attitude Orientation Instrument (EAO)

CODE

R = removed on the modified EAO instrument as the question was judged to be inappropriate or too difficult for participants to answer.

APPENDIX: Entrepreneurial Attitude Orientation (EAO) Scale with subscales and attitude components identified

Indicate how much you agree with each of the following statements by circling a number between "1" and "10" where "1" indicates that you strongly disagree with the statement and "10" indicates you strongly agree with the statement. A "5" indicates you only slightly disagree and a "6" shows only slight agreement. Work as quickly as you can, don't stop to think too deeply about any one question, but mark down your first thought. Please answer all of the questions.

- 1) I get my biggest thrills when my work is among the best there is. (achievement—
affect)
- 2) I seldom follow instructions unless the task I am working on is too complex.
(innovation—behavior)
- 3) I never put important matters off until a more convenient time. (achievement—
behavior)
- 4) I have always worked hard in order to be among the best in my field. (personal
control—behavior)
- *5) I feel like a total failure when my business plans don't turn out the way I think they
should. (self-esteem—affect)
- 6) I feel very energetic working with innovative colleagues in a dynamic business
climate. (innovation—affect)
- 7) I believe that concrete results are necessary in order to judge business success.
(achievement—cognition)
- R - 8) I create the business opportunities I take advantage of. (personal control—
behavior)
- 9) I spend a considerable amount of time making any organization I belong to func-
tion better. (achievement—behavior)
- 10) I know that social and economic conditions will not effect my success in business.
(personal control—cognition)
- 11) I believe it is important to analyze your own weaknesses in business dealings.
(achievement—cognition)
- 12) I usually perform very well on my part of any business project I am involved with.
(self-esteem—behavior)
- 13) I get excited when I am able to approach tasks in unusual ways. (innovation—
affect)
- *14) I feel very self-conscious when making business proposals. (self-esteem—affect)
- 15) I believe that in the business world the work of competent people will always be
recognized. (personal control—cognition)
- 16) I believe successful people handle themselves well at business gatherings. (self-
esteem—cognition)
- 17) I enjoy being able to use old business concepts in new ways. (innovation—affect)
- *18) I seem to spend a lot of time looking for someone who can tell me how to solve
all my business problems. (self-esteem—behavior)
- 19) I feel terribly restricted being tied down to tightly organized business activities,
even when I am in control. (innovation—affect)
- 20) I often sacrifice personal comfort in order to take advantage of business opportu-
nities. (achievement—behavior)

- *21) I feel self-conscious when I am with very successful business people. (self-esteem—effect)
- 22) I believe that to succeed in business it is important to get along with the people you work with. (self-esteem—cognition)
- 23) I do every job as thoroughly as possible. (achievement—behavior)
- 24) To be successful I believe it is important to use your time wisely. (achievement—cognition)
- 25) I believe that the authority I have in business is due mainly to my expertise in certain areas. (self-esteem—cognition)
- 26) I believe that to be successful a businessman must spend time planning the future of his business. (achievement—cognition)
- 27) I make a conscientious effort to get the most out of my business resources. (achievement—behavior)
- *28) I feel uncomfortable when I'm unsure of what my business associates think of me. (self-esteem—effect)
- *29) I often put on a show to impress the people I work with. (self-esteem—behavior)
- 30) I believe that one key to success in business is to not procrastinate. (achievement—cognition)
- 31) I get a sense of pride when I do a good job on my business projects. (achievement—effect)
- 32) I believe that organizations which don't experience radical changes now and then tend to get stuck in a rut. (innovation—cognition)
- *33) I feel inferior to most people I work with. (self-esteem—effect)
- 34) I think that to succeed in business these days you must eliminate inefficiencies. (achievement—cognition)
- 35) I feel proud when I look at the results I have achieved in my business activities. (achievement—effect)
- 36) I feel resentful when I get bossed around at work. (personal control—effect)
- *37) Even though I spend some time trying to influence business events around me every day, I have had very little success. (personal control—behavior)
- *38) I feel best about my work when I know I have followed accepted procedures. (innovation—behavior)
- 39) Most of my time is spent working on several business ideas at the same time. (innovation—behavior)
- 40) I believe it is more important to think about future possibilities than past accomplishments. (achievement—cognition)
- 41) I believe that in order to succeed, one must conform to accepted business practices. (innovation—cognition)
- 42) I believe that any organization can become more effective by employing competent people. (personal control—cognition)
- 43) I usually delegate routine tasks after only a short period of time. (innovation—behavior)
- 44) I will spend a considerable amount of time analyzing my future business needs before I allocate any resources. (achievement—behavior)
- 45) I feel very good because I am ultimately responsible for my own business success. (personal control—effect)
- 46) I believe that to become successful in business you must spend some time every day developing new opportunities. (innovation—cognition)
- 47) I get excited creating my own business opportunities. (personal control—effect)
- 48) I make it a point to do something significant and meaningful at work every day.

