

Higher Education Students' Entrepreneurship and Personal-Psychological Characteristics. Empirical Evidence from Greece.

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Abstract

The purpose of this paper is to investigate, through empirical analysis, a) whether or not undergraduate students have any entrepreneurial intentions, based on their psychological characteristics such as locus of control, etc. and b) whether or not these psychological characteristics have any impact on their entrepreneurial intentions. For this purpose, anonymous questionnaires were administered to undergraduate students in the third and final year in higher education institutions in the Athens area. Statistical tools were employed in order to analyse the collective data. Results indicated that in general Greek undergraduate students were not risk-takers while they had little inclination towards entrepreneurship. Moreover, Greek undergraduate students have shown a positive locus of control, good self confidence and an aptitude for innovation while they have not shown high levels of tolerance to ambiguity. Taking into consideration that a) the economic development and the competitive advantage of a country are basically determined by the qualitative improvement of, and the productive use of, inputs such as entrepreneurship, and b) the enhancement of entrepreneurial skills of students is mainly the result of an effective education system, then this paper supports the view that advancing the existing knowledge on the relationship between entrepreneurial skills and the entrepreneurial intentions of young people would make a valuable contribution to a more competitive education system and to more innovative entrepreneurship.

Introduction and Aims of the Study

The context of entrepreneurship is closely related to economic development, entailing people that can develop their business rapidly through hard work and creative vision - a sort of investment activity. Entrepreneurial activities play a significant role in the economic development of a country simply because they can create new employment opportunities, contribute significantly to wage increases and enhance competitiveness (Report of European Commission, 2012; McClelland, 1967; Gartner, 1989). They intensify the transformation of savings into productive investments by offering new and innovative products and services, thus satisfying ever-increasing social needs. Profit cannot be the sole motive; there must also be the desire for innovation and expansion into new markets and production methods.

Certainly the development of entrepreneurial behavior depends heavily on a person's intentions. Therefore, an individual's attitude, belief and perceptions are crucial determinants of their entrepreneurial desires. Entrepreneurship is necessarily a time-consuming process as its results cannot be perceived and observed in the short-term (Gartner, et.al. 1994; Krueger, 1993). The need for time as well as the desirability and intentions of an individual are just two elements of the process. Indeed the success or failure of an entrepreneurial action depends on other factors. Research indicates that the influence on an individual's intention and career path is an essential issue for the science of psychology and has its roots in planned behavior theory (Krueger & Casrud, 1993).

Of the various factors that explain an individual's behavior, personality traits have a direct impact on intentions and provide useful insights into entrepreneurial behavior (Dinis, et. al., 2013; Davidson, 1991; Krueger & Casrud, 1993). These personality traits can be further developed and enhanced through entrepreneurial education.

Those engaging in entrepreneurial activity - entrepreneurs - can be distinguished by their energy, intelligence and risk-taking; indeed, it is by combining different resources (monetary and non-monetary) for development purposes that creativity and innovation can be efficiently and effectively materialized. The personality factors that influence a person's entrepreneurial intentions to develop a business are the following (Dinis, et.al., 2013; Chang & Rieple, 2013; Gartner, 1989; Krueger & Casrud, 1993; Linan, 2008):

- ❖ Locus of control

- ❖ Propensity to take risk
- ❖ Self confidence
- ❖ Need for achievement
- ❖ Tolerance to ambiguity
- ❖ innovativeness

Entrepreneurial education and the intentions of individuals have gained momentum recently and have been a concern of education policymakers. Any lack of entrepreneurship in a country cannot be attributed solely to the inefficient use of financial resources but also to the degree of effectiveness of the educational system and to the development of managerial skills and entrepreneurial function. Hence the factors determining production, alone, are not enough to enhance the economic development of society. The single most influential factor to determine development, to a large extent, is the human capital nurtured by the educational system, both as an attitude and a lifestyle. Human development through education is the pivotal determinant that contributes to increased productivity.

