ATTITUDES TO ENTREPRENEURSHIP: WHAT DO 1ST YEAR BUSINESS STUDENTS THINK? AREAS OF FOCUS AND IMPROVEMENT FOR UNIVERSITIES IN PROMOTING AND SUPPORTING STUDENT ENTREPRENEURSHIP

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ABSTRACT

The role of education in the creation of entrepreneurial new firms is at the centre of the research outlined in this paper. Entrepreneurship is one of the key platforms for growth identified by the European Union, with its role in job creation and growth being recognized worldwide. This paper describes an initial empirical analysis of a comprehensive research project conducted in eight countries. In particular, it looks at the entrepreneurial education context to provide insight into the attitudes of first year business students towards entrepreneurship, entrepreneurs and the creation of new ventures.

INTRODUCTION

Entrepreneurship which can be understood as ‘the mindset and process to create and develop economic activity’ (European Commission, 2003, p. 6) has significantly raised interest among practitioners, scientists and politicians over the last decades (OECD, 2007). This growing interest has been developed alongside different economic changes, such as globalisation (Gummesson, 2002) and the acceleration of technological development (Santoro & Chakrabarti, 2002). This has lead to rapid changes in the competitive environment (Siguaw et al., 2003) with organisations more than ever needing to adapt to these changes and develop innovative products, services, processes and business models (Szerb, 2003). In today’s economy entrepreneurship is seen as vital source for economic growth and competitiveness, job creation as well as wealth creation and providing societal interests (European Commission, 2003).

In accordance with the outlined significance for economies and business organisations, the Lisbon European Council has defined the need to boost entrepreneurship as a major challenge facing the European Union’s member states in year 2000 (Eurobarometer, 2007). Since then, many different agendas for promoting Entrepreneurship have been set. For instance, the Oslo Agenda for Entrepreneurship Education in Europe shows a large set of actions also detailing on what level these actions have to be conducted (e.g. EU level, member state level, or at universities, businesses or intermediary organisations).

Given the critical nature of entrepreneurship, both academics and practitioners have increased their efforts in promoting an entrepreneurial mindset within the society (e.g. the "Oslo Agenda for Entrepreneurship Education"). Education has been confirmed as a vital component in the creation and continuing development of entrepreneurial attitudes (Gorman et al., 1997; Kourilsky and Walstad, 1998) and successful firms. While research has continued to grow exploring entrepreneurship education, our understanding of students outside the entrepreneurial education streams, or not yet entered into such stream, is still lacking. In this context students are seen as the primary resource of future entrepreneurs. Many studies have investigated entrepreneurial attitudes at specific universities already (Lüthje and Franke, 2003; Franke and Luthje 2004; Lena and Wong 2003; Teixeira and Forte 2008). However, due to the usage of different questionnaires, results are not comparable across universities and countries.

Hence, this empirical study is targeted at business students in their first year of study, who have not yet been introduced to entrepreneurship in their studies. It aims to investigate the students’ attitudes
towards new venture creation, and to derive recommendations how to better promote and improve entrepreneurship as part of more general business studies. While the results presented are part of a wider research project which investigated entrepreneurial attitudes of students in many different countries (e.g. Germany, UK, Finland, Slovenia, Portugal, Poland or United Arab Emirates), this paper primary focuses on the data collected at an Australian University. Findings relating to other countries are included as a comparison where suitable.

To provide a comprehensive overview, the paper covers a wide range of topics on entrepreneurship, including (1) the student’s perceived image of entrepreneurs and entrepreneurship, (2) the student’s level on interest on various entrepreneurship types, (3) the student’s familiarity with entrepreneurship and where this familiarity comes from, (4) the factors influencing students in their decision of becoming an entrepreneur or employee, as well as (5) the ways how higher education institutions can foster the student’s interest in entrepreneurship. Aiming to find similarities and differences in the data, comparisons using the student’s age and experience with entrepreneurship as differentiation criteria are shown. Furthermore, the study compares the Australian results with the international average received from seven other countries.

Implications suggested to arise from the research include (1) improved methods for universities to foster entrepreneurial spirit and assist new venture creation with students, and (2) improved understanding of the propensity for students to undertake entrepreneurial study and start a new venture. This includes better understanding of (a) the importance of entrepreneurship and entrepreneurs for students, (b) personal entrepreneurship capabilities in students, (c) how well students understand the reality of new venture creation, (d) students’ interest in those indicators that indicate the propensity to undertake entrepreneurial activity, (e) interest in studying entrepreneurial concepts, and (f) tendencies for becoming an employee versus being self-employed. In addition, a discussion of the results were expected to lead to (3) areas of focus and improvement for the promotion of entrepreneurship spirit in universities, as well as (4) areas of further research.

The paper is organised as follows: The first section has provided an introduction to the reason for the study. The second section will review relevant entrepreneurship literature to give a background on the topic of the study. The third section will discuss the research design, defining the research questions to be examined, a framework for the study as well as justification and reasoning for the research method. The fourth section provides an overview of the most relevant results using the study framework. The fifth section will discuss the results to make the results more relevant in application and the last section will conclude the study with the key observations to be taken from the study including looking at both the supply-side and the demand-side of entrepreneurship education and finally recommendation for future study will be made.

