

# **Students in an enterprise education program: Their experience of, and attitudes towards, the world of work**

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## **Abstract**

Over the last decade or more, there have been a number of attempts to introduce programs into secondary schools that seek to provide students with an orientation to the world of business and to entrepreneurial activity. Despite the considerable effort that has been put into developing these programs and in offering them both within and in addition to standard curriculum offerings, there has been relatively little research on the programs, their effectiveness or their relevance to the prior experience, attitudes or interests of school students.

This paper draws on data from an ongoing evaluation of one of these Enterprise Education programs. It uses data provided by over 10,000 students accumulated from programs offered over the four years of 1998-2001 and focuses on the personal and family experience of the students and on their attitudes toward, and understanding of, "business".

The data highlight the views of "business" that students hold and the significant variations in these (and in the student's exposure to the "world of work") that operate across different demographic groups. The paper will consider some of the implications of these findings for programs of this type targeted at school students.

## **Introduction**

Within the rhetoric of Australian governments about the reform of secondary education, enterprise education has been a major innovative theme since at least the late 1980s when the OECD took up the idea from US and Canadian practice (Ball 1989). However, despite the extensive efforts to develop and extend this curriculum strand (see for example, Kearney 1991), it remains a relatively small part of the experience of most school students.

While, more recently, attempts have been made to introduce aspects of entrepreneurial skill and knowledge into mainstream curricula, the major means by which enterprise education has manifested within secondary schools has been in programs developed outside the usual educational bureaucracies. These have been introduced into schools on a voluntary basis. While the nature of these programs is quite variable, a common feature has been their use of real or simulated business experience involving the creation and operation of a company involved in the production of goods or the provision of services.

One of these programs is ABW Enterprise Education. Originated in 1993, the program has grown over the years and in 2001, 8,372 students from ninety-two schools in seven states/territories participated. The program involves students in an intensive one-week experience. Groups of ten students form a company and then operate the company for eight business cycles (notionally two years), developing and marketing new products as they go and competing against each other within a computer

simulation of the Australian economy. Originally the program was targeted at Year 11 students but, as it expanded, it has been taken up extensively by Year 10 students. The program has been extensively evaluated since 1998 and this paper draws on the data from those evaluations (see, eg, Hawke 2001).

Importantly, this data set provides the only comprehensive information on the background experience young people bring into such programs and provides useful insights into the experiences of, and attitudes towards, business of young people more generally.

### **Literature review**

The literature on enterprise education is surprisingly thin and notably devoid of empirical work. The greatest proportion of writing in this area falls into one of three groups. The first is strongly polemical and typically takes the position as expressed by Smyth (2000, p.2) that “enterprise education [is] part of the ‘problem’ rather than the ‘solution’”. The second exhorts schools and industry to become involved in enterprise education as a means of social and economic renewal (eg, Turner & Robinson 2001), while the other major component of the literature involves guides and “how-to” publications (such as Kearney 1991).

In Australia, only four attempts appear to have been made to examine these programs or their antecedents in any empirical way. One of these is the 1999 evaluation of the Commonwealth’s Enterprise Education in Schools (EES) element of the school to work programme (Keys Young 1999). This evaluation report provided a range of both qualitative and quantitative data on five programs that had been supported by the Commonwealth under the EES as well as extensive information on telephone surveys and interviews that were conducted with schools across Australia.

A key outcome of this evaluation was that understanding of the concept of enterprise education varied widely and that, in general, schools were unaware of the program or of resources produced to support it. Where schools had direct experience of one or more of the specifically-funded programs, they tended to think they had been useful, although there was doubt as to whether they had any real long-term impact.

The three remaining research efforts are based around evaluations of specific programs. The first (St Leger & Ward 1997) examined four pilot enterprise education projects involving secondary students and local industry from four Victorian regions. These were very different programs and the report identified the learning outcomes for students, as well as the professional development needs for teachers, and potential benefits to business arising from programs of this type.

The second is concerned with one of the more widely offered enterprise education programs in Australia — Young Achievement Australia (YAA). This program involves students in establishing and operating a real small business over a period of time. Cameron and Milstein (1999; Milstein & Cameron 1998) focused on rural YAA programs and appears to be the only study that has explored the long-term impacts of a program. In this study, 106 graduates of the program responded to a survey that sought to assess changes in knowledge, attitudes, skills, and consequent changes in outcomes. This data was supplemented by ten case studies of individual graduates.