- (achievement—behavior)
- 49) I usually take control in unstructured situations. (innovation—behavior)
 - *50) I never persist very long on a difficult job before giving up. (self-esteem—behavior)
 - 51) I spend a lot of time planning my business activities. (personal control—behavior)
 - 52) I believe that to arrive at a good solution to a business problem, it is important to question the assumptions made in defining the problem. (innovation—cognition)
 - 53) I often feel badly about the quality of work I do. (self-esteem—affect)
 - 54) I believe it is important to continually look for new ways to do things in business. (innovation—cognition)
 - 55) I believe it is important to make a good first impression. (self-esteem—cognition)
 - 56) I believe that when pursuing business goals or objectives, the final result is far more important than following the accepted procedures. (innovation—cognition)
 - 57) I feel depressed when I don't accomplish any meaningful work. (achievement—affect)
 - 58) I often approach business tasks in unique ways. (innovation—behavior)
 - 59) I believe the most important thing in selecting business associates is their competency. (achievement—cognition)
 - R - 60) I take an active part in community affairs so that I can influence events that affect my business. (personal control—behavior)
 - 61) I feel good when I have worked hard to improve my business. (achievement—affect)
 - 62) I enjoy finding good solutions for problems that nobody has looked at yet. (innovation—affect)
 - 63) I believe that to be successful a company must use business practices that may seem unusual at first glance. (innovation—cognition)
 - 64) My knack for dealing with people has enabled me to create many of my business opportunities. (personal control—behavior)
 - 65) I get a sense of accomplishment from the pursuit of my business opportunities. (achievement—affect)
 - *66) I believe that currently accepted regulations were established for a good reason. (innovation—cognition)
 - 67) I always feel good when I make the organizations I belong to function better. (achievement—affect)
 - 68) I get real excited when I think of new ideas to stimulate my business. (innovation—affect)
 - 69) I believe it is important to approach business opportunities in unique ways. (innovation—cognition)
 - 70) I always try to make friends with people who may be useful in my business. (achievement—behavior)
 - 71) I usually seek out colleagues who are excited about exploring new ways of doing things. (innovation—behavior)
 - 72) I enjoy being the catalyst for change in business affairs. (innovation—affect)
 - *73) I always follow accepted business practices in the dealings I have with others. (innovation—behavior)
 - *74) I rarely question the value of established procedures. (innovation—behavior)
 - 75) I get a thrill out of doing new, unusual things in my business affairs. (innovation—affect)

*indicates reverse scored

Appendix H

Modified EAO as Administered to Participants

NAME OF YOUR VENTURE GROUP _____

ATTITUDE TEST 1 & 2

Please complete all the items in the following attitude test. There are 73 items in all. Read each statement and decide whether or not you agree or disagree, and to what extent you agree or disagree. Circle the appropriate number on the scale of 1-10. Circle "1" if you strongly disagree with the statement, and "10" if you strongly agree with the statement. Circle "5" if you disagree slightly or "6" if you agree slightly. Choose any other numbers on the scale which you feel express your level of agreement/disagreement to the statement. Do not think too deeply about each question, mark down your first thought.

Thankyou for your co-operation.

Sample Statement:

I feel good when I think of a new solution to an old problem.

