

Tampere University of Technology
Industrial Management

**FINNISH SURVEY ON COLLEGIATE
ENTREPRENEURSHIP 2006**

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ISCE 2006

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Preface

ISCE stands for **International Survey on Collegiate Entrepreneurship** – an international research project investigating entrepreneurship in institutes of higher learning (universities and polytechnics). The goal of this project is to explore, explain and discuss the behaviour and intentions of students in their decision to start entrepreneurial activities and to set up an enterprise. The project is co-ordinated on an international level by the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen (KMU-HSG) together with KfW Endowed Chair for Entrepreneurship at European Business School (ebs) in Oestrich-Winkel, Germany. On a national level, the project was managed by Professor Asko Miettinen, Institute of Industrial Management at Tampere University of Technology.

The purpose of this study is to find out the entrepreneurial intentions of the students in higher education in Finland. Relatively low motivation of Finns to start their own business, shortage of entrepreneurial skills, and fear of failure as a hinder for entrepreneurial activities instead of positive attitudes towards entrepreneurship is well documented by several studies. This study reveals that both female and male respondents are more interested in entrepreneurship in comparison to the amount of entrepreneurs in Finland at the moment. However, the results also show that female students are less interested in entrepreneurship than their male counterparts. The results further demonstrate the varying effect of different factors on entrepreneurial intentions between genders. Together with the fact that the entrepreneurship corps is getting older very fast highlights the role of demographic factors when studying entrepreneurship.

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1. Introduction

1.1. Background and goal of the survey

According to 2006 Global Entrepreneurship Monitor (GEM) Finland belongs to high income countries low early-stage entrepreneurial activity (5 %) and above average established ownership rate among 42 GEM countries. Furthermore, the proportion opportunity-driven early stage entrepreneurial activity is fourth lowest of 21 high income countries. These figures are concerning from the point of view of future, because some 25 per cent of all firm population in Finland will face a generation change in five-ten years: the entrepreneurship corps is getting old.

However, the number of enterprises has been increasing steadily since 1995. The amount of new start-ups was particularly high in 2006. 99.8 per cents of enterprises in Finland are SMEs and they account more than a half of the annual turnover of all companies in the country. As 93 per cent of these enterprises have fewer than 10 employees, it can be stated that the micro enterprises are of vital importance for the Finnish economy.

Entrepreneurship is a driver for job creation and economic growth. This is particularly true in the case of so called growth companies. They provide more than 70 per cent of all genuine new jobs. Here is another problem: the proportion of growth companies is far more too low in Finland, only 2-3 percent if severe criteria are employed and 5-7 per cent if less demanding criteria are used.

Due to strong investments in education, participation in third level training is generally high in Finland. A high education rate supports research and development, and in this way, the production of innovations. In order to support and increase the rate of young entrepreneurs in Finland, it is essential to realise the meaning and role of

entrepreneurship education at every level of education and also in teachers' training and teaching practices.

The curriculum design process in Finland is twofold: the National Board of Education, which is subordinate to the Ministry of Education, issues core curricula for the comprehensive school (7-to-16-year-olds), the upper secondary school and vocational schools (upper secondary). The comprehensive and upper secondary school curricula were revisited a couple of years ago, and the current curricula is aimed to provide for the utilisation of knowledge and know-how, education for entrepreneurship. Based on the national curricula, schools and other establishments devise their own curricula. Schools include entrepreneurship education at their discretion. All vocational qualifications were also overhauled and include entrepreneurship knowledge and skills as from 2001.

The national core curriculum for comprehensive and upper secondary schools contains entrepreneurship modules, which schools apply to their own curricula. In addition, the core curricula stress teaching methods that are aimed to promote entrepreneurial behaviour. A recent evaluation study showed, however, that only one third of all comprehensive schools have started this teaching as expected (Seikkula-Leino, 2006). This result indicates how slow process a nation-wide change process actually is.

In the case of universities and polytechnics, the Ministry of Education approves the titles and the extent of degree programmes. The contents are determined by the education units concerned. To which extent entrepreneurship is included varies between degree programmes. According to the curricula, a great deal of emphasis is placed on interaction between education and industry, expert exchanges and the transfer of knowledge from educational establishment to business. However, the practice is different from these principles, and in most cases curricula seem to be more hopeful than helpful from entrepreneurship point of view.

There are some contradictory messages for the future scenario for entrepreneurship in Finland as the figures presented above demonstrate. One of the possible responses to this

challenge lies with the targeted encouragement of educational institutions particularly in higher education . The main reason for this is that a good number of new ideas, technologies and therefore new products and services emerge predominantly within innovative contexts such as polytechnics and universities. As a result, an upcoming strand of research has developed under the heading ‘Academic Entrepreneurship’ (i.e.Shane, 2004), which explicitly aims to explore and clarify the significance, structures, as well causes, of establishing a venture (Fueglistaller et al., 2006). One of the purposes of such research is to improve in a targeted manner the situation in which such entrepreneurship activities can occur.

The first objective of the ISCE research project is to compare the entrepreneurial potential of students at international level. The second one is to repeat comparisons at regular intervals of changes in relation to entrepreneurial potential on the one hand, as well as the general conditions at universities on the other, which is why the survey will be conducted biannually. The third objective of the project is to ensure that individual aspects of entrepreneurship can be examined in a more in-depth way, thereby creating opportunities for further development (Fueglistaller et al., 2006).

1.2. Methodology and sample

This study is a part of an international study on collegiate entrepreneurship conducted in 14 countries. The study emanates from a project that was administrated in 2003 by the Swiss Research Institute of Small Business and entrepreneurship at the University of St. Gallen (KMU-HSG) in co-ordination with a student initiative called ‘START’. The objective of the original study was to create a clear picture of students’ career aspirations and future goals and plans. The focus was on the assessment of a foundation which students built to evaluate and decide what field they were going to study. A project with similar goals was being conducted in Germany by the European Business School simultaneously. In 2004 the KMU-HSG worked together with the KfW Endowed Chair for Entrepreneurship at the European Business School (EBS) to revise and re-launch another survey. Since the same questions, scales, methods and constructs were used

across different countries and universities, a tangible comparison of tendencies and trends was made.