The study found participants had enjoyed the program. However, the program did not appear to have any great impact on subsequent study or career choices. It also noted that graduates' evaluations were highest when the program they'd attended was judged to have involved a cohesive group that was well led by their business adviser. Breen (1999; 2001) has also examined some YAA programs and reports that these programs were more attractive to those already so inclined but that, nonetheless, impact can be identified, although the nature of the impact is not detailed.

The final research program in this area involves another of the widely available programs — ABW Enterprise Education (Hawke 1999; 2000; 2001; 2002). The research has been ongoing since 1998 and involves the year-by-year evaluation of the program. However, over this period of time, data has accumulated on over 10,000 school students who have undertaken the program. The successive evaluations have clearly indicated that students and teachers enjoy the program and that the program shifts their attitudes towards business and their views of their own abilities in a number of significant ways.

### **Methodology**

Students who have registered to participate in an ABW Enterprise Education program are asked to complete a survey before commencing the program. This asks for basic information about the student and also asks them to rate a series of statements as to how those statements apply to them. Over the years since the evaluation began, the form has changed to some degree but most of the items have remained worded in the same manner and it is this data that is used in this paper.

**Table 1 Survey samples by year of undertaking the program**

Year	Frequency	Percent
1998	766	7.2
1999	3229	30.4
2000	2962	27.9
2001	3651	34.4
Total	10608	100.0

**Table 2 Distribution of sample by state**

State	Frequency	Percent
ACT	897	8.5
NSW	3672	34.6
QLD	1981	18.7
SA	2247	21.2
TAS	400	3.8
VIC	1161	10.9
WA	250	2.4
Total	10608	100.0

A total of 10,608 useable survey responses are available for analysis and Table 1 indicates how these have accumulated since the initial, limited study of the 1998 cohort, and Table 2 shows how the students are spread across the Australian states and territories. The survey forms are returned from the schools to ABW who then arranges the input of the data.

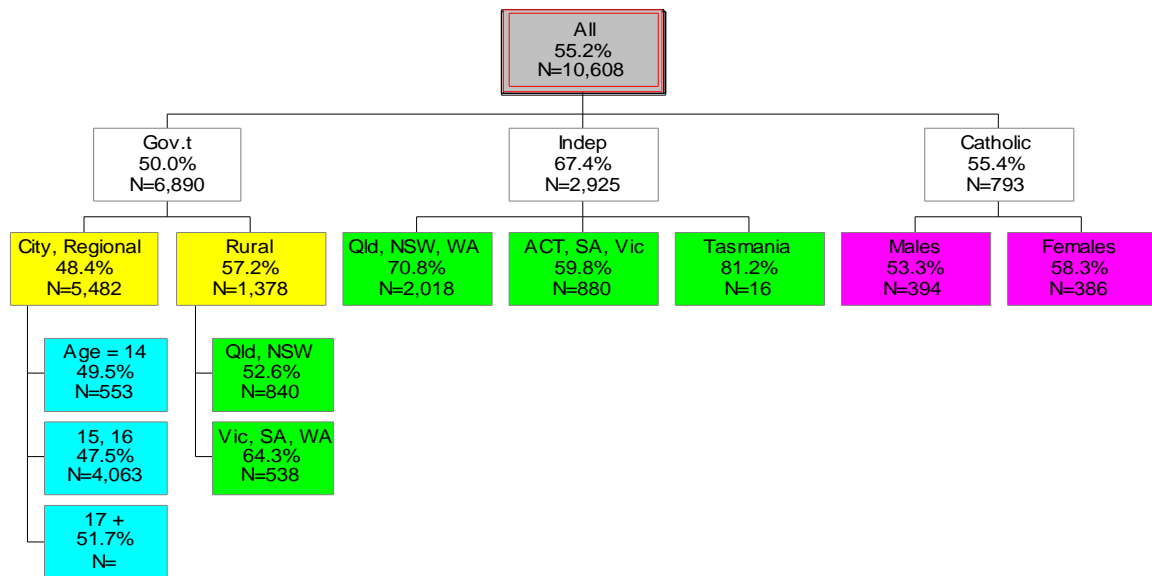
For this study, the principal data analytic approach adopted has been the use of Formalised Inference-based Recursive Modelling (FIRM) (Hawkins & Kass 1982), a contemporary version of the AID methodologies developed in the 1960s. Essentially the approach involves successively subdividing the sample on the variable that maximises the differences within the sample on a specified criterion. This allows for the relationships between variables to be easily understood without requiring

assumptions of linear relationships among the variables. In the following, all reported splits are significant at the 1% level.