1	2	3	4	5	6	7	8	9	10
I Strongly Disagree				I Slightly Disagree	I Slight Agreement				I Strongly Agree

Read and assess how you feel about this statement . If you strongly agree circle number 10, if you strongly disagree circle number 1. Express your level of agreement or disagreement with any number from one to ten. You must decide where you fit on the scale provided.

Now begin working through the items.

1) I get my biggest thrills when my work is among the best there is.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

2) I seldom follow instructions unless the task I am working on is too complex.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

3) I never put important matters off until a more convenient time.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

4) I have always worked hard in order to be the best in my field.

1 2 3 4 5 6 7 8 9 10

5) I feel like a total failure when my "venture business" plans don't turn out the way I think they should.

1 2 3 4 5 6 7 8 9 10

6) I feel energetic working with innovative peers in a dynamic "venture business" climate.

1 2 3 4 5 6 7 8 9 10

7) I believe that concrete results are necessary in order to judge "venture business" success.

1 2 3 4 5 6 7 8 9 10

8) I spend a considerable amount of time making any organisation I belong to function better.

1 2 3 4 5 6 7 8 9 10

9) I know that social and economic conditions will not effect my success in "venture business".

1 2 3 4 5 6 7 8 9 10

10) I believe it is important to analyse your own weaknesses in business dealings.

1 2 3 4 5 6 7 8 9 10

11) I usually perform very well on my part of any "venture business" activity I am involved with.

1 2 3 4 5 6 7 8 9 10

12) I get excited when I am able to approach tasks in unusual ways.

1 2 3 4 5 6 7 8 9 10

13) I feel very self conscious when making business proposals.

1 2 3 4 5 6 7 8 9 10

14) I believe that in the business world the work of competent people will always be recognised.

1 2 3 4 5 6 7 8 9 10

15) I believe successful people handle themselves well at business gatherings.

1 2 3 4 5 6 7 8 9 10

16) I enjoy being able to use old concepts in new ways.

1 2 3 4 5 6 7 8 9 10

17) I seem to spend a lot of time looking for someone who can tell me how to solve all of my business problems.

1 2 3 4 5 6 7 8 9 10

18) I feel terribly restricted being tied down to tightly organised business activities even when I am in control.

1 2 3 4 5 6 7 8 9 10

19) I often sacrifice personal comfort in order to take advantage of business opportunities.

1 2 3 4 5 6 7 8 9 10

20) I feel self conscious when I am with very successful people.

1 2 3 4 5 6 7 8 9 10

21) I believe that to succeed in business it is important to get along with the people you work with.

1 2 3 4 5 6 7 8 9 10

22) I do every job as thoroughly as possible.

1 2 3 4 5 6 7 8 9 10

23) To be successful I believe it is important to use your time wisely.

1 2 3 4 5 6 7 8 9 10

24) I believe that the authority I have in business is mainly due to my expertise in certain areas.

1 2 3 4 5 6 7 8 9 10

25) I believe that to be successful a business person must spend time planning the future of his/ her business.

1 2 3 4 5 6 7 8 9 10

26) I make a conscientious effort to get the most out of my resources.

1 2 3 4 5 6 7 8 9 10

27) I feel uncomfortable when I'm unsure of what my business associates think of me.

1 2 3 4 5 6 7 8 9 10

28) I often put on a show to impress the people I work with at Venture.

1 2 3 4 5 6 7 8 9 10

29) I believe that one key to success in business is not to procrastinate (procrastinate means
- to waste time and put off till later, dilly, dally etc.)

1 2 3 4 5 6 7 8 9 10

30) I get a sense of pride when I do a good job on my "venture business" projects.

1 2 3 4 5 6 7 8 9 10

31) I believe that organisations which don't experience radical changes now and then tend
to get stuck in a rut.

1 2 3 4 5 6 7 8 9 10

32) I feel inferior to most people I work with.

1 2 3 4 5 6 7 8 9 10

33) I think that to succeed in business these days you must eliminate inefficiencies.

1 2 3 4 5 6 7 8 9 10

34) I feel proud when I look at the results I have achieved in my business activities.