BACKGROUND

Despite its current prominence and the amount of research undertaken over the last two decades, the concept of entrepreneurship still remains a rather vague concept with lots of different approaches. While the origin of entrepreneurship is most often referred to Schumpeter (1934), and the merits of Drucker (1985) are widely acknowledged, today many varying, non-consistent definitions and approaches exist (Maes, 2003). Following the definition within a Green Paper on Entrepreneurship in Europe of the European Commission, entrepreneurship can be defined as ‘the mindset and process to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organisation’ (European Commission, 2003, p. 6). Thereby, the given definition outlines four major components of entrepreneurship.

Entrepreneurship ...

- is a mindset and a process
- is about developing economic activity
- contains specific characteristics
- can take place within new or existing organisations

First, entrepreneurship is both a mindset and a process. While most scholars understand entrepreneurship as the process of uncovering and exploiting business opportunities (Kirzner 1997, Shane & Venkataraman, 2000), others also recognise entrepreneurship as a mindset (European Commission, 2003; Redford, 2006; Gupta, 2008) referring to the thinking, motivation and capacity needed “to enter and compete in an existing market, to change or even to create a new market” (European Commission, 2003, p. 5).
Second, putting the mentioned mindset into action and following the entrepreneurial process develops economic activity. The most found economic impact of entrepreneurship in literature refers to job creation, economic growth as well as its crucial role in gaining and maintaining national/international competitiveness (European Commission, 2007, Cuervo et. al., 2007; European Commission, 2006, Maes, 2003). Nevertheless, entrepreneurship is also linked with more personal and social outcomes. For instance, literature outlines that entrepreneurship unlocks personal potential, assists societal interests and contributes to an increase in wealth of the poor (European Commission, 2007; OECD, 2006; European Commission, 2003).

Third, translating an intangible idea into success requires specific characteristics. While the definition given by the European Commission only refers to ‘blending risk-taking, creativity and/or innovation with sound management’ (European Commission, 2003, p. 6), literature points out a much larger and wider range of characteristics. Researchers have discussed a variety of personal characteristics of a ‘typical entrepreneur’. These personal characteristics include amongst others high achievement drive, action orientation, an internal locus of control, a tolerance for ambiguity, calculated or moderate risk taking, commitment, optimism, opportunism, creativity, innovation, independence, or a combination of these characteristics (Liang and Dunn, 2002; Bhide, 2000; Timmons, 1999; Scarborough and Zimmerer, 1999; Stevenson et. al, 1999; Kuratko and Hodgetts, 1998, Lambing and Kuehl, 1997; Jennings, 1994; Ho and Koh, 1992; Brockhaus and Horwitz, 1986).

Fourth, entrepreneurship can take place within new or existing organisations. While the general public often understands entrepreneurship only as starting a new business (start-ups), entrepreneurship literature takes a broader view and also recognises new venture creation within existing organisations, called e.g. intrapreneurship (Pinchot, 1985), corporate entrepreneurship (Zahra, 1991) or corporate venturing (Stopford and Baden-Fuller, 1994). Just as classical entrepreneurship is seen as crucial for the economy (see above), intrapreneurship is today recognised as one of the most important drivers of organisational survival, growth, profitability and renewal (Zahra, 1991)

In addition to the described characteristics, many scholars have detailed the competencies needed for entrepreneurial success. While Man et. al. (2002) cluster the competencies on a high level into opportunity, relationship, conceptual, organising, strategic and commitment competences, Lans et. al. (2005) provides more explicit competencies by allocating competence profiles of entrepreneurs and managers to this high level classification. Their literature review (amongst others Onstenk, 2003; Man et al., 2002; Mulder, 2001; Erkkiä, 2000; McClelland, 1987) outlines e.g. market-orientation, communication, networking, problem analysis, leadership, planning and organisation, result orientation, self-management, value clarification, and vision as competencies supporting the likelihood of entrepreneurial success.

Recognising the importance of entrepreneurship and the preference of many people towards being employee, the question arises how entrepreneurship can be fostered by governments, organisations and universities. Especially universities are seen having a crucial role in fostering entrepreneurship, as they can encourage entrepreneurship in three different ways. First, universities as institutions of higher education can encourage students by providing entrepreneurial training (Lüthje and Franke, 2002). Second, universities as institutions of research can transfer knowledge and technologies to industry. Literature refers to this commercialisation of research competencies, capacities and results as the university’s ‘third mission’ (Etzkowitz et al., 2000). Third, universities can bring people together in order to create new business either through networks or project interaction.

When looking to create a new venture, potential entrepreneurs generally, but more specifically students, need to develop an array of skills (McMullan and Long, 1987) to support their endeavours (e.g., planning, risk taking, market analysis, problem solving and creativity). Commencing a new venture indeed requires a mastery of a range of skills that are different to running an existing business. Whilst there are limitations in higher education courses, they still play a vital role in providing an important insight into the challenges of being an entrepreneur and in encouraging skill development and self-reliance (Henderson and Robertson, 2000). Driven by this, there has been an explosion of entrepreneurial tertiary courses including minors and majors in entrepreneurship.

Whilst this primarily deals with the supply side of entrepreneurship education (i.e., the courses taught in this field) (following Redford, 2006), the ‘demand side’ dealing with the motivations and attitudes of students, the future entrepreneurs and creators of new ventures, will also be addressed in this study. The impact of entrepreneurship education has been recognized as one of the crucial factors that help youths understand and foster an entrepreneurial attitude (Gorman et al., 1997; Kourilsky and Walstad, 1998).