## Findings and discussion

Students are asked to provide a number of pieces of demographic information about themselves — age, gender, and the grade they are currently enrolled in. As well, information is available about the school, its location and status. These data items form a framework within which we will explore similarities and differences in the background of the students.

### *Experience of business*



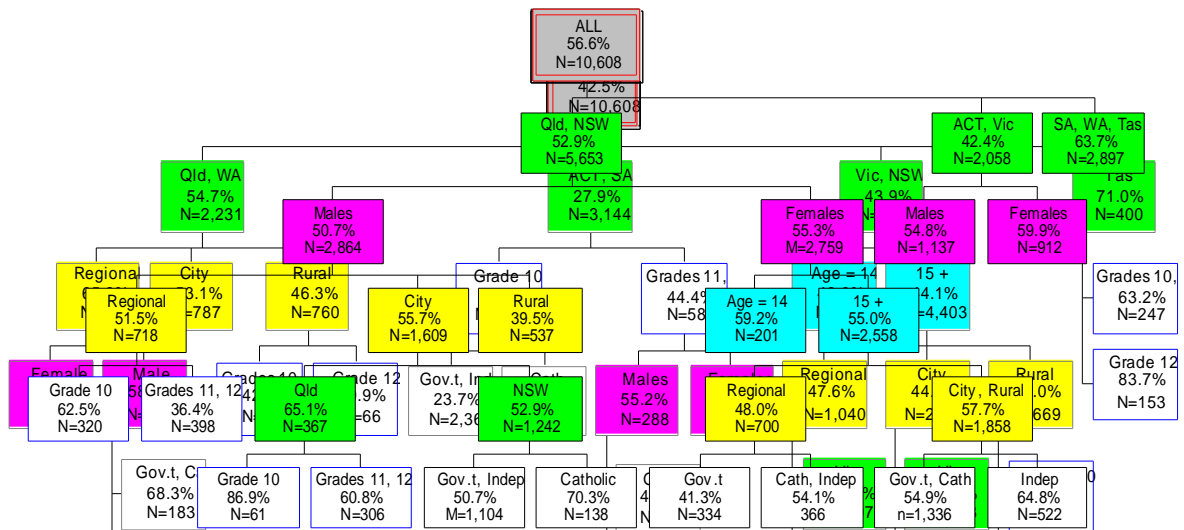
**Figure 1 Percentage whose parents or relatives own/manage a business**

The survey asks students three questions about their prior exposure to business ideas and concepts. The first asks about their family’s involvement in business — “My parents or other relatives own or manage a business – Yes/No”. Overall, 55.2% of students indicated that they did have a parent or relative in business. However, there are substantial overall differences within the sample as Figure 1 shows. Amongst the subgroups, the lowest proportion responding ‘Yes’ was 47.5% (15-16 year old students in government schools that were not located in rural areas), while the highest was recorded by Tasmanian independent school students (81.2%) (note however, the small sample size for this group).

In this instance, the type of school attended by the students is the most significant factor differentiating whether or not their parents/relatives are engaged in business. This being least often the case in government schools. Within each school system, however, quite different factors operate. Within government schools, for example, the school’s location is of considerable importance, but this is not a notable factor in independent or catholic schools.

A second question asks students whether they are currently studying any business-related subjects. Overall, 42.5% of the students are doing so but again the internal differences are substantial and, in this case, more complex. As Figure 2 illustrates, the state in which a student attends school is the most significant factor in their likelihood

of studying business-related subjects. Focussing only the states with high levels of participation, the rate of business study runs from a low of 28% in ACT and SA to a high of 55% in Qld and WA. It seems clear that there are wide differences among the states as to the extent to which students are exposed to business-related concepts through the curriculum. It is possibly not surprising to notice, too, that age and school grade also play important roles here with the pattern being that younger students are less likely to be undertaking business studies than their older colleagues. Together these suggest that features of the school system itself play the dominant role in determining the extent to which students are exposed to these ideas within school itself.