1 2 3 4 5 6 7 8 9 10

35) I feel resentful when I get bossed around at work.

1 2 3 4 5 6 7 8 9 10

36) Even though I spend some time trying to influence business events, I have had very
little success.

1 2 3 4 5 6 7 8 9 10

37) I feel best about my work when I know I have followed accepted procedures.

1 2 3 4 5 6 7 8 9 10

38) Most of my time is spent working on several business ideas at the same time.

1 2 3 4 5 6 7 8 9 10

39) I believe it is more important to think about future possibilities than past
accomplishments.

1 2 3 4 5 6 7 8 9 10

40) I believe that in order to succeed, one must conform to accepted business practices.

1 2 3 4 5 6 7 8 9 10

41) I believe that any organisation can become more effective by employing competent people.

1 2 3 4 5 6 7 8 9 10

42) I usually delegate routine tasks after only a short period of time.

1 2 3 4 5 6 7 8 9 10

43) I will spend a considerable amount of time analysing my future business needs before I allocate any resources.

1 2 3 4 5 6 7 8 9 10

44) I feel very good because I am ultimately responsible for my own "venture business" success.

1 2 3 4 5 6 7 8 9 10

45) I believe that to become successful in business you must spend some time every day developing new opportunities.

1 2 3 4 5 6 7 8 9 10

46) I get excited creating my own business opportunities.

1 2 3 4 5 6 7 8 9 10

47) I make it a point to do something significant and meaningful in relation to venture every week.

1 2 3 4 5 6 7 8 9 10

48) I usually take control in unstructured situations.

1 2 3 4 5 6 7 8 9 10

49) I never persist very long on a difficult job before giving up.

1 2 3 4 5 6 7 8 9 10

50) I spend a lot of time planning my business activities.

1 2 3 4 5 6 7 8 9 10

51) I believe that to arrive at a good solution to a business problem, it is important to question the assumptions made in defining the problem.

1 2 3 4 5 6 7 8 9 10

52) I often feel badly about the quality of the work I do.

1 2 3 4 5 6 7 8 9 10

53) I believe it is important to continually look for new ways to do things in business.

1 2 3 4 5 6 7 8 9 10

54) I believe it is important to make a good first impression.

1 2 3 4 5 6 7 8 9 10

55) I believe that when pursuing "venture business" goals or objectives, the final result is far more important than following the accepted procedures.

1 2 3 4 5 6 7 8 9 10

56) I feel depressed when I don't accomplish any meaningful work.

1 2 3 4 5 6 7 8 9 10

57) I often approach business tasks in unique ways.

1 2 3 4 5 6 7 8 9 10

58) I believe the most important thing in selecting business associates is their competency.

1 2 3 4 5 6 7 8 9 10

59) I feel good when I have worked hard to improve my "venture business".

1 2 3 4 5 6 7 8 9 10

60) I enjoy finding good solutions for problems that nobody has looked at yet.

1 2 3 4 5 6 7 8 9 10

61) I believe that to be successful a company must use business practices that may seem unusual at first glance.

1 2 3 4 5 6 7 8 9 10

62) My knack for dealing with people has enabled me to create many of my opportunities.

1 2 3 4 5 6 7 8 9 10

63) I get a sense of accomplishment from the pursuit of my "venture business" opportunities.

1 2 3 4 5 6 7 8 9 10

64) I believe that currently accepted regulations were established for a good reason.

1 2 3 4 5 6 7 8 9 10

65) I always feel good when I make the organisations I belong to function better.

1 2 3 4 5 6 7 8 9 10

66) I get really excited when I think of new ideas to stimulate my "venture business".

1 2 3 4 5 6 7 8 9 10

67) I believe it is important to approach business opportunities in unique ways.

1 2 3 4 5 6 7 8 9 10

68) I always try make friends with people who may be useful in my business.

1 2 3 4 5 6 7 8 9 10

69) I usually seek out peers who are excited about exploring new ways of doing things.

1 2 3 4 5 6 7 8 9 10

70) I enjoy being the person who initiates change in "venture business" affairs.