The type of categories of education and training for entrepreneurs has been recognised to fit into three categories: Small Business awareness education which is often undertaken at a secondary school level which focuses on ‘increasing the number of people who are sufficiently knowledgeable about
small business’ to consider it as a future career option. The second is designed to provide practical assistance to those considering starting a new venture, which is often conducted at a tertiary level or in an informal course structure. The third is continuing business education for those already in business (Henry, C. et al, 2006). The focus of this study is on those people between the first and second step of this education and or training.

While new venture opportunities exist within nearly all academic disciplines (e.g., graphic arts, nursing, computer science, chemistry and pharmacy), the majority of entrepreneurship initiatives at universities are offered by business schools (Ede et al., 1998; Hisrich, 1988) and for business students (e.g., Roebuck and Brawley, 1996). In fact, most studies that have been conducted to explore entrepreneurial intent among university students have focused on business students (e.g., DeMartino and Barbato, 2002; Ede et al., 1998; Hills and Barnaby, 1977; Hills and Welsch, 1986). This study continues this research stream, however, uses first year students as its sample, given that these students have not yet been influenced in their opinions by a university education in the entrepreneurship area.

RESEARCH DESIGN

Research Questions

Education has been confirmed as a vital component in the creation of successful new firms. Due to the influence that education has on the attitudes and aspirations of the youth, there is a need to understand how to develop and nurture potential entrepreneurs during their tertiary studies. Few empirical studies have examined the entrepreneurial propensity of university students as a source of future entrepreneurs (Wang and Wong, 2004).

Further, while research has continued to grow in entrepreneurship education, our understanding of students in respect to entrepreneurial education streams is still lacking. This empirical study thus aims to investigate student attitudes towards new venture creation, and to derive recommendations how to improve entrepreneurship education as part of more general business studies looking at both the supply and demand side of entrepreneurship education. While the research presented here only focuses on 1st year business students, future comparisons with final year business students as well as students from other scientific areas, such as engineering or computer sciences, are planned.

In particular, the research questions for this research project include:

1. What is the student’s perceived image of entrepreneurs/entrepreneurship?
2. What is the student’s level of interest in different entrepreneurship types?
3. How familiar are the students with entrepreneurship and where does the familiarity come from? Which competencies do the students have?
4. Which factors influence the student’s decision between becoming an entrepreneur or employee?
5. How can universities foster the student’s interest in entrepreneurship?

It is proposed that motivations for entrepreneurial activity differ between students of different gender and entrepreneurial experience. Hence, the paper focuses on two specific criteria in an Australian context: (1) gender and (2) entrepreneurial experience (vertical factors), in order to test the likely influence that these factors have on the motivation of students towards entrepreneurial endeavours. These two factors will be cross-tested against the following factors (horizontal factors) to see what sort of a relationship, if any, exists between them: a) Understanding of the importance of entrepreneurship, b) Understanding of characteristics of entrepreneurs, c) Personal entrepreneurship capabilities, d) Understanding of new venture creation statistics, e) Interest in the signals for entrepreneurial activity, f) Interesting in studying entrepreneurial concepts, g) Tendencies for becoming self-employed versus being an employee, h) Tendencies for becoming an employee versus being self-employed, i) Tendency to become an employee of starting their own business, j) What can universities do to improve interest in new venture creation.

Research method and questionnaire development

In order to investigate the research questions presented above, a descriptive, primary-quantitative method was applied. While exploratory and causal research explore circumstances resp. coherencies, descriptive research pictures ‘specific details of a situation, social setting or relationship’ and allows
the researcher to examine a phenomenon of which there is little previous knowledge (Lowe, 2007). Facing the challenge of illustrating the status quo of student attitudes to new venture creation, a quantitative design was chosen. Reflecting the research questions as well as the international approach, a paper-based survey was identified to be the most appropriate research method. A paper-based survey was used in order to allow the survey to achieve high coverage as the questionnaires could be given directly to student and collected at the same time.

Based on a literature review, a standardised questionnaire was developed in order to investigate the research questions. The semi-final questionnaire was send to experts at potential partner universities as well as key contacts in the field of entrepreneurship to gain feedback and conduct individual pre-tests. After reviewing and integrating the comments, the questionnaire was tested by different students in order to detect and eliminate weaknesses in functionality and comprehensibility.

Sample and data collection method

A convenience sample was used, with potential partner universities selected from the authors’ contact database. From the 10 universities personally invited, eight universities took part in this research project. The country, number of responses as well as mean age of responses are reported in Table 1.

<table>
<thead>
<tr>
<th>Country</th>
<th>N</th>
<th>Mean Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>125</td>
<td>22.3</td>
</tr>
<tr>
<td>Australia</td>
<td>65</td>
<td>20.0</td>
</tr>
<tr>
<td>Finland</td>
<td>92</td>
<td>21.2</td>
</tr>
<tr>
<td>Slovenia</td>
<td>146</td>
<td>21.4</td>
</tr>
<tr>
<td>UK</td>
<td>53</td>
<td>21.3</td>
</tr>
<tr>
<td>Portugal</td>
<td>224</td>
<td>18.9</td>
</tr>
<tr>
<td>Poland</td>
<td>50</td>
<td>20.3</td>
</tr>
<tr>
<td>UAE</td>
<td>118</td>
<td>19.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>873</strong></td>
<td><strong>20.6</strong></td>
</tr>
</tbody>
</table>

Table 1: Survey participants

Paper-based questionnaires were handed out to first year business students during their lectures. Completed questionnaires were then collected and sent to the German university where the hand-written data was digitalised and analysed.