Even if a country has an experienced labor force and adequate financial resources, it will have limited innovative capacity if the human capital is not trained with the necessary entrepreneurship skills so as to efficiently combine resources for the production and the distribution of goods and services (Farmer & Richman, 1965, p. 1). Entrepreneurial development is a dynamic process and, while all individuals have a share in the responsibility for their future careers, education is the only way which gives people options through appropriate knowledge and training (Holton III & Trott Jr, 1996).

As the future working environment will depend on the creativity and individuality of young people, any information about the views of young people on entrepreneurship will be useful. Certainly it is personality traits that give rise to entrepreneurial activity but the impact of appropriate education can enhance the entrepreneurial potential of individuals. So the need for an injection of investment in entrepreneurial education is evident, with its focus mainly on knowledge and training.

With particular reference to the Greek context, it is well known that the country is facing serious economic problems and, for the last three years, has been involved in a cycle of financial debt, rendering it highly vulnerable to its creditors. As a result, the country is facing a deep economic recession that has been mainly

characterized by high rates of unemployment (due to extremely limited employment opportunities - especially for the youth) and the stagnation of innovation and creativity. The latter is mainly because this unfavorable situation has had a direct negative impact on the standard of living and increased the level of dissatisfaction. Clearly, the high level of uncertainty in the country has had a negative impact on people's attitudes, beliefs and perceptions in entrepreneurial intentions, diminishing the desirability of people to start up a business and increasing their reluctance to take risks. On the other hand, promoting entrepreneurship and fostering a positive attitude among young students towards business creation and innovation appears to be the main path to economic development, not only for Greece but for any country facing developmental issues. The acceleration of human development, the adoption of new technologies and efficient use of resources can be achieved only through one key area, namely entrepreneurial education.

Based on the above, the purpose of this paper is to investigate, through empirical analysis, a) whether or not undergraduate students have any entrepreneurial intentions, based on their psychological characteristics such as locus of control, etc. and b) whether or not these psychological characteristics have any impact on their entrepreneurial intentions.

Methodology

For the purpose of this study, anonymous questionnaires were administered to undergraduate students in the third and final year in higher education institutions in the Athens area. Since the Athens area has a wide distribution of higher education departments across the Attiki prefecture, the sample will be randomly selected and were distributed during the spring semester of the academic year 2013 – 2014. The questionnaire is divided into two main sections. The first section includes the personal characteristics such as gender, age, family status, scientific subject, residency, parental educational level, family income, etc. while the second section of the questionnaire consists of 74 questions designed to determine the psychological characteristics and the entrepreneurial intentions of the undergraduate students. This second section was developed by Dinis, Paco Ferreira, Raposo & Rodrigues (2013) and also by Koh (1996) (cited by Dinis, et.al., 2013) who studied the entrepreneurial characteristics. According to the authors, the structure of this research instrument was

based on the questionnaire of Lin~a'n and Chen (2007) (cited by Dinis, et.al. 2013) which aimed to assess entrepreneurial intentions.

The statistical tools employed in the study are:

- ❖ Descriptive statistics (percentages)
- ❖ Crosstabulation test
- ❖ Correlation tests (Pearson and Spearman)
- ❖ T-test

Findings¹

From the sample of 261 undergraduate students in question, 67.8% were women and 32.2% were men. Moreover, 62.5% of the undergraduate students were in their third year while 37.5% were in the final year of their studies. The vast majority of the undergraduate students (98.9%) were not married. Their fields of study were in Social Sciences (including Humanities and Education) and Law (40.2%), Technology-Engineering (24.9%), Health sciences (11.1%), and Business studies (23.8%).

The majority of the students (67%) had their main residency in the Athens area while the remaining 33% were outside Athens. regarding the type of employment of their parents, a high percentage of 65.1% (for fathers) and 82.4% (for mothers) were employees whereas only 34.9% (fathers) and just 17.6% (mothers) were self-employed. The majority of the respondents (85.4%) had graduated from higher public school and the remainder (14.6%) had graduated from a private school. Only 21.5% of the sample had attended modules on entrepreneurship, with the vast majority (78.5%) having not attended any. The cross-tabulation test between the field of studies of the respondents and the attention of entrepreneurial modules showed that students from business studies had the tendency to attend modules on entrepreneurship.