1 2 3 4 5 6 7 8 9 10

71) I always follow accepted business practices in the dealings I have with others.

1 2 3 4 5 6 7 8 9 10

72) I rarely question the value of established procedures.

1 2 3 4 5 6 7 8 9 10

73) I get a thrill out of doing new, unusual things in my "venture business" affairs.

1 2 3 4 5 6 7 8 9 10

Appendix I

Modified EAO Instrument with Modification Codes

CODING SYSTEM

S = same as the original EAO instrument

V = the word Venture has been used to replace a word or added to focus the question

SM= slight modification of wording to ease interpretation e.g.

D = definition of word used in the item is supplied

NAME OF YOUR VENTURE GROUP _____

ATTITUDE TEST 1 & 2

Please complete all the items in the following attitude test. There are 73 items in all. Read each statement and decide whether or not you **agree** or **disagree**, and to **what extent you agree or disagree**. Circle the appropriate number on the scale of 1-10. Circle "1" if you strongly disagree with the statement, and "10" if you strongly agree with the statement. Circle "5" if you disagree slightly or "6" if you agree slightly. Choose any other numbers on the scale which you feel express your level of agreement/disagreement to the statement. Do not think too deeply about each question, mark down your first thought.

Thankyou for your co-operation.

Sample Statement:

I feel good when I think of a new solution to an old problem.

1	2	3	4	5	6	7	8	9	10
I				I	I				I
Strongly				Slightly	Slight				Strongly
Disagree				Disagree	Agreement				Agree

Read and assess how you feel about this statement . If you strongly agree circle number 10, if you strongly disagree circle number 1. Express your level of agreement or disagreement with any number from one to ten. You must decide where you fit on the scale provided.

Now begin working through the items.

1) I get my biggest thrills when my work is among the best there is.

1	2	3	4	5	6	7	8	9	10
Code = S (achievement-affect)									

2) I seldom follow instructions unless the task I am working on is too complex.

1	2	3	4	5	6	7	8	9	10
Code = S (innovation-behaviour)									

3) I never put important matters off until a more convenient time.

1	2	3	4	5	6	7	8	9	10
Code = S (achievement-behaviour)									

4) I have always worked hard in order to be the best in my field.

1 2 3 4 5 6 7 8 9 10

Code = S (personal control-behaviour)

5) I feel like a total failure when my "venture business" plans don't turn out the way I think they should.

1 2 3 4 5 6 7 8 9 10

Code = V (self-esteem-affect)

6) I feel energetic working with innovative peers in a dynamic "venture business" climate.

1 2 3 4 5 6 7 8 9 10

Code = V (innovation-affect)

7) I believe that concrete results are necessary in order to judge "venture business" success.

1 2 3 4 5 6 7 8 9 10

Code = V (achievement-cognition)

8) I spend a considerable amount of time making any organisation I belong to function better.

1 2 3 4 5 6 7 8 9 10

Code = S (achievement-behaviour)

9) I know that social and economic conditions will not effect my success in "venture business".

1 2 3 4 5 6 7 8 9 10

Code = V (personal-control cognition)

10) I believe it is important to analyse your own weaknesses in business dealings.

1 2 3 4 5 6 7 8 9 10

Code = S (achievement-cognition)

11) I usually perform very well on my part of any "venture business" activity I am involved with.

1 2 3 4 5 6 7 8 9 10

Code = V (self-esteem-behaviour)

12) I get excited when I am able to approach tasks in unusual ways.

1 2 3 4 5 6 7 8 9 10

Code = S (innovation-affect)

13) I feel very self conscious when making business proposals.

1 2 3 4 5 6 7 8 9 10

Code = S (self-esteem-affect)

14) I believe that in the business world the work of competent people will always be recognised.

1 2 3 4 5 6 7 8 9 10
Code = S (personal-control-cognition)

15) I believe successful people handle themselves well at business gatherings.

1 2 3 4 5 6 7 8 9 10
Code = S (self-esteem cognition)

16) I enjoy being able to use old concepts in new ways.

