
University Students And Their Entrepreneurship Spirit (Case Study In Ecole Nationale Polytechnique D'oran)

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Introduction:

Without doubt that entrepreneurs are a special breed, they are passionate about their ideas and their business goals, they are also willing to work hard over extended periods of time, so that their dreams come true. Over time a big number of studies have been done on entrepreneurial minds. It's an important subject for academics and researches. Entrepreneurial spirit is a vital ingredient in the achievements of anyone who succeeds beyond his or her original means. The person who starts a small business has something in common with the seller who suggests a better procedure for appealing to customers. The engineer who develops a new technique for improving quality control in a manufacturing system, the doctor or lawyer who opens his or her practice, they all show to a greater or lesser degree the entrepreneurial spirit that drives them to create new processes, new products, new ventures from the challenges and opportunity they see and experience. Many people would ask where and how new organizations, new products, new markets come from?

The answer is entrepreneurship, and then what are the characteristics which distinguish between people who have the spirit of entrepreneurship from those who do not? in other words what inspire people to be entrepreneurs?

1) Theoretical frame of study:

A) Definitions of entrepreneurship:

The concept of entrepreneurship has a wide range of meanings, the word entrepreneur originates from the French word (entreprendre), which means to **undertake**. In a business context it means to start a business.

Entrepreneurship as Hisrich and Peters have defined it "is the process of creating something new of value by devoting the necessary time and effort, assuming the accompanying financial, psychic and social risks and receiving the resulting reward of monetary and personal satisfaction and independence" (Davidson 2002: 13).

Sharma (1990) said that entrepreneurship is "the tendency of a person to organise the business of his own and run it profitably, using all the qualities of leadership, decision making". (Davidson 2002:14)

According to Cole "Entrepreneurship is a purposeful activity of an individual or group of associated individuals, undertaken to initiate, maintain or aggrandize profit by production or distribution of economic goods or services". (Gartner 1985:696-706)

Entrepreneurship as a word conveys different meanings depending on the situation. For many, it is associated with small business although this has changed with the realization there is more to entrepreneurship. (Ratten, 2023 :79-90).

The identification of business-related opportunities through a process of using existing, new or a recombination of resources in an innovative and creative way. (Ratten, 2023 :79-90).

Entrepreneurial spirit is very important for both entrepreneur and corporate entrepreneur, because the entrepreneurial spirit consist of innovation, creativity, leadership, team work, communication skills and as an agent of change. It can be said that the entrepreneurial spirit is not only needed by an entrepreneur but also a manager in bringing his company to compete. (Genoveva, G., & Tanardi, J. 2020).

Most economic, psychological and sociological research points to the fact that entrepreneurship is a process and not a statistic phenomenon. Entrepreneurship is more than just a mechanical factor.

B) Operational definition of entrepreneurship:

After reviewing several definitions from sources, I become prone to adopt the following definition which successfully synthesises the functional roles of entrepreneurs as Wennekers and Thurik (1990) put it : “the manifest ability and willingness of individuals, on their own, in teams within and outside existing organizations, to perceive and create new economic opportunities (new products, new production methods, new organisational and new product-market combinations) and to introduce their ideas in the market, in the face of uncertainty and other obstacles, by making decisions on location form and the use of resources and institutions.” (Collins and Williams 1995:203)

C) Definition of the entrepreneurial spirit:

The following may expresses the chief elements of the entrepreneurship spirit

“It is what inspires people to leave behind uncertainty, be it material or immaterial, and to engage in following a vision through venturing, no matter how intangible or ephemeral it may be initially”. (Collins and Williams 1995:205)

Uddin and Bose (2012), define entrepreneurial spirit as the commitment to starting a new business. This intention indicates the potentiality of an entrepreneur to start business in future.

Some literature represents notions related to career orientation (Francis and Banning, 2012) and the nascent entrepreneur (Koruntka et al, 2003).