**Figure 3 Percent of students with a part-time job**

**Figure 2 Percentage of students studying business-related subjects**

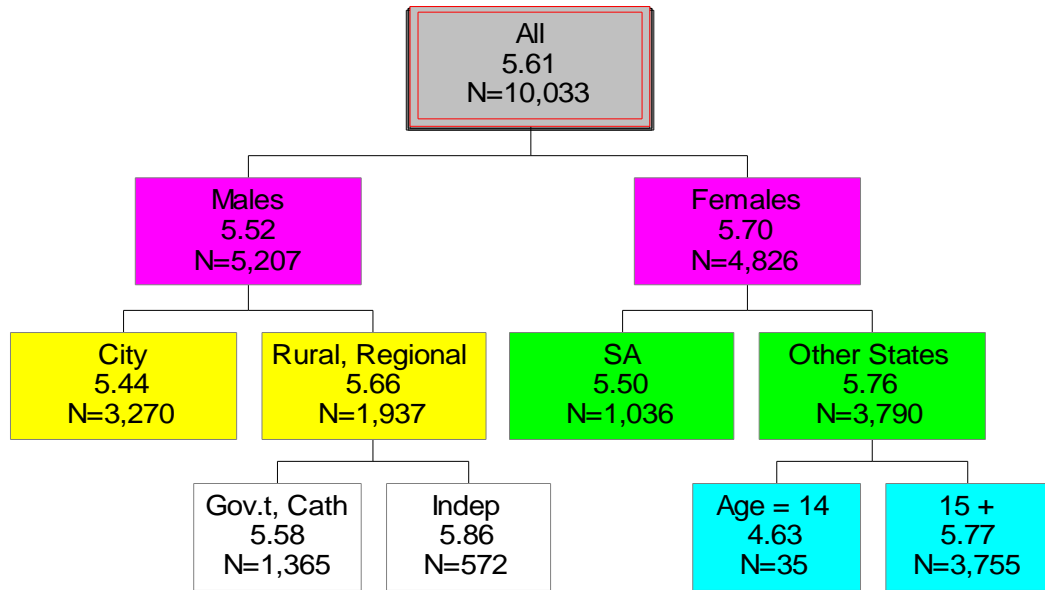
The third question we examine asks students whether or not they are currently in part-time work. Slightly over half (56.6%) indicated that they are.

As with the previous question, the most significant factor was the students' state of schooling. Almost two thirds of those in the western states and Tasmania are in part-time work (63.7%) but much lower proportions do so in the east (52.9% in NSW & Qld, 42.4% in Vic and the ACT). However, gender was clearly also significant, with female students in the larger, eastern states somewhat more likely to have a part-time job than their male counterparts. This suggests that local labour markets may play a major role in providing opportunities for students to gain first-hand experience of work.

*Attitudes about business*

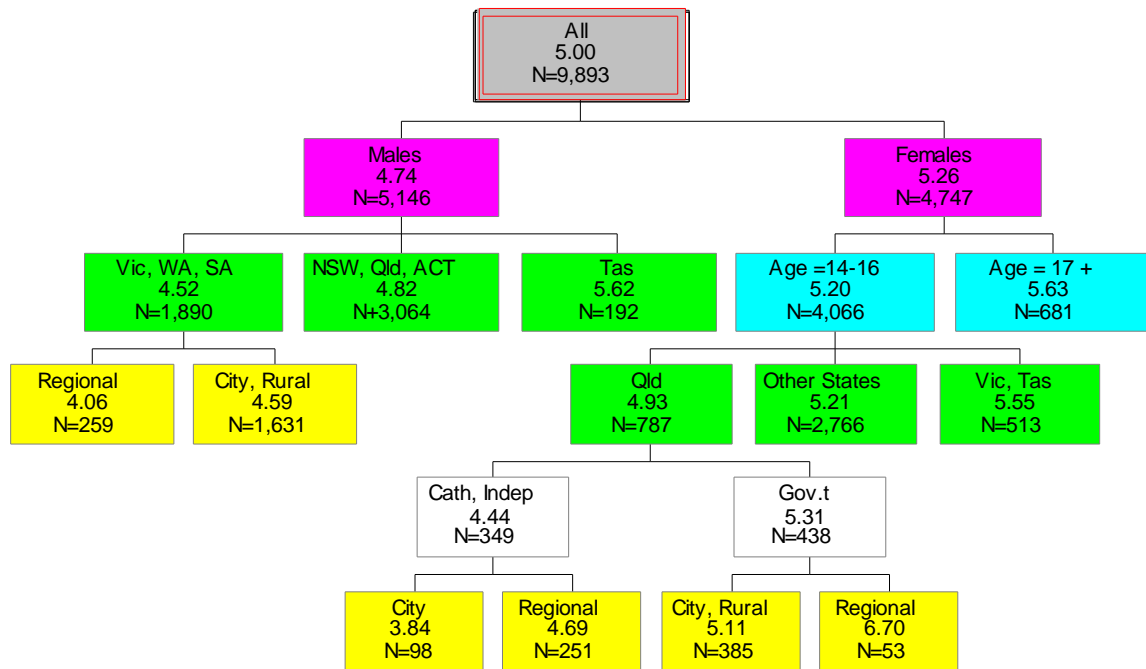
As with the students' prior experiences of business, three questions identify significant variations within the overall sample as to their attitudes to business in general. In total, the survey asked students to respond to seven statements of which the three reported here remained consistent over the period. Others were changed as it was found that the pre-program ratings did not differentiate among the students and thus could not identify changes post-program. For this set of questions, students were