1 2 3 4 5 6 7 8 9 10
Code = SM (innovation-affect)

17) I seem to spend a lot of time looking for someone who can tell me how to solve all of my business problems.

1 2 3 4 5 6 7 8 9 10
Code = S (self-esteem-behaviour)

18) I feel terribly restricted being tied down to tightly organised business activities even when I am in control.

1 2 3 4 5 6 7 8 9 10
Code = S (innovation-affect)

19) I often sacrifice personal comfort in order to take advantage of business opportunities.

1 2 3 4 5 6 7 8 9 10
Code = S (achievement-behaviour)

20) I feel self conscious when I am with very successful people.

1 2 3 4 5 6 7 8 9 10
Code = SM (self-esteem-affect)

21) I believe that to succeed in business it is important to get along with the people you work with.

1 2 3 4 5 6 7 8 9 10
Code = S (self-esteem-cognition)

22) I do every job as thoroughly as possible.

1 2 3 4 5 6 7 8 9 10
Code = S (achievement-behaviour)

23) To be successful I believe it is important to use your time wisely.

1 2 3 4 5 6 7 8 9 10
Code = S (achievement-cognition)

24) I believe that the authority I have in business is mainly due to my expertise in certain areas.

1 2 3 4 5 6 7 8 9 10

Code = S (self-esteem-cognition)

25) I believe that to be successful a business person must spend time planning the future of his/her business.

1 2 3 4 5 6 7 8 9 10

Code = SM (achievement cognition)

26) I make a conscientious effort to get the most out of my resources.

1 2 3 4 5 6 7 8 9 10

Code = SM (achievement behaviour)

27) I feel uncomfortable when I'm unsure of what my business associates think of me.

1 2 3 4 5 6 7 8 9 10

Code = S (self-esteem-affect)

28) I often put on a show to impress the people I work with at Venture.

1 2 3 4 5 6 7 8 9 10

Code = V (self-esteem-behaviour)

29) I believe that one key to success in business is not to procrastinate (procrastinate means - to waste time and put off till later, dilly, dally etc.)

1 2 3 4 5 6 7 8 9 10

Code = D (achievement-cognition)

30) I get a sense of pride when I do a good job on my "venture business" projects.

1 2 3 4 5 6 7 8 9 10

Code = V (achievement-affect)

31) I believe that organisations which don't experience radical changes now and then tend to get stuck in a rut.

1 2 3 4 5 6 7 8 9 10

Code = S (innovation cognition)

32) I feel inferior to most people I work with.

1 2 3 4 5 6 7 8 9 10

Code = S (self-esteem-affect)

33) I think that to succeed in business these days you must eliminate inefficiencies.

1 2 3 4 5 6 7 8 9 10

Code = S (achievement-cognition)

34) I feel proud when I look at the results I have achieved in my business activities.

1 2 3 4 5 6 7 8 9 10
Code = S (achievement-affect)

35) I feel resentful when I get bossed around at work.

1 2 3 4 5 6 7 8 9 10
Code = S (personal-control-affect)

36) Even though I spend some time trying to influence business events, I have had very little success.

1 2 3 4 5 6 7 8 9 10
Code = SM (personal-control-behaviour)

37) I feel best about my work when I know I have followed accepted procedures.

1 2 3 4 5 6 7 8 9 10
Code = S (innovation-behaviour)

38) Most of my time is spent working on several business ideas at the same time.

1 2 3 4 5 6 7 8 9 10
Code = S (innovation-behaviour)

39) I believe it is more important to think about future possibilities than past accomplishments.

1 2 3 4 5 6 7 8 9 10
Code = S (achievement-cognition)

40) I believe that in order to succeed, one must conform to accepted business practices.

1 2 3 4 5 6 7 8 9 10
Code = S (innovation-cognition)

41) I believe that any organisation can become more effective by employing competent people.

1 2 3 4 5 6 7 8 9 10
Code = S (personal-control-cognition)

42) I usually delegate routine tasks after only a short period of time.

1 2 3 4 5 6 7 8 9 10
Code = S (innovation-behaviour)

43) I will spend a considerable amount of time analysing my future business needs before I allocate any resources.