The aim of the 2006 ISCE study was to compare the entrepreneurial activities and intentions of students in an international context. To accomplish this goal, a questionnaire consisting of several parts was developed on the basis of already existing studies. This standardised questionnaire was used by all research partners. All information was received anonymously.

The first major part of the questionnaire examines the entrepreneurial potential of students on a comparative basis at an international level. The first step is to explore students' professional orientation and expectations or 'determinants of creation'. This section examines the micro-social environment, such as the culture, family and the educational institute the respondent attends. In addition, the questionnaire investigates various stages of entrepreneurial activities by questioning how many students have already established a business, or are interested in starting up one. This part of the questionnaire ends with an item concerning the obstacles students perceive and which may be a decisive motive for them not to start up a business of their own. The next part examines the constructs of personality. This part of the questionnaire is adapted by the personality model of Schallberger and Venetz (1999). The constructs are further divided into two sections: the first section under the title of the 'Big 5' (neuroticism, openness, extraversion, conscientiousness, and agreeableness) and the second measuring the respondent's locus of control (Krampen, 1991).

The second section in four elements examines 'creation process'. The first one includes exploration of the motives and possible obstacles the students have faced in establishing or planning a business. This part of the questionnaire was inspired by the study of Lars Kolvereid (1996) covering issues such as the degree of independence, leisure time, creativity, solution orientation and safety orientation. The second element of the creation process was the intention of creation which was investigated by asking the respondents about the various hurdles they face or believe they may encounter on starting up a

venture. The third step of the creation process investigated the entrepreneurial intention (Krueger et al., 2000; Luthje & Franke, 2003), steps and activities for starting up a business by the students. Creation activities was the last step of the creation process which studied the steps the respondents have taken or plan to take in setting up their business.

The questionnaire was prepared in five languages (English, French, German, Finnish and Hungarian). The survey itself took place via the Internet, whereby a link to the questionnaire was emailed to students. On completion of the survey, all data were processed by the core team and provided to the various national representatives so as to produce the national results. The Finnish version was double translated from English and German.

The sample of the ISCE 2006 study consists of 37,412 questionnaires for analysis, coming from the following participating countries: Australia, Austria, Belgium, Finland, France, Germany, Hungary, Ireland, Lichtenstein, New Zealand, Norway, Singapore and South Africa. The Finnish sample was collected in May-June 2006 from the following polytechnics and universities:

- South-Karelia Polytechnic
- Helia Polytechnic
- Kymi Polytechnic
- Savonia Polytechnic
- Tampere Polytechnic
- University of Kuopio
- Lappeenranta University of Technology
- University of Oulu
- Tampere University of Technology
- University of Vaasa

There are 1,566 observations in the Finnish sample, mostly students of business administration (40.7 %) and technology (52.4 %). The high proportion from these two

areas emerged because the questionnaire was directed to these students. The rest students are from faculties of medicine, pharmaceuticals, social sciences and humanities. 48.3 per cent of the respondents were males and 51.7 per cent females, respectively. The sample is culturally very homogeneous, because 98.8 per cent of the respondents have Finnish as the native language. The remaining 20 students speak Russian, Estonian, Swedish, English, Chinese, Polish or Greek as their first language.

A great majority of the respondents are undergraduate students (79.5 %), while the proportion of graduate students was one fifth (20.1 %) and those of doctoral students only 0.4 per cent. There are no graduate nor doctoral students in the polytechnics, which explains the type of distribution in the sample. A vast majority of the respondents (85.8 %) are full-time students. The average age of the students in the sample is 25.5 years and they had studied 2.48 years at the time when the survey was conducted. The last average reveals that Finnish students start relatively late their studies in universities and polytechnics.

2. Entrepreneurial activities of the students

2.1. General ideas about the future

The students were asked to which main activity they are pursuing after they graduate. The two alternatives open to the respondents were 'paid employment' or self-employment'. The choice concerned their job expectations for the first 5 years after graduation (< 5 years) or 5 years or more after completing their studies (> 5 years).

Table 1 Job expectations directly after graduation and 5 years later

	Directly after studies - within less than 5 years		5 years or more after graduation	
	Frequency	Percent	Frequency	Percent
Working in a micro business	92	5.9	25	1.6
Working in a small business	268	17.1	79	5.0
Working in a medium-sized business	329	21.0	167	10.7
Working in a big company	224	14.3	197	12.6
Working as a researcher	27	1.7	20	1.3
Working in civil/public service	68	4.3	56	3.6
Getting on with family business	26	1.7	39	3.5
Taking over an existing business	5	0.3	11	0.7
Starting up a franchise business	5	0.3	8	0.5
Investing into a existing company	18	1.2	54	3.5
Continuing with my founded start-up	24	1.5	41	2.6
Starting up a business	54	3.5	252	16.1
Working as self-employed	22	1.4	52	3.3
Concentrating on founding a family	182	11.6	294	18.7
Don't know yet	222	14.2	271	17.3
Total	1 566	100.0	1 566	100.0

The results show that immediately after graduation a majority of students (64.3 %) prefer a paid job. The first selection is a medium-sized company (21.0 %) followed by a small firm (17.1 %) and a big company (14.3 %). At graduation, micro firms and public sector seem not to be an attractive option. Interestingly, the roles change in 5 years from graduation: now almost a half (48.9 %) give first entrepreneurial career with 16.1 per cent with the idea to start up his/her own. A paid job option as a first preference is hold by about one third (34.8 %) of the respondents. Adding all entrepreneurial option 5 years

after graduation makes less than one third (29.2 %) of the students, which is six times more than the current level of entrepreneurial activity in Finland (GEM 2006). Anyway, both figures are among the lowest in the ISCE data (12/14). The results demonstrate once again that Finland is like her Nordic neighbours still rather a paid employees' society than an entrepreneurial society. There are also quite a few in the sample, who don't know yet what to do after graduation.

There are some differences between male and female respondents (Table 2) concerning their intentions after graduation and five years later. (several categories have been added to get a new one "working as an employee").