The researchers on entrepreneurial spirit have identified that three factors dominate entrepreneurial spirit. The first one is the demographic profile, including age, sex, previous experiences and the influence of role model. The second one is a group of personality traits that include self-efficacy, confidence, and autonomy, the locus of control, risk-taking tendency and professional attraction. The third factor is contextual and it includes education and environment. (Qosja and Druga, 2015:2)

2) Research method

From this short introduction and definitions of entrepreneurship, we attempt to answer the questions related to that study by stating the following hypothesis as a methodological approach to the study.

A) **The main hypothesis:** There are individual differences between the students of ENPO about their vision of entrepreneurship spirit.

Hypothesis 2: There is difference between the three specialisations (management, genie mechanic and genie civil) in entrepreneurship spirit.

Hypothesis 3: There is difference between male and female of students about their vision of entrepreneurship spirit.

- In order to support all these hypotheses a survey was conducted by submitting a questionnaire to the **sample which consisted of 80 students** in ENPO after measuring validity and reliability (of the questionnaire) (appendix 1).

B) **The statistical instrument** used in this study was central tendency (descriptive statistic), analysis of variances (ANOVA) and "T" test (deductive statistic)

3) Applied study:

A) Pilot study

After reading some theories ideas about the entrepreneurial spirit mentioned above, we have found that the concept is composed of three factors which are: social, educational and personality characteristics.

A survey was conducted by submitting a questionnaire to the students of ENPO.(see appendix1)

Before applying this questionnaire to the sample of the principal study, we tested it by measuring its validity and reliability, then some modifications have been made related to their. its validity, and for its reliability was tested by using internal consistency method. The survey was conducted through twenty-five (25) students from the research population. The result found was 0,76 in "alpha Crombach" by using statistical package for social sciences (SPSS version 17.0) , therefore, the questionnaire becomes appropriate to be used in the principal study.

B) Principal study:

a) Questionnaire:

The survey was designed to extract information about respondent's social factors, educational and personality characteristics.

The questionnaire has thirteen (30) questions and it is composed by three categories:

a1) Social factors:

The respondents were asked about:

- Their family background.
- The financial status of the family.
- The encouragement received to pursue an entrepreneurial career.

Through the question numbers: one, two, three, four and five.

a2) Educational factor:

- The educational level.
- Working experience.
- Learning courses.

Through the questions numbers: six, seven, eight, ten, eleven, twelve and thirteen.

a3) **Personality characteristic factor:**

Creativity, leadership, motivation, optimist, opportunity, curiosity, self confidence, initiative, self efficacy and risk, were measured by the questions from fourteen to thirty.

The questionnaire is composed also of three (3) ranges of propositions/answers:

- **Yes** (3 points or degrees)
- **Sometimes** (2 points)
- **No** (1point)

b) **Study context:**

This study has geographic, physical and temporal limits.

b1) **Geographic context:**

Represented by "Ecole Nationale Polytechnique d'Oran (ENPO)" situated in Es-Senia town of Oran, Algeria.

b2) **Population context:**

The research was effectuated on eighty (80) students of ENPO which is the sample of this study divided in three specializations showed in the following table

b3) **Characteristics of the sample:**

Table 1: showed the sample in specialization

| specialization | number | percentage |
|-----------------------|---------------|-------------------|
| Management | 45 | 56% |
| Genie civil | 20 | 25% |
| Genie mechanic | 15 | 19% |

Table 2: showed the sample in sex

| sex | number | percentage |
|------------|---------------|-------------------|
| Male | 56 | 70% |
| Female | 24 | 30% |

b4) **temporal context:**

The study was effectuated during the period, from October to February of the year 2016.

4) **Results, analysis and discussion:**

- **The main hypothesis:** there are individual differences between students of ENPO about their vision of the entrepreneurship spirit.

Results of central tendency about the respondent's vision of the entrepreneurship spirit are entered in table 3.

Table 3:

| | |
|--------|-------|
| Mean | 66.19 |
| Median | 68 |
| Mode | 68 |

The results show that the mean, the median and the mode are proximate (66.19, 68, 68), so we can say that there are individual differences between the students concerning the vision of entrepreneurship spirit.

Also we can measure the degree of spirit about entrepreneurship by:

The average of the three degree (mean, median and mode) equals to $67.39 = 66.19 + 68 + 68 / 3$.