asked to respond on a nine-point scale indicating the degree to which the statement applied to them. The figures reported below are their average ratings.



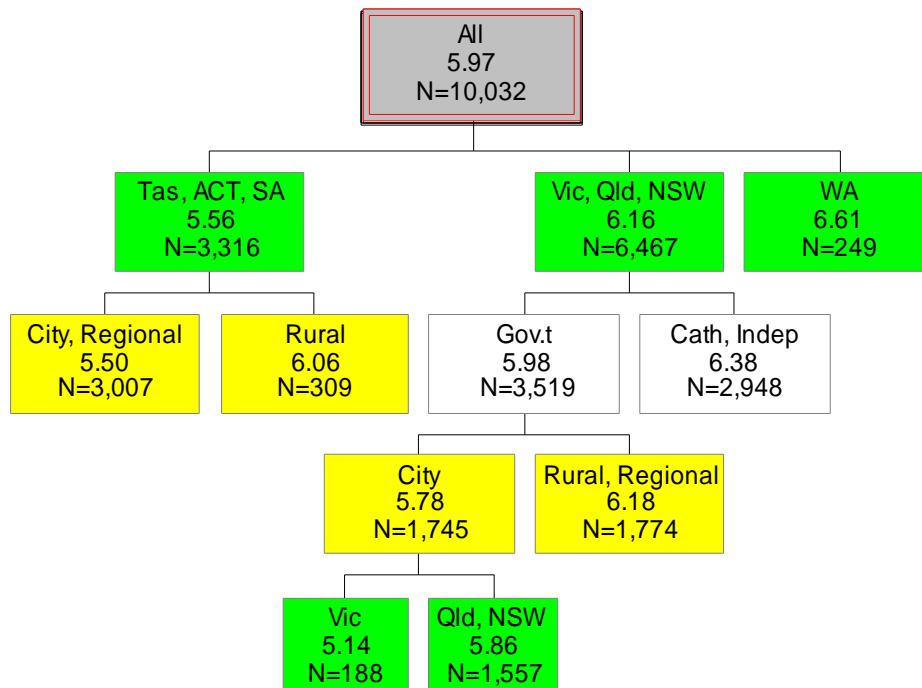
**Figure 4 Average rating of knowledge of business operation**

The first of these asked students to indicate the degree to which they “have a good understanding of how a business operates”. Figure 4 shows that the students’ gender is the most significant factor influencing their rating of their knowledge. Female students typically rate their knowledge higher than males, although this is not the case in South Australia. For male students, those studying in the capital cities rate their knowledge as being lower than do males from rural or regional areas.



**Figure 5 Average rating of wish to run a business in the future**

The second question asked whether students would like to run a business in the future. Again, the gender of the student was the dominant factor with male students much less interested in running a business. Among males, however, significant state differences were apparent but these were only important for the younger female students.



**Figure 6 Average rating of access to business career information**

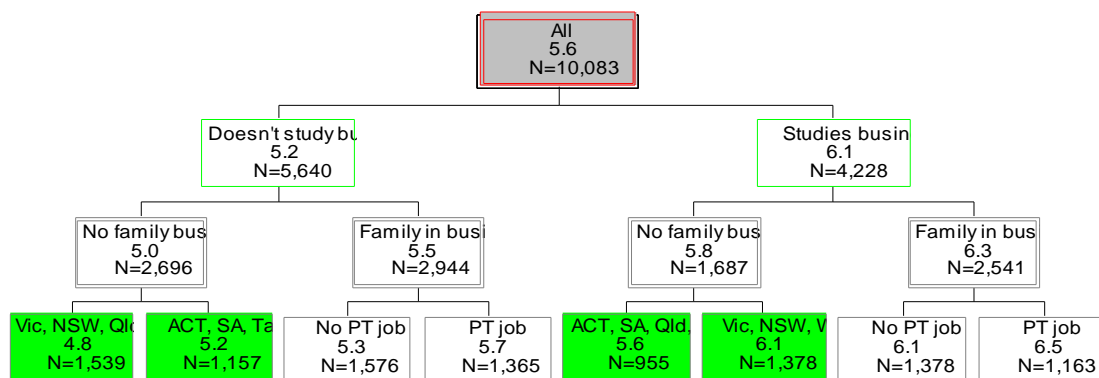
Finally, the participants were asked to identify how easily they could access information about a career in business. Unlike the two previous questions, gender played no part here and this appears to be a systemic, rather than personal matter. The