Table 2 Job expectations directly after studies and 5 years later among male and female students

	Directly after studies- within less than 5 years		5 years or more after graduation	
	Male %	Female %	Male %	Female %
Work as an employee	67.1	61.8	37.5	32.2
Self-employed	10.6	9.1	31.0	27.4
Founding a family	9.5	13.6	15.5	21.9
Don't know yet	12.8	15.5	16.0	18.5
Total	100.0	100.0	100.0	100.0

The figures indicate that male students are higher in both working as an employee and in their intentions to be self-employed. The relatively high percentages in founding a family don't exclude active participation in the world of work, because 86 per cent of women aged 25-54 are employed outside the home in Finland.

2.2. Current entrepreneurial activities and intentions of students

The students were asked if they already started up their own business or ever thought starting one. Table 3 below gives the responses to this item.

Table 3 Thoughts about starting a business

	N	%
No, never	386	24.6
Yes, sketchily	581	37.1
Yes, rather concretely	165	10.5
Yes, but I turned away from it	194	12.4
Yes, I am bound and determined to be self-employed	131	8.4
Yes, I already started with the realisation	41	2.6
Yes, I am already self-employed	34	2.2
Yes, I was self-employed but no longer am I	34	2.2
Total	1 566	100.0

The table above shows that the proportion of students who already have started their own business is 4.4 per cent and a half of them have closed their business since. In comparison with ISCE 2006 data this is somewhat above the average (3.2 %). The majority of the respondents demonstrate entrepreneurial intentions by stating that they have had ideas of setting up their own business. Some 2.6 per cent of the students have already started with the realisation of starting their own venture. An additional 8.4 per cent of the respondents believe that they are actually bound to be self-employed and are further determined to be. A vast majority of students responded that they have thoughts of starting up a business. However, these ideas are still rather sketchy (37.1 %) , with a further 10.5 per cent thinking more concretely about setting up their own firm. A quarter (24.6 %) of respondents have never an idea of starting up their own business.

There are some differences between male and female respondents. The proportion of respondents having strong intentions is 38.7 per cent among male students and 33.6 per cent among their female counterparts. The proportion of respondents having weak intentions is 33.0 per cent among male students and 30.0 per cent among female students. However, when looking at established entrepreneurs, the difference is clear. 3.8 per cent of male students are already running their businesses, while the percentage among their female counterparts is only 0.6 per cent. Anyway, these differences are far more less dramatic than the proportions in the current Finnish business community, where only

some one third of entrepreneurs are female. Interestingly enough, the proportions of the respondents having strong or weak entrepreneurial intentions increases after the age of 23.

Those students who have already ideas about setting up their own business or those who have already started their own business were asked what they have taken in the process of starting up their own business. Table 3 shows the results.

Table 4 Steps already taken to start up a business

	n	%
No step taken	206	34.5
Thinking through first business idea(s)	367	61.3
Writing down first business idea(s)	47	7.9
Developing a business plan	27	4.6
Gathering start-up specific information	118	19.8
Visiting start-up specific events	73	12.1
Talking to potential sources of financing	8	1.3
Determining a date of foundation	2	0.3
A prototype of the product/service exists	31	5.1

About a third of the respondents announced that no steps so far have been taken to start up their business. More than 60 per cent are thinking of their first business idea and some 20 per cent have gathered start-up specific information (these steps might be a part of their courses). Furthermore, 12.1 per cent have visited start-up specific events and another 4.6 per cent have developed a business plan (which can also be a part in their studies). Some 5 per cent have identified a prototype of their product or service, but only a small minority (1.3 %) have talked to potential sources of financing or determined a date for foundation (0.3 %). The figures also show that some students have taken more than one preparatory step.

As to the question when the students with a strong intention plan to establish their business the following results in Table 5 were identified.

Table 5 When do you consider the foundation of a business?

	n	%
Still while studying	88	7.8
Directly after graduation	40	3.5
After graduation and some years of work experience	336	29.8
Don't know yet	664	58.9
Total	1128	100.0

The vast majority doesn't know yet when they establish their business. Some 30 per cent thinks to do it after some years of experience. This indicates that most students are not yet confident enough for real start up steps. The proportion of those respondents who plan to set up a business during their studies is 7.8 per cent and those who take this step directly after graduation only 3.5 per cent.

The proportion of those Finnish students who have not carried out any steps at all to set up a business is about one third. The international ISCE average is higher, 47.2 per cent (Fueglistaller et al., 2006). This means that almost a half of students who have already thought of establishing a business had not taken any real step to become entrepreneurs. It is worth mentioning that the highest level of uncertainty ("Don't know yet") out of all participating countries was found among students in Finland (58.9 %).

When investigating in more detail the businesses already set up, the analysis per sector reveals a very low per cent of students intending to become active in the primary sector (agriculture, hunting, fishing, forestry, and mining) although Finland is for example one of the leading countries in the forest industry sector. This figure (1.9 %) is clearly below the current national averages, although many students still have an agricultural family background. The interest in the secondary sector is considerably higher (30.5 %) leaving the highest proportion to those students interested in the tertiary sector, 67.6 per cent which is very close to the current national average of people working for service

industries (69 %). This figure is the second lowest one after Norway among the 14 countries.

It is understandable that the amount of founders establishing a business indicated by those asked is low, 1.9 on average. One third (32.7 %) would like to start up a business by him/herself. Potential partners are expected to be found from one's personal circle of friends (48.2 %) followed by direct relatives (27.3 %) and from fellow students (27.2 %). Thus, similar to actual business founders, potential founders prefer to involve people from their immediate friends or acquaintances followed by people from their own university or polytechnic.

2.3. Entrepreneurial Power of students

A special index construction was administered for comparative purposes of the students. This construction bases on two items presented in the questionnaire. It was firstly asked whether or not the students had ever considered setting up their own business. There were eight alternatives from "No, never" to already self-employed. The second item focused on potential business founders in terms of specific steps already taken to establish their own business. The alternatives in this item covered a number of more and less committed activities (see Table 3). The range of this index varies from 1 (for 'non-founders', i.e. students who had never considered starting up their own business) to ten (for students who had previously established their own business). The index was calculated on the basis of the averages obtained for the participating countries, as well as the international mean.