As we know that 30 is the lowest value: how many expressions in the questionnaire x the degree of proposition “no” (30 expressions x degree1).

60 is the average value: the number of the expressions x the degree of the proposition “sometimes” (30 expressions x degree2).

90 is the highest value: the number of the expressions x the degree of the proposition “yes” (30 x degree3).

Since $67.39 > 60$ (the average value) so the members of the sample have a spirit of entrepreneurship.

Through this result, we can say that the students of “ENPO” have the spirit of entrepreneurship which pushes them to be able to create their enterprises; and choosing to be students in “ENPO” shows us that these students have a vision to become owner of their enterprises which are the clear target of their futures (I have deduced that from a discussion with these students).

Also, in order to develop their spirit, these students participate in many trainings which are organised by “ENPO” under conventions with other schools and establishments in the world and specially, France (with FIE and CATI). Thus, these students are always helped and supervised by teacher’s instructions who have experiences in this domain.

Hypothesis 2: There is difference between the three specializations (management, genie mechanic and genie civil) in spirit of entrepreneurship.

Results of analysis of variances (ANOVA) about differences between the three specializations (management, genie mechanic and genie civil) in spirit of entrepreneurship are entered in table 4 and 4.1.

Table 4

| Source of variation | Sum of squares | Degrees of freedom | Mean square | F |
|---------------------|----------------|--------------------|-------------|------|
| Between groups | 655.21 | 2 | 327.60 | 4.81 |
| Within groups | 5239.53 | 77 | 68.04 | |
| Total | 5894.75 | 79 | | |

Table 4.1

| Specialization | Mean | Standard deviation |
|----------------|-------|--------------------|
| Management | 68.33 | 8.89 |
| Genie mechanic | 60.86 | 6.53 |
| Genie civil | 65.10 | 7.81 |

The results show that there are difference, between the three groups (management, genie mechanic and genie civil) because the result of (F) is 4.81 at the significance level 0.05, and the group of “management” is higher than the two others because its mean is 68.33 with standard deviation 8.89, than “genie civil” which its mean is 65.10 with a standard deviation 7.81, and higher than the last one “genie mechanic” with 60.86 as mean and 6.53 as standard deviation. We can say then, that this hypothesis is supported.

To explain this result, we could say that the differences between these groups can be attributed to the characteristics of the specialities. As the speciality of management is favourite its student's learn subjects related to entrepreneurship like theory of organisations, computability, methodology, psychopathology of organisation etc.....

The two other specialities (genie mechanic and genie civil) are more technically oriented, which points to study subjects of their own specialities.

Hypothesis 3: There is difference between male and female of students about their vision to the spirit of entrepreneurship.

Results of "T" test about difference between male and female of students in spirit of entrepreneurship are entered in table 5.

Table 5

| Sex | Mean | Standard deviation | "T" test | significance |
|--------|-------|--------------------|----------|--------------|
| Male | 68.39 | 8.52 | 3.89 | 0.01 |
| Female | 60.83 | 6.39 | | |

From observing the results in the above table, we can say that the hypothesis is supported, because the "T" test shows that there is difference between the two groups (male and female) of students, and its result is 3.89 at 0.01 level of significance; also the group of male with 68.39 of mean and 8.52 of standard deviation is higher than female who have 60.83 of mean and 6.39 of standard deviation in spirit of entrepreneurship.

The explanation of this result may be, that the students (male) are more prepared and motivated to be entrepreneurs than females with respect to Algerian culture which favours males to be owners and leaders of enterprises, Despite the equivalent capacities of females who are considered inferior in Algerian society and if the women take place as head, she is looked as like as particular case and against the principles of religion in the minds of some people.

Because of these beliefs comportments, some women don't like to be entrepreneurs and feel always inferior of men, but we could observe that the students female are entering slowly in the domains of men nowadays and the situation is changing.

Conclusion:

Through this study, we conclude that there is no difference in the entrepreneurial spirit among students of the three majors, and that the latter (the entrepreneurial spirit) exists for them, and that the difference exists only between males and females and in favor of males. Therefore, we conclude that they are more prepared for this profession than females.

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