Table 1 presents the degree of acceptance of statements on entrepreneurial intentions. As the mean value for statements tends to 4, the more undergraduate students tended to agree with that particular statement, whereas when the mean value tends to 0, the more undergraduate students tended to disagree with the content of the statement. Therefore, according to Table 1, it seems that while undergraduate students

¹ For all tables presented, the cross-tabulation tests are given in the Appendix.

tended to agree on having the intention to run a business someday, they were not so confident about it. Hence, according to the results the respondents do not seem to have an increased level of entrepreneurial intention. These results are also confirmed by other similar studies such as Dinis, et.al. (2013), Chang & Rieple, (2013), Linan & Chen (2009), etc.

Table 1 Degree of acceptance of the statements regarding entrepreneurial intentions

	Statements	Mean	Std. Deviation
1	I am ready to do anything to be an entrepreneur	2.44	1.09
2	My professional goal is to become an entrepreneur	2.53	1.13
3	I will make every effort to start and run my own firm	2.75	1.23
4	I am determined to create a firm in the future	2.78	1.19
5	I have very seriously thought about starting a firm	2.71	1.23
6	I have the firm intention to start a firm some day	2.92	1.23

The cross-tabulation test between the field of studies and entrepreneurial intention has shown that those undergraduate students in health sciences had the greater intention to be entrepreneur. The Pearson Correlation test showed a positive relationship between those who had attended modules related to entrepreneurship and entrepreneurial intentions ($r=0.186/$ p-value = 0.003). This indicates that those students who had attended modules in entrepreneurship had higher expectations and higher entrepreneurial intentions. Moreover there was a positive correlation relationship between the gender of the respondents and their entrepreneurial intentions ($r= 0.167/$ p-value = 0.007), indicating that men had a greater likelihood of experiencing entrepreneurial intentions than women.

Table 2 Degree of acceptance of the statements regarding the locus of control

	Statements	Mean	St. Deviation
1	People’s misfortunes result from the mistakes they make	2.95	0.99
2	Many of the unhappy things in people’s lives are partly due to bad luck	2.64	1.01
3	I do not enjoy outcomes, no matter how favorable, if they do not stem from my own efforts	2.91	1.18
4	I am willing to accept both positive and negative consequences of my decisions and actions	4.07	0.84
5	It is I, not luck nor fate, which influence the outcome of events in my life	3.57	0.90
6	I cannot wait and watch things happen; I prefer to make things happen	3.95	0.90
7	I believe success is a product of luck and fate	2.02	0.84

rather than personal effort

The locus of control shows a greater degree of acceptance among undergraduate students and lower standard deviation comparing the values with entrepreneurial intention. From table 2 it is evident that undergraduate students tended to agree with statement 4 and 6. The cross-tabulation tests revealed that students in health sciences, social sciences and law seem to have greater locus of control. The Pearson correlation test between the locus of control and entrepreneurial intention revealed positive statistical significant relation ($r=0.240$, $p=0.000$). This result indicates that those with greater belief in their own effort and achievements are more likely to exhibit entrepreneurial intentions.

Table 3 Degree of acceptance of the statements regarding the propensity to take risk

	Statements	Mean	St. Deviation
1	I do not care if the profit is small so long as it is assured and constant	3.31	1.03
2	I am willing to take high risks for high returns	2.85	1.09
3	I do not mind working under conditions of uncertainty as long as there is a reasonable probability of gains from it for me	2.56	1.09
4	I do not fear investing my money on venture whose dividends I have calculated	2.91	1.05
5	I will consider a risk worth taking only if the probability for success is 60% or more	2.88	0.96
6	I fear moving into a new undertaking I know nothing about	3.91	1.04