An international survey base was determined to be necessary in order to widen the relevance of the study in respect to entrepreneurship education. It was expected that differences existed not only in regards to the approaches to entrepreneurship education in different countries, but also in relation to the beliefs, motivations and possible intentions of the students. An international perspective was also sought to create a benchmark from which entrepreneurship education could be compared with the potential to create some best practice recommendations, leading to shared learning across various countries and contexts.

Question design

There were essentially three primary objectives that guided question design which related to:

1. Determining methods for universities to foster entrepreneurial spirit within students. The objective was to understand the types of positive and negative images that students had in relation to entrepreneurship. This information would be important in understanding how to better promote entrepreneurship.

2. Questions to get a better understanding of the propensity for students to undertake entrepreneurial study with the purpose of starting a new venture which included a) Understanding of the importance of entrepreneurship, b) Understanding of characteristics of entrepreneurs, c) Personal entrepreneurship capabilities, d) Understanding of new venture creation statistics, e) Interest in the signals for entrepreneurial activity, f) Interesting in studying entrepreneurial concepts, g) Tendencies for becoming self-employed versus being an employee, h) Tendencies for becoming an employee versus being self-employed, i) Tendency to become an employee of starting their own business, j) What can universities do to improve interest in new venture creation.

3. Questions of demographic and classification nature - There was a particular emphasis given to the following five ‘vertical characteristics’ in order to compare them against the ‘Topics of entrepreneurial propensity’ mentioned above. These included: a) Age, b) Gender, c) Country (or study), d) Work Experience *, e) ‘Entrepreneurial Experience’ **
For the Australian component of the study, paper-based self-administered questionnaires were handed to 1st year business students during their lectures. Due to ethics regulations, the students were told that their participation in the project was voluntary, leading to a low response of 65 completed questionnaires (a response rate of around 15%). The sample of 65 has the following characteristics: The majority of students (71.4%) were 19 or younger, with 19-21 year olds (22.3%) and 30-40 year olds (6.3%) following. Of the respondents 54% were females and 46% males. While 23.1% of respondents indicated to have no work experience, 55.4% have worked part-time and 18.4% full-time, with another 10.8% having completed a traineeship. Three respondents had founded a company and one additional person indicated to have taken steps to start a business.

**Perception of entrepreneurship**

The most positive benefit that entrepreneurship contributes to society was nominated as ‘contributes to job creation’ (4.02, internationally 3.96), followed by ‘Is crucial for competitiveness for an economy’ (3.92, internationally 3.86) and ‘Unlocks personal potential’ (3.80, internationally 3.62) with the lowest score being recorded for ‘Contributes to an increase in wealth of the poor’ (2.85, internationally 2.89). It was observed that the male students generally had a slightly more positive view in respect to the contribution of entrepreneurship to society than female students however it was not deemed to be significant from a research perspective.

**Role Models in entrepreneurship**

In an open question to understand the type of entrepreneurial role models came to the mind of Australian students, Bill Gates, was most commonly nominated (21 of 63 students, which is 32% of respondents) followed by Richard Branson (9, 14%). In respect to the international comparison, it was found that each country had specific role models from their region nominated. However, countries with similar role models named included: Germany, Slovenia and Poland, all of which stated Bill Gates (Microsoft) as the most nominated role model, and England with Richard Branson (Virgin) the most nominated, whilst Steve Jobs (Apple) was also often sited. A further open question sought to know the...
type of firms that students thought were entrepreneurial. Entrepreneurial firms were nominated by Australian Students as Microsoft (15, 23%) and Virgin (10, 15%), with ‘Boost Juice’ and ‘Wok in a Box’ also named. Microsoft was most named in Slovenia, Virgin most named in England (*locally-based firm), Sonae most named in Portugal (*locally-based firm), Nokia most name in Finland (*locally-based firm), Emaar in UAE (*locally-based firm), Microsoft in Poland, and Apple in Germany. IKEA and Google were international firms also often sited. These responses may provide ideas for usable role model entrepreneurs and entrepreneurial firms that could be used in education.

Entrepreneurial Status

Three Australian students (two female) were found to have started their own businesses (5%, internationally: 14 Students, 2% of total sample size), with another five having taken steps to start a business (7.7%, internationally: 22, 2.5%). 11 students indicated that they have no interest in starting a business (17%, internationally: 134, 15%).