The international average of the index is 35.5 per cent (Table 6). The highest percentage was found in Ireland (40.9 %) followed by Singapore (39.5 %) and Liechtenstein (37.5 %). The lowest ones are those of Germany (33.9 %) and Switzerland (34.5 %). Finland scores somewhat above the mean with 37.1 per cent. However, the differences between the participating countries are not large, because the range is only 5.8 per cent.

Table 6 International comparison of entrepreneurial power

Irland	40.9 %
Singapore	39.5 %
Liechtenstein	37.5 %
Finland	37.1 %
New Zealand	36.6 %
Belgium	36.0 %
Austria	35.3 %
Hungary	35.2 %
Norway	34.9 %
Switzerland	34.5 %
Germany	33.9 %
International average	35.5 %

Similar results were achieved when the unequal distribution of study disciplines was taken account by calculating the index for all students undertaking business-related studies. The international average was slightly higher (36.4 %) as well as the national mean of Finnish students (37.5 %). However, the ranking for Finnish students in the latter comparison was fifth instead of fourth in the first one.

3. The personal background for entrepreneurial activities and potential

This part of the report handles the personal background of the respondents. Personal background was studied by looking at the respondents' personality factors, their locus of control, their motives, skills and competences and their family background. In addition, some motivational factors such as independence and creativity and their relationship to entrepreneurial potential are reported. Special attention is drawn to the differences between male and female students given the fact that currently only one third of entrepreneurs in Finland are women.

Personality was explored by looking at two largely studied constructs: the 'Big 5' and locus of control. This section of the questionnaire is based on the models Schallenberg

and Venter and Krampen (1991). The 'Big 5' consists of: extroversion, compatibility, conscientiousness, emotional stability and the respondents' culture. The second personality construct studied is the respondents' locus of control (Rotter) belonging to the 'family' of attribution theories.

Extroversion can be defined as an orientation in mind toward other people, events and objectives. Extraverts are socially gregarious and outgoing while their opposites introverts tend to be shy, retiring people. One of the implications of the introversion/extroversion personality dimension for behaviour involves task performance in different environments. Some evidence suggests that introverts perform better in an environment where there is relatively little sensory stimulation, whereas extraverts perform better in an environment with greater sensory stimulation. Thus, as might be expected, extraverts are well represented in managerial and entrepreneurial occupations.

Extroversion

To define the degree of *extroversion* of the respondents, they were asked to rate their level of talkativeness, whether they were good-natured, their thoroughness, if they are sociable and open. The respondents are classified into three groups: very extroverted, extroverted and less extroverted. In all, 13.3 per cent of the respondents were very extroverted (16.6 % of males and 9.8 % of the females), 43.7 per cent extroverted (41 % vs. 46.2 %) and 43 per cent less extroverted (49.3 % vs. 37.2 %).

Cross-tabulating extroversion and entrepreneurial potential gives the following result (Table 7).

Table 7 Extroversion and entrepreneurial potential

	Extroversion			Total
	Low/moderate	High	Very high	
Entrepreneurial potential Non-entrepreneur	200 51.8 %	151 39.1 %	35 9.1 %	386 100 %
Potential entrepreneur	409 43.5 %	405 43.1 %	126 13.4 %	940 100 %
Very potential entrepreneur	65 27.1 %	128 53.3 %	47 19.6 %	240 100 %
Total	674 43.0 %	684 43.7 %	208 13.3 %	1 566 100.0 %

The Chi-Square test gives a value of 40.532*** (df = 4), which is statistically very significant. In other words, there is a positive relationship between extroversion and entrepreneurial potential among students. This result contradicts with the recent study of Singh and DeNoble (2003) indicating that extroversion correlates negatively with entrepreneurial intentions.

Differences between male and female respondents are interesting. Through cross-tabulating separately female and male data gives evidence that among male respondents both high and very high extroversion related to high entrepreneurial potential, while this connection is found only in the case of very extroverted female respondents.

Emotional stability

One of the many ways to characterise entrepreneurship is the concept of entrepreneurial mindset – a way of thinking about one’s business that captures the benefits of uncertainty (McGrath and MacMillan, 2000). Because entrepreneurs are action and adaptively execution oriented by their very nature, there are also emotional investments needed in starting up and running one’s business. A part of becoming an entrepreneur is learning to simplify complexity and coping with uncertainty as an ally rather than an enemy. Entrepreneurs are expected to be more stable and emotionally well controlled particularly in hard economic times to be able to manage their business. That is why emotional stability is often considered a prerequisite for entrepreneurship. Emotional stability and control are needed because of taking and managing calculated risks.

Emotional expressivity and emotional sensitivity are attributes relating to social skills also needed in the process of running a business. Many entrepreneurs rate high in excitability stemming from pursuing opportunities with particular discipline.

In these data, emotional stability relates very significantly to entrepreneurial potential:

Table 8 Emotional stability and entrepreneurial potential

	Emotional stability			Total
	Low/moderate	High	Very high	
Entrepreneurial potential				
Non-entrepreneurs	234 30.1 %	143 19.9 %	9 12.9 %	386 24.6 %
Potential entrepreneurs	486 60.2 %	431 59.9 %	41 58.1 %	940 60.0 %
Very potential entrepreneurs	75 9.7 %	145 20.2 %	20 28.6 %	240 15.3 %
Total	777 100.0 %	719 100.0 %	70 100.0 %	1 566 100.0 %

A value of Pearson's Chi-Square obtained is 55.337*** (df = 4), which means that there is very significant relation between emotional stability and entrepreneurial potential. Emotionally highly stable respondents have more than twice entrepreneurial potential compared to their emotionally less stable (low/moderate) counterparts. Among potential entrepreneurs the figures are very close to each other.