From table 3 it is evident that the undergraduate students were not generally risk takers. And this can be inferred since the statement with the highest score in the mean value is 6. The same result aligned with the findings of Dinis, et.al. (2013), McClelland, 1967), etc. The cross-tabulation test between the field of studies and the propensity of taking risk had shown that students with higher knowledge abilities mainly in mathematics had a more positive attitude towards risk. The same results obtained by Agbim, et.al. (2013). Moreover it is worth mentioning that in those fields where mathematics is the main module in their studies, the majority of students were men. The Spearman correlation test between the propensity to take risk and the entrepreneurial intention revealed a weak positive statistical significant relation ($r=0.179$, $p=0.005$). This means that those with a greater tendency to taking risks had an increased likelihood of becoming entrepreneurs.

Table 4 Degree of acceptance of the statements regarding self confidence

	Statements	Mean	St. Deviation
1	I accomplish most when I am alone, under no direct supervision by anyone	3.49	1.07
2	I have confidence in my ability to achieve	3.59	0.91
3	I have weaknesses and fears that are far from being resolved	3.25	1.02
4	I doubt my ability to cope under new untested conditions	3.40	1.08
5	I find difficulty in asserting myself against the opinion of the majority	2.22	1.13
6	Even if I am capable, hard working and ambitious, if I do not have the money, I cannot start a business	3.74	1.06

From table 4 it is evident that the majority of the statements were given values above 3. This result is convergent with other previous studies such as Dinis, et.al. (2013), Robinson, et.al. (1991), etc. However, it seems that undergraduate students tend to agree with the perception that financial resources are an essential priority to start up a business. The cross-tabulation test between the field of studies and self confidence showed that the greatest levels of self confidence tend to be found in those in engineering and business studies.

Table 5 Degree of acceptance of the statements regarding the need for achievement

	Statements	Mean	St. Deviation
1	I take pleasure in responding to challenges so competition makes me work harder	3.41	1.07
2	I do not like a well-paid job if I cannot derive a sense of achievement and satisfaction from it	3.19	1.13
3	I want to earn only as much as possible to attain a comfortable standard of living	2.49	0.99
4	I do not mind routine, unchallenging work if the pay is good	3.35	1.10
5	When I do something, I see to it that it does not only get done but is done with excellence	4.12	0.88
6	I hire people on the basis of friendship and other relations (for their loyalty) rather than on the basis of competence	2.13	1.04

The statements relating to the need for achievement are both referring to internal needs (non-monetary), such as a feeling of satisfaction, and to needs linked to success from economic perspective, such as a good standard of living, a good salary, etc.

From table 5 it seems that statements referring to internal needs have greater values than external ones. The Pearson correlation test between the need for achievement and entrepreneurial intentions revealed a positive statistical significant relation but a rather weak one ($r=0.292$, $p=0.002$). Indeed Linan & Chen also have found that subjective motives have significant relation with entrepreneurial intentions.

Table 6 Degree of acceptance of the statements regarding tolerance to ambiguity

	Statements	Mean	St. Deviation
1	Job security is extremely important to me	2.0	0.94
2	A good job is one with clear instructions as to what is to be done and how is to be done	2.14	0.91
3	I enjoy working in unstructured situations	2.12	1.02
4	I have a work schedule which I try to follow very carefully	2.45	0.97
5	It bothers me when several people have overlapping responsibilities	2.63	0.97
6	In unclear situations, I like to make decisions and take the “lead”	3.19	1.14

It is evident from table 6 that there is not much tolerance of ambiguity since in five out of six statements the mean value is much lower than 3. Only statement 6 has a slightly greater value than 3. Moreover, the Spearman correlation test between tolerance to ambiguity and entrepreneurial intention did not confirm a relation. Indeed, the relationship between tolerance to ambiguity and entrepreneurial intention also do not being confirmed by the study by Dinis, et.al. (2013). Contrary to the results of Dinis, et.al. (2013), who found no relation between innovativeness and entrepreneurial intentions, are the findings of this study regarding the relationship between the two variables below, which suggest a positive correlation.