Table1: Personal entrepreneurship capabilities

<table>
<thead>
<tr>
<th></th>
<th>Male average (n=29)</th>
<th>Female average (n=34)</th>
<th>Total average (n=63)</th>
<th>Ranking</th>
<th>+/-</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) I know techniques for finding out what the market wants</td>
<td>3.00 (I: 2.95)</td>
<td>2.79 (I: 2.99)</td>
<td>2.89 (I: 2.97)</td>
<td>3 (I: 3)</td>
<td>- (I: -)</td>
</tr>
<tr>
<td>b) I understand the type of issues that confront an entrepreneur in taking an idea to market</td>
<td>3.21 (I: 3.12)</td>
<td>2.85 (I: 3.22)</td>
<td>3.02 (I: 3.18)</td>
<td>1 (I: 1)</td>
<td>+ (I: +)</td>
</tr>
<tr>
<td>c) I can create a business plan and a business concept</td>
<td>3.00 (I: 3.00)</td>
<td>2.94 (I: 3.08)</td>
<td>2.97 (I: 3.05)</td>
<td>2 (I: 2)</td>
<td>- (I: -)</td>
</tr>
<tr>
<td>d) I know how to legally finance a new business concept</td>
<td>2.90 (I: 2.88)</td>
<td>2.65 (I: 2.87)</td>
<td>2.76 (I: 2.88)</td>
<td>- (I: -)</td>
<td></td>
</tr>
</tbody>
</table>

I = Internationally.
NB. A five point Likert Scale was used: (1) strongly disagree to (5) strongly agree with the statement.

In respect to personal capabilities, Australian Students gave ‘b) I understand the type of issues that confront an entrepreneur in taking an idea to market’ the only positive rating (>3) on the 5 point scale, whilst the international students also assessed their capabilities for ‘c) I can create a business plan and a business concept’ positively. The remaining factors were assessed negatively by both the International and Australian students.

Unsurprisingly, ‘entrepreneurship experience’ had an effect on some of the factors with a correlation analysis showing a correlation between .3 and .45 (P value under .05) with statements a, c and d whilst for ‘b) I understand the type of issues that confront an entrepreneur in taking an idea to market’ there was no significant correlation found (<.1). For the ‘financing of new ventures’, during a cross-analysis of data it was found that the only group who thought they moderately agreed (scored 4 or higher on the five point scale) to having capabilities in this area were those who had started a business themselves. These results compared similarly with the results from the entire International sample size.

Understanding of new venture creation statistics (the reality of new venture creation)

When asked about the survival of new firms, Australian students thought that only 33.85% (internationally 44.14%) of businesses would survive longer that 5 years. These results show a somewhat low level of confidence in survival when compared with American statistics of new business creation, which found that only 45% of businesses were still in business 5 years later (Shane, 2006).

The age the average entrepreneur starting a new business was estimated at 26.56 years old (Internationally 28.12 years old). Comparing these perceptions against US figures, only 2.4% of business in the USA were started by people under 24 years of age with the most common age for starting a business being between 35 and 44 (Shane, 2008). The Australian small business sector provides a similar picture, with only 9% of small business operators aged less than 30 years old (ABS, 2006), down from 9.4% (ABS, 2003).

In relation to the gender of entrepreneurs, students stated that they thought that 65.5% (Internationally: 67.8%) of entrepreneurs were men compared with 34.5% women (Internationally: 32.2%).
32.2%). These results show a perception that is very close to the actual statistics: the Australian Bureau of statistics showed that 68% of small business operators were male and 32% were female (ABS, 2006).

The last factor ‘How much starting capital do you think the average entrepreneur needs to start their new venture’ was the only question of the four that displayed any observable difference between the genders and the different levels of entrepreneurial experience. On average, female students estimated that entrepreneurs needed $US 232,857 (internationally $US 8,137,612) compared to men estimating $US 157,667 (internationally $US1,453,923) however this was need deemed to be significant in a ‘P value’ test. Internationally there are some countries where new business is required to either deposit a set amount of money in a designated account or have a certain amount of cash in reserve to start a business, however with the costs of starting a business in Australia being only $AU400 (around $US250) and Australian being ranked third in OECD countries for ease of ‘Starting a Business’ (World Bank / IMF 2008). This suggests that communicating the correct statistics is useful for students to build a realistic picture of the capital required to start a business. Based upon US data, Shane (2008) highlights if a firm starts with $US100,000, the firm is 23% more likely to succeed, which may also be useful in educating students about how to build a businesses that is likely to survive and grow.

Interest in the signals for entrepreneurial activity

<table>
<thead>
<tr>
<th>Table 2: Interest in the signals for entrepreneurial activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Male average (n=29)</strong></td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>a) I regularly read books / articles about entrepreneurship / innovation</td>
</tr>
<tr>
<td>b) I participate regularly in conferences / lectures / workshops on entrepreneurship and/or innovation</td>
</tr>
<tr>
<td>c) I worked for myself as a teenager eg. delivering papers, babysitting, mowing lawns etc</td>
</tr>
<tr>
<td>d) I have been a freelancer or self employed</td>
</tr>
<tr>
<td>e) I have closely followed or assisted family members who have started companies</td>
</tr>
<tr>
<td>f) I have closely followed or assisted friends or acquaintances who have started companies</td>
</tr>
<tr>
<td>g) One or more of these businesses from e) and f) went bankrupt</td>
</tr>
<tr>
<td>h) ‘One should not start a business when there is a risk it might fail’</td>
</tr>
</tbody>
</table>

I = Internationally.
NB. A five point Likert Scale was used: (1) strongly disagree to (5) strongly agree with the statement.

Two Australian students either agreed or strongly agreed that they had closely followed businesses that went bankrupt with both recording tendencies to be an employee (as answered in Q.14). Interestingly enough, in the Australian data, students that (c) worked for themselves as a teenager, were not more likely to want to become entrepreneurs (P value under .05) as answered in ‘What do you think is your future on the following scale’ between 1. ‘being an employee’ and 5. ‘having own business’. This was in contrast the international survey where a correlation of between .30 and .45 was noticed for all factors (a-f) (and a P value below .05) except ‘One or more of these businesses they observed went bankrupt’.