As to the differences between female and male respondents, Table 9 gives the results:

Table 9 Emotional stability and entrepreneurial potential of male and female respondents

Gender		Emotional stability			Total
		Low/moder.	High	Very high	
Male	Entrepreneurial potential	90	57	5	152
	Non-entrepreneurial	59.2 %	37.5 %	3.3 %	100.0 %
	Potential entrepreneur	196	242	24	462
		42.4 %	52.4 %	5.2 %	100.0 %
	Very potential entrepreneur	40	90	13	143
		28.0 %	62.9 %	9.1 %	100.0 %
Total		326	389	42	757
		43.1 %	51.4 %	5.5 %	100.0 %
Female	Entrepreneurial potential	144	86	4	234
	Non-entrepreneurial	61.5 %	36.8 %	1.7 %	100.0 %
	Potential entrepreneur	272	189	17	478
		56.9 %	39.5 %	3.6 %	100.0 %
	Very potential entrepreneur	35	55	7	97
		36.1 %	56.7 %	7.2 %	100.0 %
Total		451	330	28	809
		55.7 %	40.8 %	3.5 %	100.0 %

It can be observed that both in the case of male and female respondents the proportion of highly potential entrepreneurs decreases with decreasing emotional stability. The shares vary, however. Out of very stable female respondents every fourth students belongs to highly potential entrepreneurs while the share of male respondents is every third. In the case of emotionally stable respondents the percentages of non-entrepreneurs and highly entrepreneurial respondents turn to be opposite. There are less highly potential entrepreneurs and more non-entrepreneurs among female respondents, while in the case of male respondents it is vice versa. Thus, emotionally stable respondents orient more often toward entrepreneurship than working as an employee, but out of stable ones only male respondents tend to belong to highly entrepreneurial category.

Locus of Control

Locus of control refers to the extent to which individuals believe that they can control events affecting them. Individuals who have a high internal locus of control believe that the events in their lives are primarily the result of their own behaviour and actions. Individuals who have a high external locus of control, on the other hand, believe that the

events in their lives are primarily determined by chance, fate or other people. The model that influences the locus of control section of the questionnaire employed in this survey was that of Krampen (1991) measuring respondents' general beliefs. The results of Finnish students are given in Table 10.

Table 10 Locus of control and entrepreneurial potential

	Locus of Control			Total
	External	Internal	Strongly Internal	
Entrepreneurial potential	69	292	25	386
Non-entrepreneurial	36.5 %	29.3 %	16.3 %	24.6 %
Potential entrepreneur	108	744	88	940
	57.1 %	60.8 %	57.5 %	60.0 %
Very potential entrepreneur	12	188	40	240
	6.3 %	15.4 %	26.1 %	15.3 %
Total	189	1 224	153	1 566
	100.0 %	100.0 %	100.0 %	100.0 %

The results reveal that a majority of the respondents has an internal locus of control, while the proportion of those having a strong internal one and external one is about the same. A value of 37.542*** is obtained in chi-square test confirming the widely demonstrated result according to which people with entrepreneurial potential tend to have an internal locus of control. In these data it is particularly true in the case of respondents having strongly internal locus of control.

Data further show that male respondents having very strong entrepreneurial potential belong three times more often in the group with high internal control compared to their female counterparts. Hansemark (2003) has demonstrated in his recent study that locus of control affects more strongly the predictability of entrepreneurial intentions among males than among females. Thus, the reasons of the birth of entrepreneurial intention may be different among females, although it can't be proved in this study.

Independence

Need for independence has been traditionally linked to entrepreneurs as a major motive. Entrepreneurship is seen to allow the opportunity to define one's own work in one's own way. There are also some traditional organisational jobs allowing a great deal of this kind of freedom, but often particularly entrepreneurs or self-employed appreciate jobs that are highly autonomous and flexible. For example Douglas and Shepherd (2002) have emphasised the relationship between independence and entrepreneurial intentions.

Table 10 indicates the relationship between independence and entrepreneurial potential. The figures show that low/moderate need for independence relates to considerably more often to non-entrepreneurial orientation than high need for independence as expected. The relationship is statistically very significant (Chi-Square 86,415***; df = 2).

Table 11 Independence and entrepreneurial potential

	Independence		Total
	Low/moder.	High	
Entrepreneurial potential	180	206	386
Non-entrepreneurial	36.9 %	19.1 %	24.6 %
Potential entrepreneur	280	660	940
	57.4 %	61.2 %	60.0 %
Very potential entrepreneur	28	212	240
	5.7 %	19.7 %	15.3 %
Total	488	1 718	1 566
	100.0 %	100.0 %	100.0 %

Creativity

Creativity has also been closely linked to entrepreneurship. In the case of potential entrepreneurs, the parameters are not set and people are supposed to exercise judgment involving creativity. The entrepreneur is also expected to create a new framework for valuing resources based on his or her beliefs about what will satisfy the market, how competitors will behave, or what the effect of technological change will be and how it will shape the competitive landscape. Creativity is also important in entrepreneurial decision-making without neglecting the concept of opportunity seeking as described much in entrepreneurship literature.

In this survey, cross-tabulating shows that self-assessed creativity relates strongly to entrepreneurial potential (Table 11). A value of 78,847*** (df = 2) is obtained in chi-square test.

Table 12 Creativity and entrepreneurial potential

	Creativity		Total
	Low/moder.	High	
Entrepreneurial potential	228	158	386
Non-entrepreneurial	34.4 %	17.5 %	24.6 %
Potential entrepreneur	376	564	940
Very potential entrepreneur	56.8 %	62.4 %	60.0 %
Very potential entrepreneur	58	182	240
Total	8.8 %	20.1 %	15.3 %
Total	662	904	1 566
	100.0 %	100.0 %	100.0 %

Openness to experiences

Openness to experiences comes close to extraversion orientation described earlier. It is expected to have important implications for social behaviour. This personality dimension correlates with attributes such as being sociable, lively, seeking novelty and change, and emotionally expressive. Some experts consider this attribute to be an example of a characteristic with a relatively high genetically determined component. The relations between openness to experiences and entrepreneurial potential is given in Table 13.

Table 13 Openness to experiences and entrepreneurial potential

	Openness	Total

	Low	High	
Entrepreneurial potential	319	67	386
Non-entrepreneurial	28.2 %	15.4 %	24.6 %
Potential entrepreneur	671	269	940
	59.3 %	61.8 %	60.0 %
Very potential entrepreneur	141	99	240
	12.5 %	22.8 %	15.3 %
Total	1 131	435	1 566
	100.0 %	100.0 %	100.0 %

A value of 42.935*** (df = 2) is obtained showing that an expected relationship exists between these two variables. Singh and DeNoble (2003) have achieved the same result about the correlation between openness to new experiences and entrepreneurial potential. Male respondents with high openness were more likely to have high entrepreneurial potential than their female counterparts in the Finnish data. Furthermore, males with low openness to experiences had entrepreneurial potential two times more than the female respondents. Thus, high openness to experiences seems to be more important in predicting entrepreneurial potential among female respondents.