dominant factor was the state in which the student was enrolled. With the exception of WA, it appears that students in the larger states believe they have better access to information than do the students from smaller states (see Figure 6).

Within states, locational and school type issues dominate the variation.

### *Extending the set of predictors*

The analyses of attitudes to business reported above drew on the same set of demographic predictors used for the analyses of prior experience. However, it is possible to extend this set by including the data on prior experience as well. As we will see, this can significantly affect the picture that emerges.



**Figure 7 Rating of understanding of business for the extended set**

When this extended analysis is applied to the question concerning the future possibility of running a business, the first two levels of breakdown remain unchanged. However, the third level is now shaped by whether or not the student has a family member in business. For each of the subgroup defined by NSW, Qld and ACT males and that defined by 14-16 year old females (see Fig. 5), this factor operates to subdivide the group. In each case, those with a family member owning or managing a business report that they are more likely to want to run a business in future.

In the case of the students' rated understanding of business operations, however, the additional variables completely change the outcome as Figure 7 highlights.

Here, the new variables dominate the analysis and Gender, the variable that was most significant in the original analysis disappears entirely, suggesting that it was to some degree a proxy for other factors.

Whether or not students are currently studying business-related subjects is now the most significant factor and, in a consistent manner, the presence or absence of family involvement in business becomes the next most significant. Indeed this analysis provides the most coherent picture of any of those reported here with each of these two factors having a simple cumulative effect. Indeed the average ratings for the four primary subgroups can be computed from the simple formula:

$$\text{Average rating} = 5.0 + 0.8 \text{ (if studying business)} + 0.5 \text{ (if family member in business)}$$



## *Overall patterns*

It is informative to consider these analyses as a whole and to look for patterns within the patterns.

The primary distinguishing categories identified by the FIRM analyses are set out in Table 3. It is notable that State and Gender dominate as factors that differentiate the responses of the student respondents.

**Table 3 Key factors – primary analyses**

<b>Analysis</b>	<b>Primary</b>	<b>Secondary</b>
P/T work	State	Gender
Study business	State	Location/Grade/Age
Family in business	Type	Location/State/Gender
Career info	State	Location/Type
Understanding	Gender	Location/State
Run a business	Gender	State/Age

Among the states and territories, particular patterns of groupings appear more or less frequently. SA and the ACT frequently occur in the same groups as is the case for NSW and Qld. Moreover, the latter pair rarely occur in combination with either SA or Tasmania. It appears that the ways by which state factors shape the experience and attitudes of students is more complex than simply one of small versus large but reflects some combination of educational philosophies and local labour markets.

## **Conclusions**

It is clear, at least for this program, that students entering enterprise education programs do so with highly variable backgrounds as to their knowledge of work and their attitudes towards it. This study has highlighted the substantial variations across states that contribute greatly to these differences and suggests that the educational systems within which students are prepared considerably shape their exposure to business ideas and practices. These variations appear to be complex and involve not only the overarching role of the state curriculum framework but appear to involve the type of school — government, catholic or independent — as well.

Gender differences are also important and there are substantial differences in the background that male and female students bring to these programs especially regarding their disposition towards business. Girls are notably more positive in their attitudes than are boys and are more likely to have had experience in part-time work.

Crucially, too, other factors that reflect the social and cultural background of the students — type of school, location, access to P/T work, exposure to business through family — are also significant in shaping the experience and attitudes of the students.

Most enterprise education programs don't explicitly address the range of different backgrounds students bring to them. This research suggests that these might be important factors in constraining these programs development and take up. Future research needs to also explore whether these are factors in the longer-term impact of these programs as well.

## Acknowledgments

The support and assistance of the staff of ABW in compiling the data used in this study and allowing access is greatly appreciated. Special thanks to Sandra Ross (General Manager) and Norman Owens (Chairman).

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