The data above also shows that females in Australia were found to be slightly more risk adverse when it comes to starting a new business than males, recording a slightly (1.97, internationally: 2.52) higher score (higher level of agreement) to the statement ‘One should not start a business when there is a risk it might fail’ than men (1.69, internationally: 2.17) however the difference was found to be significant only in an international context with a P value of 0.00. The only other statements that showed differences between the sexes were with the statements: ‘I worked for myself as a teenager eg. delivering papers, babysitting, mowing lawns etc’ and ‘I regularly read books / articles about...’
entrepreneurship / innovation’ with both displaying about a higher value for male respondents (agreement to the statement) however it was not found to be significant. Other differences between the answers given by men and women were unsubstantial. Internationally they were no substantial differences between the answers based on gender noted outside the factor described above.

As the calculation of the entrepreneurship experience was based partly upon this category of questions (together with questions relating to those nominated in ‘entrepreneurial status’), there was a high correlation between those undertaking these activities and the entrepreneurial experience of the student.

**Interest in studying entrepreneurial concepts**

<table>
<thead>
<tr>
<th>Interest</th>
<th>Male average (n=29)</th>
<th>Female average (n=34)</th>
<th>Total average (n=63)</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Starting a new business from an idea</td>
<td>3.93 (I: 3.80)</td>
<td>3.15 (I: 3.59)</td>
<td>3.51 (I: 3.68)</td>
<td>1</td>
</tr>
<tr>
<td>b) Entrepreneurship using research</td>
<td>3.66 (I: 3.40)</td>
<td>2.88 (I: 3.28)</td>
<td>3.24 (I: 3.33)</td>
<td>3</td>
</tr>
<tr>
<td>c) Entrepreneurship within an existing company</td>
<td>3.71 (I: 3.48)</td>
<td>3.24 (I: 3.51)</td>
<td>3.45 (I: 3.50)</td>
<td>2</td>
</tr>
</tbody>
</table>

I = Internationally.

NB. A five point Likert Scale was used: (1) strongly disagree to (5) strongly agree with the statement

The average responses from the Australian first year business students in respect to entrepreneurship education were positive with an average rating for the three nominated areas of study recording a score between neutral and agree (between 3 and 4 on a 5 point scale). Females responding to the theme of ‘Entrepreneurship using research’ recorded a (slightly) negative response. When comparing the Australian results of the survey with the international survey results, Australian men expressed higher interest in each of the factors that men internationally, whilst the comparison of the Australian females with International females, the opposite occurred with Australian females recording slightly lower interest levels in each category than international females.

**Tendencies for becoming an employee versus being self-employed**

<table>
<thead>
<tr>
<th>Tendency</th>
<th>Total average (n=63)</th>
<th>Rank</th>
<th>+/-</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Being an employee is the most suitable option for my future profession</td>
<td>3.02 (I:2.8)</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>b) Job security / stability of employment / Stable income</td>
<td>4.00 (I:3.6)</td>
<td>1</td>
<td>+</td>
</tr>
<tr>
<td>c) Social security and/or insurances</td>
<td>3.41 (I:3.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) It is not as risky as being self-employed</td>
<td>3.52 (I:3.5)</td>
<td>3</td>
<td>+</td>
</tr>
<tr>
<td>e) Too much workload when self-employed</td>
<td>3.25 (I:3.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Red tape / administrative barriers</td>
<td>3.11 (I:3.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Lack of an entrepreneurial idea</td>
<td>3.11 (I:2.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) Lack of finances for self-employment</td>
<td>3.59 (I:3.3)</td>
<td>2</td>
<td>+</td>
</tr>
<tr>
<td>i) Severity and/or irreversibility of the decision</td>
<td>3.27 (I:3.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j) Lack of knowledge / familiarity with regards to self-employment</td>
<td>3.24 (I:2.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>k) Having colleagues / too lonely being self-employed</td>
<td>3.03 (I:2.6)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NB. A five point Likert Scale was used: (1) strongly disagree to (5) strongly agree with the statement
Australian students nominated that ‘Job security / stability of employment / stable income’ was the primary reason for choosing to be employee rather than being self-employed, whilst ‘Being an employee is the most suitable option for my future profession’ was rated the least likely reason.

**Tendencies for becoming self-employed versus being an employee**

Table 5: Tendencies for becoming self-employed versus being an employee

<table>
<thead>
<tr>
<th>Tendency</th>
<th>Total average (n=63)</th>
<th>Rank</th>
<th>+ / -</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Personal independence / Managing own time</td>
<td>4.00 (I:4.06)</td>
<td>1</td>
<td>+</td>
</tr>
<tr>
<td>b) Family / friends are self-employed</td>
<td>2.95 (I:2.76)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>c) I have an idea that can be a business opportunity</td>
<td>3.19 (I:3.30)</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>d) It is a ‘normal thing to do’</td>
<td>2.41 (I:2.97)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>e) No need to adapt to a business environment</td>
<td>2.56 (I:2.75)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>f) More interesting work</td>
<td>3.68 (I:3.75)</td>
<td>3</td>
<td>+</td>
</tr>
<tr>
<td>g) Possibilities for self-fulfilment</td>
<td>3.95 (I:4.00)</td>
<td>2</td>
<td>+</td>
</tr>
<tr>
<td>h) More prestigious than being an employee</td>
<td>3.32 (I:3.53)</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>i) Better income prospects</td>
<td>3.51 (I:3.67)</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>j) Lack of attractive employment opportunities</td>
<td>3.10 (I:3.06)</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>k) To avoid uncertainties related to employment (e.g., being unemployed)</td>
<td>2.90 (I:3.03)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>l) Having your own business is the most suitable option for my profession</td>
<td>2.70 (I:2.70)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. A five point Likert Scale was used: (1) strongly disagree to (5) strongly agree with the statement