Security orientation

Security oriented people would not give up employment security or tenure in a job or organisation. Their main concern might be to achieve a sense of having stabilised their career so that they can relax. This can reflect in concern for financial security or employment security or geographic security in the sense of being in an area they feel they can always find a job. Such security orientation may involve trading their loyalty and willingness to do whatever the employer wants from them for some promise of job tenure. They may be less concerned with the content of their work. On the other hand, everyone has certain needs for security and stability, especially at times when financial burdens may be heavy.

Entrepreneurial career can't guarantee any stability nor security especially at the early stages of a business. Thus, one would consider high security orientation as an 'anti-entrepreneurial' factor and assume that security orientation correlates negatively with

entrepreneurial potential. Table 13 demonstrates that this assumption is right: Chi-Square Test gives a value of 28.372*** (df = 2). Yet, it can be noted that about two thirds of the students in the sample are highly security oriented. This confirms the point taken by Routamaa and Mäki-Tarkka (2005) according to which security is the most important motivation factor of Finns.

Table 14 Security orientation and entrepreneurial potential

	Security orientation		Total
	Low/moder.	High	
Entrepreneurial potential	88	298	386
Non-entrepreneurial	17.7 %	27.9 %	24.6 %
Potential entrepreneur	306	634	940
	61.6 %	59.3 %	60.0 %
Very potential entrepreneur	103	137	240
	20.7 %	12.8 %	15.3 %
Total	497	1 069	1 566
	100.0 %	100.0 %	100.0 %

4. Obstacles for establishing a business

4.1. General obstacles

There are a number of potential, both imagined and real hindering factors in the process of setting up a business. The students were asked what type of obstacles they think they could encounter, and to rate each of them on a scale from 6 to 1 (6 = very significant obstacle, 1 = very insignificant obstacle).

Table 15 Obstacles for establishing a business

1. Lack of the right business idea	4.62
2. Own financial risk	4.36
3. Lack of equity	4.31
4. Lack of courage	4.18
5. Lack of contact to clients/customers	3.97
6. Lack of debt capital	3.94
7. Lack of entrepreneurial qualifications and skills	3.93
8. Know-how deficit	3.84
8. Fear of failure	3.84
10. Complicated regulatory efforts	3.58
10. Lack of time	3.58
12. Economical cycle	3.51
13. Business environment/economic policy	3.45
14. Lack of right founding partner	3.34
15. Support from family and friends	2.66

Several types of hurdles can be noted among the major obstacles: lack of a decent business idea and financial issues being the strongest ones. These are followed by attitudinal obstacles such as lack of courage (4.18) and fear of failure somewhat later (3.84). Experienced lack of entrepreneurial qualifications and skills (3.93) and know how deficit (3.84) rank in the middle group of hurdles. Business environment and business cycles together with the lack of proper business partners and support from family and friends were considered less significant hurdles.

When looking at the selected obstacles of those students who have already established their own business compared to those who have strong, weak or no intentions at all the figures are as follows.

Table 16 Obstacles for setting up a business among students with various intentions

	Students who already started	Students with strong intentions	Students with weak intentions	Students with no intentions
1. Lack of right business idea	4.19	4.15	4.59	4.98
2. Own financial risk	4.04	3.98	4.35	4.64
3. Lack of equity	3.97	3.97	4.35	4.42
4. Lack of courage	3.77	3.92	4.14	4.60

has a clear message: students who already established a business or who have strong intentions are close to each other while the other two groups experience systematically stronger the obstacles such as lack of business idea, financial issues and courage.

Fueglistaller et al. (2006) conducted a factor analysis and reliability test identifying three factors of obstacles. The first factor was named '*economic conditions*' with the highest loadings on two items: business environment and economic situation. The second factor was referred to as '*financial resources*', consisting mainly of following three items: lack of private capital, lack of foreign capital and personal financial risk. The third one was named '*personal engagement*', including three items: lack of courage, fear of failure, and lack of a good business idea. The Finnish data above show that these three factors clearly differentiate students with varying entrepreneurial intentions from each other.

Obstacles: an international comparison

Financial obstacles were considered a major obstacles in all participating countries as Table 17 shows. Finland was actually the only country where personal engagement was the highest one out of all three factors in comparison and also highest score among all.

Table 17 Obstacles compared internationally

Country	Financial resources	Personal engagement	Economic environment
Switzerland	4.43	4.05	3.37
Liechtenstein	4.43	4.03	3.26
Germany	4.62	4.01	3.68
Austria	4.59	4.05	3.36
Belgium	4.12	3.77	3.56
Ireland	4.22	3.93	3.50
Finland	4.20	4.21	3.48
Norway	3.96	3.80	3.47
Hungary	4.52	3.86	3.64
New Zealand	4.10	3.83	3.53
Singapore	4.34	3.91	3.53
Intrn. average	4.38	3.94	3.47

Picking up some single averages from Table 17, it can be noted that financial obstacles are seen strongest in Germany and Austria, while economic conditions reach the highest scores in Germany and Hungary. The Finnish students are very close to the international average in terms of finding lack financial resources and economic conditions as an obstacle, but score highest in personal engagement, as mentioned earlier.

In further analyses, a significant negative correlation was found between respondents' potential to establish their own business and financial resources ($r = -.13^{**}$). In other words, the higher the level of access to finances is seen as a hurdle, the lower the level of potential to start up their own business. Somewhat lower but still significant correlation was observed between respondents' potential to start up a business and economic conditions ($r = -.11^{**}$). This correlation indicates that the less economic conditions are

considered as a hurdle, the more likely it is that the entrepreneurial potential among the students will progress.

As to the relationship between students' potential to set up a business and personal engagement (such as personal courage or the lack of business ideas), a higher correlation was found ($r = -.19^{**}$). In other words, the higher the level of students' potential to establish a business, the less they consider themselves as an obstacle. Thus, the personal characteristics also play an important role in setting up a business.