Table 7 Degree of acceptance of the statements regarding innovativeness

	Statements	Mean	St. Deviation
1	I avoid changing the way things are done	3.27	1.02
2	While others see nothing unusual in the surroundings, I am able to perceive opportunities for business	3.02	0.89
3	I am able to get around difficulties through strokes of ingenuity and resourcefulness	3.38	0.88
4	I believe there are always new and better ways of doing things	3.86	0.84
5	I find it difficult to come up with new, wild or even crazy ideas	3.79	1.07

Indeed, it is evident from table 7 that all statements have mean values greater than 3. This means that respondents tend to have a tendency to innovation. The Pearson

correlation test revealed a positive statistical significant relation between innovativeness and entrepreneurial intention ($r=0.285$, $p=0.000$). This indicates that those who perceive and act on business activities in a unique and innovative way are more likely to have entrepreneurial intentions. Hence innovativeness positively influences entrepreneurial intentions and this can also be confirmed by Robinson, et.al. (1991).

Table 8 Descriptives of summated scales and t-test

Descriptives of summated scales and t-tests						
Scales	minimum	maximum	mean	SD	t ^a	significance
<i>Entrepreneurial Intention (EI)</i>	1,00	5,00	2,690	1,050	-4,754	0,000
<i>Locus of Control (LC)</i>	1,43	4,43	3,164	0,484	5,471	0,000
<i>Propensity to take Risk (PR)</i>	1,40	4,60	2,907	0,522	-2,868	0,004
<i>Self-Confidence (SC)</i>	1,83	4,50	3,285	0,477	9,664	0,000
<i>Need for Achievement (NA)</i>	1,33	4,33	3,118	0,451	4,225	0,000
<i>Tolerance to Ambiguity (TA)</i>	1,17	4,00	2,428	0,523	-17,621	0,000
<i>Innovativeness (IN)</i>	1,80	5,00	3,468	0,559	13,520	0,000

^at-test with 260 degrees of freedom and test value 3 (neither agree nor disagree)

From table 8 it is evident that undergraduate students do not have any entrepreneurial intentions since the mean value is lower than 3. There is heterogeneity in the sample regarding the entrepreneurial intentions since there is a large variation in their responses and hence in values. However, it seems that the undergraduate students do have a locus of control as well as a need for achievement and innovation but do not have tolerance to ambiguity and are risk averse.

Correlation tests between the 7 groups of variables revealed three positive statistical significant relations, namely those among a locus of control and a need for achievement (Pearson = 0,266**, Spearman rho=2.48**), self confidence and innovation (Pearson = 0,382**, Spearman rho=0,392**), and innovation and the need for achievement (Pearson = 0,235**, Spearman rho=0.247**). The above correlations (**) are significant at 5% significant level.

Conclusions

Statistical analysis of the data from the Greek undergraduate students regarding their intention to become entrepreneurs highlighted the following findings:

The sample of undergraduate students that have been used for analysis exhibited a great degree of heterogeneity regarding their intention to become entrepreneurs. Moreover, results revealed that in general Greek undergraduate students were not risk-takers while they had little inclination towards entrepreneurship. In particular, from the group of statements related to their *propensity to take risk*, the statement with the highest mean value was “I fear moving into a new undertaking I know nothing about”. Indeed, the factor “propensity to take risk” may have a negative influence on students’ intentions to engage in entrepreneurial activity. In fact, many similar studies (Dinis, et.al., 2013; Davidson, 1989, 1991; Krueger, et.al., 2000; Linan 2008; Keat, et.al. 2011; Robinson, et.al. 1991; Kuratko, 2005; Gartner, 1989; etc.) also revealed that students who are negative towards risk-taking usually do not consider themselves to be an entrepreneur. In particular, these studies converged on the conclusion that this kind of attitude towards risk may be attributed to: a lack of knowledge about entrepreneurship, the assumption that success is borne out of stability in the status-quo, and the non-acceptance of uncertainty.