The tendencies for being self-employed over employed provides potential points for promotion of entrepreneurship with business students. The highest three scores were registered for (a) Being an employee is the most suitable option for my future profession, (g) Possibilities for self-fulfillment and (f) More interesting work’ in that order. ‘It is a ‘normal thing to do’ recorded the lowest rating.

**Future career assessment: employee or starting own business**

In respect to the differences between the sexes, there was no significant difference between the two noticeable. As there was only 4 and 2 students nominated as ‘Medium-high’ or ‘High’ in entrepreneurial experience respectively it is difficult to get a meaningful outcome in the evaluation of entrepreneurial experience against the students likely career path. In total, Australian first-year business students were found to be split in the following way: ‘Strong or slight tendency to be an employee’ (negative tendency) – 27%, ‘Neutral’ – 26%, ‘Strong or slight tendency to own a business’ (positive tendency) – 37%.
Unsurprising internationally, those with high entrepreneurial experience (3.83) had a significantly higher score (p value < .05) on the scale relating their likelihood of ‘having their own business’ that those with very low entrepreneurial experience (2.91). International first year business students were found to be split in the following way: ‘Strong or slight tendency to be an employee’ (negative tendency) – 25.9%, ‘Neutral’ – 28.6%, ‘Strong or slight tendency to own a business’ (positive tendency) – 34.3%.

What can universities do to improve interest in new venture creation?

Table 6: What can universities do to improve interest in new venture creation?

<table>
<thead>
<tr>
<th></th>
<th>Total average (n=63)</th>
<th>Rank</th>
<th>+ / -</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Created more awareness of entrepreneurship as a possible career choice</td>
<td>3.44 (I: 3.55)</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>b) Provided students with ideas to start a new business</td>
<td>3.38 (I: 3.65)</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>c) Offered a bachelor or master study on entrepreneurship</td>
<td>3.27 (I: 3.55)</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>d) Offered project work focused on entrepreneurship</td>
<td>3.60 (I: 3.71)</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>e) Arranged conferences / workshops on entrepreneurship</td>
<td>3.63 (I: 3.61)</td>
<td>1</td>
<td>+</td>
</tr>
<tr>
<td>f) Bring students in contact with the network needed to start a new business</td>
<td>3.62 (I: 3.92)</td>
<td>3 (1)</td>
<td>+</td>
</tr>
<tr>
<td>g) Allow companies run by students to use university facilities</td>
<td>3.21 (I: 3.72)</td>
<td>(3)</td>
<td>+</td>
</tr>
<tr>
<td>h) Provide students with the financial means needed to start a new business</td>
<td>3.37 (I: 3.51)</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>i) Brought entrepreneurial students in contact with each other</td>
<td>3.63 (I: 3.79)</td>
<td>1 (2)</td>
<td>+</td>
</tr>
</tbody>
</table>

There was no significant difference found in the answers of female and male students. Those assessed to have higher entrepreneurial experience (‘Medium High’ and ‘High’) unsurprisingly indicated a higher interest in entrepreneurial activities, however they responded that ‘e) Arranged conferences / workshops on entrepreneurship’ and ‘f) Bring students in contact with the network needed to start a new business’ would be of most interest. The international data shows that students in general were more enthusiastic towards the concepts suggested to boost their enthusiasm assessing all concepts higher for Australian students except for ‘Arranged conferences / workshops on entrepreneurship’. A cross assessment with another question was also undertaken to remove the
answers, and the influence on the results, of those students who made a negative assessment (had marked 1 or 2 on the five point scale) to having Entrepreneurship as part of their studies. There were only 52 students from 878 internationally that fit into the category and the removal of their results had minimal impact on the results and was therefore not considered important.

**DISCUSSION, IMPLICATIONS AND CONCLUSION**

*The study’s contribution to the promotion of entrepreneurship in universities (demand side)*

A primary focus of this paper was on ‘how can entrepreneurship be promoted to students’. The paper found many entry points for entrepreneurship promotion. The study found that there was generally a positive perception of entrepreneurship and entrepreneurs within first year business students. In respect to entrepreneurship, its contribution to job creation in the economy and being crucial for economic competitiveness could be points of entrepreneurship promotion with students whilst on a more individual basis, promotion of its proven ability to unlock personal potential could also be a promotional message used. Further, promotion of some of the lesser known (but recognised in literature) contribution of entrepreneurship such as ‘contribution to the poor’ could also prove advantageous.

Additionally there is an opportunity to promote to students the positive characteristics found in this study towards entrepreneurs. Some of the characteristics named in ‘tendencies for being a self-employed over employed’ such as ‘personal independence’ or ‘possibilities for self-fulfilment’ are other promotional points for consideration. Some of the characteristics named in ‘tendencies for being a employed over self-employed’ could also be addressed in promotion to re-address misnomers such as ‘lack of finances for self-employment’ (minimal finances are required to start a business in Australia). Whilst connecting students with an idea (potentially with a university researcher) could help to overcome the factor of ‘lack of an entrepreneurial idea’ that was identified in the study.