5. Conditions in universities and polytechnics

Students were asked to assess their university or polytechnic in terms of how entrepreneurial they saw their educational institute by employing a scale from 1 (very bad) to 6 (very good). The Finnish students rated their environment in this respect to be very close to the international average as Table 18 indicates.

Table 18 Entrepreneurial environment of universities and polytechnics

Country	Mean
Liechtenstein	4.59
Singapore	4.20
Switzerland	4.11
Germany	4.10
New Zealand	4.09
Finland	4.07
Ireland	4.03
Norway	4.02
Austria	3.99
Hungary	3.97
Belgium	3.92
International mean	4.06

In all, the differences are very small. Only Liechtenstein ranks considerably higher than its counterparts. The other means of the countries vary between 3.92 and 4.20. Thus,

conditions at universities in various countries seems to be very similar. When comparing Finnish universities (4.06) and polytechnics (4.08) there were no differences at all in terms of perceived entrepreneurial environment. The overall opinion was that the students in tertiary level education institutions in Finland are of the belief that the climate and conditions is rather favourable in assisting them in establishing a business.

Students were also asked if they have attended any lectures or events on the topic of entrepreneurship within their university or polytechnic. Some 34.3 per cent of students in universities and 45.3 per cent of their counterparts in polytechnics identified that they have not attended any lectures or events and 4.6 per cent of students in universities and 8.8 per cent students in polytechnics responded that such lectures or events have not been offered to them so far. However, 60.9 per cent of students in universities and 46 per cent of students in polytechnics have attended lectures or events on the topic of entrepreneurship. Thus, universities seemed to be better off in this respect than their counterparts in polytechnics.

Students were also asked what kind of support for establishing a business would they like to be offered by their university or polytechnic to have a better chance to start up their own business during their studies, or immediately after graduation. The results are seen in Table 19.

Table 19 Support students would like to have offered by their educational institute

Coaching for the start up	68.5 %
Get-togethers and discussions with other young entrepreneurs	42.8 %
General seminars and lectures on the topic of starting up a business	38.8 %
Seed financing by university/polytechnic	35.6 %
Contact point for general questions regarding starting up a business	34.2 %
Business plan seminars	31.4 %
Symposia, start-up days, contact platforms	31.4 %
Incubators (service centre for early stage start-ups)	28.0 %
Business game – starting up a business	19.0 %
No further offers	7.0%

The most popular was that of organising coaching. The second most popular choice was that of providing get-togethers and discussions with other young entrepreneurs followed by general seminars and lectures on the topic of starting up a business (which are actually arranged by great many educational institutions today) and seed financing.

Entrepreneurship related courses available in educational institutes are a part of supporting entrepreneurial environment. The students were asked there are courses offered in their school to their knowledge. International comparisons reveal that there are great differences in offerings. The best situation is in Liechtenstein, where only 0.5 per cents of the respondents told that there are no entrepreneurship-related courses offered followed by Singapore (0.9 %), Germany (3.6 %) and Finland (8.7 %). The situation is worst surprisingly in Ireland (13.7), Hungary (13.6 %) and Belgium (10.4 %). It should be noted that students in economic-related study fields reported somewhat lower figures, for example 5.6 per cent in Finland.

Somewhat paradoxically, Finland together with Germany and Switzerland rank high in this measure although their general entrepreneurial index is rather low. This raises the question if merely offering entrepreneurship-related courses to students will be enough to improve students' entrepreneurial incentives and potential. For example, content of courses may be discouraging by emphasising too much the risk factors included in entrepreneurship.

Furthermore, courses offered by universities and polytechnics doesn't secure that students attend them. The results revealed that the highest attendance rate was in New Zealand (81.4 %) and lowest in Ireland (41.6 %). The international average was high, 71.4 per cent. In the Finnish sample almost a half of all students (47.3 %) had attended entrepreneurship-related courses. Students in economic-related fields reported actually lower attendance rates. The international average for those students is 58.9 per cent, 12.5 per cent lower than for all students in the sample. In the case of Finnish students, the difference is 5.5 per cent, yet favouring other than business and economic-related field students.

Summary and conclusions

The study examined the respondents' goals after they completed their studies. The results revealed that a vast majority of Finnish students (about two thirds) prefer a career as a paid employee directly after their studies. After five or more years of their graduation intention to become self-employed has tripled to some 30 per cent. One conclusion from this finding is that students would realistically prefer to work for a period of time in someone else's business before starting up one's own. However, the option to maintain in paid employment is still higher five or more years after graduation than the attraction to become self-employed. Rankings of expected entrepreneurial position was second lowest of 14 countries participating in the survey.

The survey also investigated future entrepreneurial potential in relation to the specific activities and intentions of the respondents aiming to start up their own business. The Finnish students demonstrated slightly above international average level of entrepreneurial activities (4.4 %). One fourth (24.6 %) had never thought about starting a business and 37.1 per cent had done it only sketchily. The conclusion is that Finland is still predominantly a paid employees' society in terms of looking at the professional preferences of students in institutes of higher learning. The findings are in line with the results of the GEM 2005 according to which total entrepreneurial activity is below international average although at the level of other Nordic countries.

This challenges the educational system to improve the image of entrepreneurship and entrepreneurial opportunities particularly in institutes of higher learning. A high education rate and high investments in research and development as such are not enough, but in order to support and increase the rate of young entrepreneurs in Finland, it is essential to realise the role and meaning of entrepreneurship education at every level and also in teachers' education and teaching practices. There is plenty of room for improvements.

There were some positive signals, however. A special index called 'Entrepreneurial Power' was developed for comparative purposes based on two items in the questionnaire. The index was calculated from obtained country averages. The Finnish students scored 37.1 per cent which was somewhat above the international mean (35.5 %). Their ranking was fourth after Ireland, Singapore and Liechtenstein.

The questionnaire allowed to explore the relationship between various personality factors and entrepreneurial potential, although it is well documented that situational and personal factors have only limited explanatory power or indirect influence in predicting entrepreneurial activities. However, these factors can add the descriptive knowledge about entrepreneurship phenomenon.