Previous studies on the demand of higher education in Greece (Saiti & Prokopiadou, 2008; Psacharopoulos & Papakonstantinou, 2005; Saiti & Mitrosili, 2005; Moustaka & Kasimati, 1984) have revealed that Greek students do give much consideration to their career and to a steady career development, they feel uncertain about the high unemployment rate, and they have a strong desire to enter the public sector as they consider it to be *the* pathway to a steady job with economic benefits. Given that a) in recent years Greece has been characterized by a very uncertain employment environment due to the unfavourable economic situation and b) Greek social culture is not favourable towards the development of entrepreneurship, then the results of this study cannot be considered as surprising. Based on this, it is clear that the country could improve its efforts to stimulate entrepreneurial behaviour through education. A concentration and a reinforcement of the benefits of entrepreneurship and a focus on the development of entrepreneurial skills and capabilities (starting even from primary education), will lead to a greater acceptance and efficient handling of uncertainty by students, to the development of a more favourable entrepreneurship culture and hence to the achievement of a more prominent place in a competitive economic environment. The current authors believes that although this process would be a challenging one that has no tangible results in the short term, the country urgently

needs such a change of culture as it will create an enduring legacy and foster the desired success.

In general, Greek undergraduate students have shown a positive locus of control, good self confidence and an aptitude for innovation while they have not shown high levels of tolerance to ambiguity. However it is worth mentioning that in the group of statements regarding *self confidence* the students tended to agree with the perception in order to feel more confident in starting up a business they needed to secure all the necessary financial resources. Therefore, it is evident that the economic prosperity and the feeling of economic security have an important impact on students' inclination towards entrepreneurship. Considering that a) in recent years Greece has been suffering from a deep and severe economic recession with ongoing economic uncertainty and b) as an individual gets older, self confidence diminishes (Dinis, et.al. 2013; McClelland, 1965; Kuratko, 2005; Krueger & Casrud, 1993) then this result is crucial as it may help Greek education policy makers to recognize the significance of stimulating the entrepreneurial behaviour of students. It will give them a better understanding of entrepreneurship, increase their self-esteem, making them more active and motivated, and hence nurture higher aspirations. Their entrepreneurial behaviour may be enhanced by addressing students' responses regarding the "need for achievement" in which students tended to agree more with internal needs rather than needs related to economic issues. The latter indicates a need to stimulate students' motivation and inclination towards entrepreneurship, and this can be optimized only through an educational process (Linan & Chen, 2009). This can be supported by the results of this study, particularly by the statistical analysis revealing that those who attended modules relative to entrepreneurship had increased entrepreneurial tendencies.

Certainly this study is not without limitations. It analyses only a small sample of undergraduate students in the Athens area regarding their inclination towards entrepreneurship. Analyses involving other/larger samples may reveal attitudes to entrepreneurship that considerably differ from the current findings. For this reason, the collection of more data and a more in-depth analysis would be needed to confirm the current results.

Despite the fact that it is very difficult to a) determine all the contextual factors that could more positively influence students' motivation for entrepreneurship and b) identify specific curricula for entrepreneurship education, it is clear from most

relevant studies such as Linan, (2008), Tanveer, et.al. (2013), Dinis, et.al. (2013), Report of European Commission (2012), Keat, et.al. (2011), Agbim, et.al. (2013), Robinson, et.al. (1991), Kuratko (2005), Turker & Selcuk (2009), etc., that the initiation and sustenance of entrepreneurship education, particularly concerning the expansion of knowledge, values, skills, and capabilities in an innovative and creative way would boost the desire for the transition towards entrepreneurship.

With the economic development and competitive advantage of a country being essentially determined by the qualitative improvement of, and the productive use of, inputs such as entrepreneurship, then the current authors strongly supports the view that the advancing of young people’s entrepreneurial intentions would make a valuable contribution to a more competitive education system and to greater innovation through entrepreneurship.