Promotion of entrepreneurship could also be facilitated potentially through the use of role models. Role models have proven to be a positive affect on entrepreneurial intentions, whilst “In the absence of entrepreneurial role models, economic agents are not as propelled to take the different decisions needed to become an entrepreneur” (Lafuente, E., Vaillant, Y., Rialp J. 2007, pp 779-795). The study found that local entrepreneurs were often named as role models by the international students, whilst the Australian students named mainly American examples. The international data suggests this ‘distance’ between the reality of a famous role model and students could potentially bridged through the use of Australian role models such as Dick Smith, Greg Norman, John Ilhan (Crazy Johns).

A further point of interest is that despite having low ‘entrepreneurship experience’ students still were found to have a high interest in studying entrepreneurship and / or potentially pursuing an entrepreneurial career. Whilst the data did not show conclusively that increasing the ‘entrepreneurial experience’ of students would subsequently increase the amount of students wanting to study entrepreneurship or pursue an entrepreneurial career, it is a method of teaching worth considering and an area for further research.

Promotion of the benefits of entrepreneurship specifically for female students is a further area of focus for entrepreneurship education. In the study, it was found that female students in Australian generally had less interest in studying entrepreneurial concepts (see ‘interest in studying entrepreneurial concepts’) even though they had the same average score as men in whether they would be an employee or business owner. Specific themes that could be used to promote entrepreneurship to females such as promoting the flexibility of work schedule that will allow them to take care of family responsibilities (Shane, 2008).

However, following Shane (2008), education of entrepreneurs could endorse that age is a crucial factor in the likely success of new firms with firms started by entrepreneurs aged 45-54 more likely to succeed on average than those stared by those under 35. Industry experience, professional and personal development before the entrepreneur commenced their business has also been shown to also increase likely to prosper, be more profitable and grow (Shane, 2008). Rather than to deter the would-be entrepreneur, this data could be used to create a more realistic understanding of how to be a successful entrepreneur.

A final comment in respect to promotion of entrepreneurship is that a realistic promotion of the benefits of entrepreneurship is required because promoting false myths about entrepreneurship is also not helpful to potential entrepreneurs. Similar in nature to investing in shares or property, it is valuable
to know realistic estimations of your likely success in starting a new venture and to understand the risks involved to enable mitigation strategies to be considered.

The study’s contribution to the improvement of more student orientated entrepreneurship programs in Universities (supply side)

The paper provides various insights into how entrepreneurial education can be further tailored to students in order to increase interest in entrepreneurship. The development of students ‘entrepreneurship capabilities’ could potentially be facilitated by focus on the factors identified in ‘Entrepreneurial Status’ including: ‘techniques for finding out what the market wants’, ‘understanding the type of issues that confront an entrepreneur in taking an idea to market’, ‘creating a business plan and a business concept and ‘legally finance a new business concept’. Students assessed themselves generally to neither ‘have’, nor ‘not have’ the capabilities in these areas, which is understandable given they are first year students. However these skills have been found to be important in creating successful new ventures and therefore this creates an opportunity for improving entrepreneurship skills and knowledge.

Despite this medium rating students gave themselves and the fact that students had low ‘entrepreneurial experience’, students expressed high interest in entrepreneurial topics. This result should provide a measure of confidence for educators that students are recognizing the importance of knowledge and skills in entrepreneurship. The opportunity for students to study a single module (within another subject), as a separate subject, minor or major would seemingly be welcomed by students. Firms established by those entrepreneurs with prior entrepreneurship experience has also been shown to also increase likely to prosper, be more profitable and grow (Shane, 2008). The implications for entrepreneurship education, which aligns with the opinions of students in the survey, a focus on practical experience with entrepreneurship education could be facilitated.

The section titled ‘What can universities do to improve interest in new venture creation?’ provides fodder for those educators looking to improve the acquisition, education and success of future-entrepreneurs.

CONCLUSION

The study shows the high level of interest that exists in 1st year business students both in Australia and internationally. However, as would be expected, there exists a lack of entrepreneurial experience within these students. The study found that those students that had some exposure to entrepreneurial, either personally or through others, displayed a higher interest in undertaking studies in entrepreneurship or starting a new venture. Bridging this gap to give inexperienced students (in an entrepreneurial sense) some experience in entrepreneurship would seem to create a cycle of improved acceptance and willingness to embrace entrepreneurship, because those with higher experience were found to be more interested in studying and pursuing an entrepreneurial career.

Recommendations for further research

The research itself provides excellent basis for further research including:
- Whether the desire to start new ventures increases or decreases from the 1st year of study to the last year of study
- Whether students’ entrepreneurial motivations are different across different countries
- Whether students’ entrepreneurial motivations are different across different faculties
- Whether the perception of students about new venture creation actually mirrors reality
- Comparison with answers from actual entrepreneurs to identify key factors

Limitations

Limitations of the study include the sample size of the Australian portion of the study. Whilst the overall international sample size (878 + 65 from Australia) provides a good basis for analysis, having 65 responses to the survey in Australia limits the analysis of the data in an Australian context. Further limitations to the study include the fact that a convenience sample was used in the selection of the universities chosen to participate in the survey.

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