1 2 3 4 5 6 7 8 9 10
Code = SM (achievement-behaviour)

44) I feel very good because I am ultimately responsible for my own "venture business" success.

1 2 3 4 5 6 7 8 9 10
Code = V (personal-control-affect)

45) I believe that to become successful in business you must spend some time every day developing new opportunities.

1 2 3 4 5 6 7 8 9 10
Code = S (innovation-cognition)

46) I get excited creating my own business opportunities.

1 2 3 4 5 6 7 8 9 10
Code = S (personal-control-affect)

47) I make it a point to do something significant and meaningful in relation to venture every week.

1 2 3 4 5 6 7 8 9 10
Code = V (achievement-behaviour)

48) I usually take control in unstructured situations.

1 2 3 4 5 6 7 8 9 10
Code = S (innovation-behaviour)

49) I never persist very long on a difficult job before giving up.

1 2 3 4 5 6 7 8 9 10
Code = S (self-esteem-behaviour)

50) I spend a lot of time planning my business activities.

1 2 3 4 5 6 7 8 9 10
Code = S (personal-control-behaviour)

51) I believe that to arrive at a good solution to a business problem, it is important to question the assumptions made in defining the problem.

1 2 3 4 5 6 7 8 9 10
Code = S (innovation-cognition)

52) I often feel badly about the quality of the work I do.

1 2 3 4 5 6 7 8 9 10
Code = S (self-esteem-affect)

53) I believe it is important to continually look for new ways to do things in business.

1 2 3 4 5 6 7 8 9 10
Code = S (innovation-cognition)

54) I believe it is important to make a good first impression.

1 2 3 4 5 6 7 8 9 10
Code = S (self-esteem-cognition)

55) I believe that when pursuing "venture business" goals or objectives, the final result is far more important than following the accepted procedures.

1 2 3 4 5 6 7 8 9 10
Code = V (innovation-cognition)

56) I feel depressed when I don't accomplish any meaningful work.

1 2 3 4 5 6 7 8 9 10
Code = S (achievement-affect)

57) I often approach business tasks in unique ways.

1 2 3 4 5 6 7 8 9 10
Code = S (innovation behaviour)

58) I believe the most important thing in selecting business associates is their competency.

1 2 3 4 5 6 7 8 9 10
Code = S (achievement-cognition)

59) I feel good when I have worked hard to improve my "venture business".

1 2 3 4 5 6 7 8 9 10
Code = V (achievement-affect)

60) I enjoy finding good solutions for problems that nobody has looked at yet.

1 2 3 4 5 6 7 8 9 10
Code = S (innovation-affect)

61) I believe that to be successful a company must use business practices that may seem unusual at first glance.

1 2 3 4 5 6 7 8 9 10
Code = S (innovation-cognition)

62) My knack for dealing with people has enabled me to create many of my opportunities.

1 2 3 4 5 6 7 8 9 10
Code = S (personal-control-behaviour)

63) I get a sense of accomplishment from the pursuit of my "venture business" opportunities.

1 2 3 4 5 6 7 8 9 10
Code = V (achievement-affect)

64) I believe that currently accepted regulations were established for a good reason.

1 2 3 4 5 6 7 8 9 10

Code = S (innovation-cognition)

65) I always feel good when I make the organisations I belong to function better.

1 2 3 4 5 6 7 8 9 10

Code = S (achievement-affect)

66) I get really excited when I think of new ideas to stimulate my "venture business".

1 2 3 4 5 6 7 8 9 10

Code = SM & V (innovation-affect)

67) I believe it is important to approach business opportunities in unique ways.

1 2 3 4 5 6 7 8 9 10

Code = S (innovation cognition)

68) I always try make friends with people who may be useful in my business.

1 2 3 4 5 6 7 8 9 10

Code = S (achievement-behaviour)

69) I usually seek out peers who are excited about exploring new ways of doing things.

1 2 3 4 5 6 7 8 9 10

Code = SM (innovation behaviour)

70) I enjoy being the person who initiates change in "venture business" affairs.