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Appendix

Table I cross-tabulation test between the field of studies and entrepreneurial intention

field		intension _E1	intention_ EI2	intention_ EI3	intention_ EI4	intention_ EI5	intention_ EI6	EI_SUM
humanities- law-social (N=105)	Mean (St.Dev)	2,33 (1,05)	2,28 (1,14)	2,59 (1,31)	2,75 (1,33)	2,59 (1,30)	2,81 (1,33)	15.37 (6.66)
science- technology (N=65)	Mean (St.Dev)	2,23 (1,15)	2,44 (1,23)	2,49 (1,21)	2,52 (1,20)	2,38 (1,29)	2,67 (1,28)	14.75 (6.72)
Health (N=29)	Mean (St.Dev)	2,55 (1,08)	2,75 (0,78)	3,27 (0,99)	3,20 (0,77)	3,37 (0,97)	3,48 (0,91)	18.65 (4.26)
Business (N=62)	Mean (St.Dev)	2,77 (1,06)	2,91 (1,04)	3,06 (1,08)	2,91 (1,06)	2,95 (0,99)	3,11 (1,01)	17.74 (5.38)
Total (N=261)	Mean (St.Dev)	2,43 (1,09)	2,52 (1,13)	2,75 (1,23)	2,78 (1,19)	2,71 (1,23)	2,92 (1,23)	16.14 (6.03)

Table II Cross-tabulation test between the field of studies and locus of control

field		control_ LC1	control_ LC2	control_ LC3	control_ LC4	control_ LC5	control_ LC6	control_ LC7	LC_SUM
humanities-law-social (N=105)	Mean	2,88	2,70	3,02	4,11	3,58	3,99	2,00	22.30
	Std. Dev.	0,90	,99	1,20	0,73	,817	0,79	0,75	(2.67)
science-technology (N=65)	Mean	2,76	2,53	2,80	3,98	3,46	3,90	1,86	21.32
	Std. Dev.	1,10	1,06	1,31	,97	1,07	1,02	,76	(3.92)
Health (N=29)	Mean	3,37	3,37	3,13	4,27	3,41	3,89	2,37	23.86
	Std. Dev.	1,01	0,77	0,99	0,88	0,73	0,77	0,77	(3.56)
Business (N=62)	Mean	3,04	2,32	2,75	4,01	3,77	3,96	2,06	21.95
	Std. Dev.	0,98	,90	1,08	0,85	0,91	0,82	1,03	(3.56)
Total (N=261)	Mean	2,95	2,64	2,91	4,07	3,57	3,95	2,02	22.14
	Std. Dev.	0,99	1,01	1,18	0,84	0,90	0,85	0,84	(3.39)

Table III Cross-tabulation test between the field of studies and Propensity to take risk

Field		risk_PR1_R	risk_PR2	risk_PR3	risk_PR4	risk_PR5_R	risk_PR6	SUM_PR
humanities-law- social (N=105)	Mean	3,35	2,69	2,53	2,74	3,01	4,14	18,48
	Std. Dev.	1,03	1,02	1,04	1,10	1,03	0,96	2,39
science-technology (N=65)	Mean	3,29	2,87	2,49	3,01	3,09	3,76	18,53
	Std. Dev.	1,12	1,25	1,31	1,02	0,913	1,08	3,05
Health (N=29)	Mean	2,89	2,62	2,44	3,31	2,20	3,89	17,37
	Std. Dev.	1,01	1,01	1,02	1,13	,940	,77	2,36
Business (N=62)	Mean	3,45	3,22	2,75	2,90	2,77	3,70	18,82
	Std. Dev.	0,91	0,98	0,95	,88	,711	1,19	2,64

Total (N=261)	Mean	3,31	2,85	2,56	2,91	2,88	3,91	18,45
	Std. Dev.	1,03	1,09	1,09	1,05	,96	1,04	2,64