Several factors such as extroversion, emotional stability, locus of control, independence, creativity and openness to experiences appeared to have a positive relationship with entrepreneurial potential, while security orientation had a negative one as can be expected. Interestingly, the relationships of these factors with entrepreneurial potential were different for male and female respondents in some cases. Generally speaking, entrepreneurial potential of male students was stronger than that of their female counterparts. The difference was much smaller, however, than the current statistics (only one third of entrepreneurs are women) of the gender of entrepreneurs in Finland indicates today.

The questionnaire examined the real and experiences obstacles hindering students from starting up a business of their own. Three main factors called '*economic conditions*', '*financial resources*' and '*personal engagement*' were identified in the ISCE 2006 project. The Finnish respondents considered financial resources less as an obstacle than their international counterparts in other countries and economic conditions to be at the same level as international average. What was concerning, however, was that the average of hurdles relating to personal engagement was all highest in Finland. Thus, there seems to be strong mental blocks preventing the students from pursuing an entrepreneurial

career. Out of single items, 'lack of the right business idea', 'own financial risk', 'lack of courage', 'lack of entrepreneurial qualifications and skills' were among most often mentioned major obstacles.

In general, the students considered the conditions and entrepreneurial climate to be 'rather good' across all countries. They would like to have more coaching, go-togethers and discussions with other young entrepreneurs and general seminars and lectures on the topic of starting up a business to strengthen and clarify their entrepreneurial intentions. Thus, support expectations are very practical and action-oriented. This both an appeal and a challenge for educational institutes and other supporting organisations. Peer examples are potentially a very valuable opportunity to be strengthened in the future.

Young entrepreneurship has not attracted any remarkable attention in Finland so far. The various entrepreneurial programmes have not recognised young entrepreneurs' needs or opportunities. The dominating culture is that of salaried employees aiming to a decent job in larger companies or safe career in the public sector. The Finnish Ministry of Education has finally published its guidelines on entrepreneurship education for every level of the education system. Until now, measures for entrepreneurial education have been, however, not sufficient but rather scarce and separate or only project based. A holistic view of entrepreneurship development is needed among policy-makers, too. It is also their challenge: how to make the country a more entrepreneurial society to be able to manage future challenges in a rapidly globalising world.

References

- Bird, B (1988). Implementing entrepreneurial ideas: the case of intentions. *Academy of Management Review*. 13 (3), 442-454.
- Douglas, E. J. and Sheperd, D. A. (2002). Self-employment as career choice: attitudes Entrepreneurial intentions, and utility maximization. *Entrepreneurship: Theory and Practice*. Vol. 26 (3), 81-90.
- Erikson, T. (2002). Entrepreneurial capital: the emerging venture's important asset and competitive advantage. *Journal of Business Venturing*, 17, 275-290.
- Fueglistaller, U., Klandt, H., Halter, F. (2006). *International Survey on Collegiate Entrepreneurship 2006*. University of St. Gallen and European Business School.
- Hansemark, O. (2003). Need for achievement, locus of control and the prediction of business start-up. *Journal of Economic Psychology*. Vol. 24(3), 301-319.
- Heinonen, J., Kovalainen, A., Pukkinen, T. (2006). *Global Entrepreneurship Monitor. Executive Report Finland*. Turku School of Economics and Business Administration, Series B2/2006, Turku.
- Kolvereid, L. (1996). Prediction of employment status choice intentions. *Entrepreneurship Theory and Practice* 21 (1), 47-57.
- Krampen, G. (1991). *Fragebogen zu Kompetenz- und Kontrollüberzeugungen (FKK)*. Göttingen: Hogrefe.
- Krueger, N., Reilly, M.D., Carsrud, A.L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15, (5-6), 411-432.
- Lundström, A. (ed., 2005). *Creating opportunities for young entrepreneurship. Nordic examples and experiences*. Swedish Foundation for Small Business Research, Örebro.
- Luthje, C., Franke N. (2003). The 'making' of an entrepreneur: testing a model of Entrepreneurial intent among engineering students at MIT. *R&D Management* 33 (2), 135-147.
- McGrath, R. G. and MacMillan, I. (2000). *The Entrepreneurial Mindset*. Harvard Business School Press. Printed in the U.S.A.
- Paakkunainen, K. (2007). *Alkaisinko yrittäjäksi? Tutkimus nuorten yrittäjyyksiä poliittisista kirjoituksista ja asenteista*. Yksityisyrittäjien Säätiö, Kerhokeskus-koulutyöntöry ja Nuorisotutkimusverkosto, Helsinki (in Finnish).
- Peterman, N., Kennedy, J. (2003). Enterprise education: influencing students' perception of entrepreneurship. *Entrepreneurship Theory and Practice* 28 (2), 129-144.
- Routamaa, V. and Mäki-Tarkka, K. (2005). The case of Finland. In A. Lundström (ed.), *Creating opportunities for young entrepreneurs. Nordic experiences and examples*. Swedish Foundation of Small Business, Örebro.
- Schallenberg, U. and Venez, M. (1999). Kurzversionen des MRS-Inventars von Ostendorf zur Erfassung der fünf grossen Persönlichkeitsfaktoren', *Berichte aus der Ab-*

teilung Angewandte Psychologie. No. 20, Zürich: Psychologisches Institut der Universität Zürich.

- Seikkula-Leino, J. (2006). Perusopetuksen opetussuunnitelmauudistus 2004-2006 ja yrittäjyyskasvatuksen kehittäminen. Paikallinen opetussuunnitelmatyö yrittäjyyskasvatuksen näkökulmasta. Helsinki: Opetusministeriö. http://www.minedu.fi/OPM/julkaisut/2006/yrittajyyskasvatuksen_kehittaminen?lang=fi. (in Finnish)
- Shane, S. (2004). *Academic entrepreneurship. University spinoffs and wealth creation*. Edward Elgar, Cheltenham.
- Singh, G. and DeNoble, A. (2003). Views on self-employment and personality: An explanatory study. *Journal of Developmental Entrepreneurship*, Vol 8 (3), 265-281.
- Soutaris, V., Zerbinati, S., Al-Laham, A.(2007) Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, 22, 561-591.
- Stevenson, L., Lundström, A. (2001). *Patterns and trends in entrepreneurship/SME policy and practice in ten countries*. Swedish Foundation for Small Business Research, Stockholm.