1 2 3 4 5 6 7 8 9 10

Code = SM & V (innovation affect)

71) I always follow accepted business practices in the dealings I have with others.

1 2 3 4 5 6 7 8 9 10

Code = S (innovation behaviour)

72) I rarely question the value of established procedures.

1 2 3 4 5 6 7 8 9 10

Code = S (innovation-behaviour)

73) I get a thrill out of doing new, unusual things in my "venture business" affairs.

1 2 3 4 5 6 7 8 9 10

Code = SM & V (innovation-affect)

Appendix J

Telephone Survey

TELEPHONE SURVEY

Participant responses must be circled at the time of the telephone interview.

Participant Category Managing Director Director Worker

Achievement Subscale

1. Affect Component (Ach-Aff)

Did you find it an exciting experience contributing to a successful business team at Venture? Y/N/U

2. Cognition Component (Ach-Cog)

Do you believe the Venture program has shown you the importance of dealing responsibly with business matters as soon as they arise? Y/N/U

3. Conation Component (Ach-Con)

As a result of the Venture program would you now willingly give up hobbies/leisure time and other pleasurable activities in order to complete an important task more thoroughly? Y/N/U

Personal Control Subscale

4. Affect Component (PC-Aff)

As a result of the Venture experience would you like to be the boss in total control of important business decisions? Y/N/U

5. Cognition Component (PC-Cog)

Do you believe the Venture program has taught you how to personally influence important decisions? Y/N/U

6. Conation Component (PC-Con)

As a result of the Venture program will you now work harder to achieve your future career goals? Y/N/U

Self Esteem Subscale

7. *Affect Component (SE-Aff)*

As a result of the Venture program do you now enjoy dealing with business people in a business environment? Y/N/U

8. *Cognition Component (SE-Cog)*

Do you believe the Venture program has given you more confidence in the business domain? Y/N/U

9. *Conation Component (SE-Con)*

As a result of the Venture program would you consider starting a business venture of your own sometime in the future? Y/N/U

Innovation Subscale

10. *Affect Component (In-Aff)*

As a result of the Venture program do you like solving business problems with new ideas? Y/N/U

11. *Cognition Component (In-Cog)*

Do you believe the Venture program has taught you to see the solution to business problems from many perspectives? Y/N/U

12. *Conation Component (In-Con)*

As a result of the Venture program would you personally try to design new goods or services for the retail market? Y/N/U

What do you believe you have gained from participating in the Venture program?

Appendix K

*Newspaper Article Relating to the Managing Director of
Venture Group 1 Tasmania 1993.*

Appendix K

Newspaper Article relating to the Managing Director of
Venture Group 1 Tasmania 1993.

YOUNG BUSINESS PERSON OF THE YEAR

Win gives Virginia new career goals

A new world in business and management has opened up to Alanvale College student Virginia Horscroft through the Young Achievement Australia Awards.

Virginia, 16, was last night named Tasmanian Young Business Person of the Year at a ceremony at Wrest Point in Hobart.

The year 11 student won the award through being managing director of a successful student company sponsored by the Hydro-Electric Commission in Launceston.

Under Virginia's leadership, the 25 students in the company, Why-Ay-Ay, produced 150 windchimes and 205 recipe books over six months.

The team's hard work led to a return to shareholders of \$8.20 for every \$2 invested.

Virginia said that the focus for

BY MARK POLONSKY

her future had now broadened from purely science.

"I wanted to pursue a career in a field related to chemistry, and while I'm still interested in science, I'd like to blend it with some form of business or management skills," she said.

Virginia said that winning the award would help her in applying for jobs when the time came.

"The biggest thing was the experience of working with people, organising a team and getting everyone participating."

Virginia said that she put at least seven hours a week into the company over the 26 weeks.

Nine finalists from throughout Australia will compete for the national title in Sydney on November 9.

I Virginia Horscroft, give Ms Julia Edwards my full permission to use any newspaper articles which reveal my identity in the Appendix of her Masters thesis.

V. A. Horscroft

Virginia Horscroft

Managing Director - Tasmanian Venture Group 1 1993