Table IV Cross-tabulation test between the field of studies and self confidence

field		selfconf_ SC1	selfconf_ SC2	selfconf_ SC3_R	selfconf_ SC4_R	selfconf_ SC5	selfconf_ SC6_R	SUM_SC
humanities-law-social (N=105)	Mean	3,47	3,61	3,29	3,31	2,24	3,62	19,58
	Std. Dev.	1,16	,92	1,07	1,07	1,12	1,19	2,92
science-technology (N=65)	Mean	3,53	3,67	3,21	3,60	2,09	3,63	19,75
	Std. Dev.	1,19	,95	1,02	1,07	1,16	1,05	2,77
Health (N=29)	Mean	3,44	3,48	2,89	3,20	2,79	3,89	19,72
	Std. Dev.	,82	,911	,67	1,01	1,14	,81	2,88
Business (N=62)	Mean	3,48	3,50	3,40	3,45	2,04	4,00	19,88
	Std. Dev.	,91	,86	1,06	1,14	1,04	,88	2,89
Total (N=261)	Mean	3,49	3,59	3,25	3,40	2,22	3,74	19,71
	Std. Dev.	1,07	,91	1,026	1,08	1,13	1,06	2,86

Table V Cross-tabulation test between the field of studies and need for achievement

field		needachiev_ NA1	needachiev_ NA2	needachiev_ NA3_R	needachiev_ NA4_R	needachiev_ NA5	needachiev_ NA6
humanities-law-social (N=105)	Mean	3,47	3,37	2,31	3,46	4,28	2,10
	Std. Dev.	,99	1,12	,93	1,05	,80	1,06
science-technology (65)	Mean	3,26	3,07	2,63	3,20	3,86	1,92
	Std. Dev.	1,26	1,17	1,18	1,22	1,02	1,02
Health (N=29)	Mean	3,44	3,31	2,17	3,17	4,20	2,41
	Std. Dev.	1,05	1,22	,75	1,03	,81	,77
Business (62)	Mean	3,43	2,96	2,80	3,41	4,08	2,25
	Std. Dev.	1,00	1,00	,88	1,06	,83	1,12
Total (261)	Mean	3,41	3,19	2,49	3,35	4,12	2,13
	Std. Dev.	1,07	1,13	,99	1,10	,88	1,04

Table VI Cross-tabulation test between the field of studies and tolerance to ambiguity

field		tolambiguity_ TA1_R	tolambiguity_ TA2_R	tolambiguity_ TA3	tolambiguity_ TA4_R	tolambiguity_ TA5_R	tolambiguity_ TA6
humanities-law-social (105)	Mean	1,97	2,11	1,97	2,31	2,59	3,03
	Std. Dev.	,94	,96	,82	,94	1,16	1,09
science-technology (65)	Mean	2,20	2,30	2,24	2,86	2,56	3,35
	Std. Dev.	1,07	,99	1,17	1,04	1,41	1,25
Health (29)	Mean	1,65	1,93	2,44	2,34	2,06	3,24
	Std. Dev.	,613	,75	1,02	,85	,70	1,21
Business (62)	Mean	2,06	2,11	2,11	2,32	3,03	3,29
	Std. Dev.	,86	,811	1,13	,88	1,26	1,06

Total (261)	Mean	2,0	2,14	2,12	2,45	2,63	3,19
	Std. Dev.	,94	,91	1,02	,97	1,24	1,14

Table VII Cross-tabulation test between the field of studies and Innovativeness

field		innovativeness_I N1_R	innovativeness_I N2	innovativeness _IN3	innovativeness _IN4	innovativeness _IN_5R
humanities-law-social (105)	Mean	3,29	2,96	3,40	3,87	3,71
	Std. Dev.	,97	,87	,90	,88	1,06
science-technology (65)	Mean	3,35	2,92	3,32	3,84	3,86
	Std. Dev.	1,20	1,03	,93	,88	1,21
Health(29)	Mean	2,89	3,51	3,44	3,96	3,68
	Std. Dev.	,77	,68	,78	,68	,84
Business (62)	Mean	3,33	3,00	3,40	3,80	3,90
	Std. Dev.	,99	,78	,83	,80	1,06
Total(261)	Mean	3,27	3,02	3,38	3,86	3,76
	Std. Dev.	1,02	,89	,88	,84	1,07