

**PROPENSITY TO UNDERTAKE - A STUDY ON THE
ENTREPRENEURSHIP CHARACTERISTICS OF CONCLUDING
STUDENTS OF TECHNICAL EDUCATION**

**PROPENSÃO A EMPREENDER: ESTUDO SOBRE AS
CARACTERÍSTICAS EMPREENDEDORAS DE ESTUDANTES
CONCLUINTE DO ENSINO TÉCNICO**

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ABSTRACT

Entrepreneurship is recognized as a viable alternative for the graduating students of Technical Education, initiatives and changes in the curricular matrices of the courses have resulted in the expectation that the student coming from Technical Education has the possibility to create new businesses. This research project aims to analyze the entrepreneur profile and the entrepreneurial intention of the student, as well as his vision about the school environment. We sought to understand how students evaluate the school environment in which they are inserted, and possible implications for the educational institution. To obtain the information, a survey questionnaire was applied with 23 questions to 68 final students of the Technical Course in Administration, Technical School located in São Paulo/capital, during the first semester of 2017. In general, the students were satisfied with their academic background in the applicability of entrepreneurial knowledge, as well as with the school environment.

Keywords: Technical Education. Entrepreneur Profile. Entrepreneurial Intent.

RESUMO

O empreendedorismo é reconhecido como alternativa viável para os alunos concluintes do Ensino Técnico, iniciativas e alterações nas matrizes curriculares dos cursos resultaram na expectativa de que o estudante oriundo do Ensino Técnico tenha a possibilidade da criação de novos negócios. Este projeto de pesquisa tem como finalidade analisar o perfil empreendedor e a intenção empreendedora do estudante, bem como sua visão sobre o ambiente escolar. Buscou-se entender como os alunos avaliam o ambiente escolar no qual estão inseridos, e possíveis implicações para a instituição de ensino. Para obter as informações, foi aplicado questionário *survey* com 23 perguntas a 68 alunos concluintes do Curso Técnico em Administração, de Escola Técnica situada em São Paulo/capital, durante o primeiro semestre de 2017. Em geral, os estudantes mostraram-se satisfeitos com a sua formação acadêmica face à aplicabilidade de conhecimentos voltados ao empreendedorismo, assim como com o ambiente escolar.

Palavras-chave: Ensino Técnico. Perfil Empreendedor. Intenção Empreendedora.

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1 INTRODUCTION

The theme of entrepreneurship in diverse fields has been the focus of study of Brazilian researchers over the last years, in particular teaching and learning.

Dornelas (2008) argues that entrepreneurship means something new, different, changing the current situation and unceasingly pursuing new business opportunities, focusing on innovation and value creation. Entrepreneurs are vital to the economic health of a country, they generate jobs, stimulate economic growth and introduce technological innovations (SOUZA, 2006).

In this context Santos; Minuzzi; Cross (2007) emphasize the need for educational institutions to adopt an adequate curriculum to explore and develop students' potential for the business world. Ferreira and Mattos (2004) ,in turn, seek to differentiate the types of education, separating them into: managerial - through the acquisition of know-how and entrepreneurial that privileges the students' self-knowledge acquisition; these authors argue about the role of the schools of Administration in awakening and influencing the student to adopt an entrepreneurial attitude, showing him possibilities to develop an entrepreneurial career.

The teaching and learning of entrepreneurship seems to require more than the simple acquisition of knowledge, it integrates knowledge and know-how (FILION, 2000). However, Saraiva and Souza (2009) verified that: punctual and uncoordinated initiatives of teachers, absence of training on the subject and institutional lack of definition about the recent graduates' profile have been some of the challenges to be overcome.

Despite these challenges, there are structural changes in labor relations, as Martens argues; Freitas (2006), where formal employment is declining, and there is a need to find alternatives for vocational placement, especially for the young recent graduate.

Three levels of learning relationships for entrepreneurship are presented by Dolabela (2001): primary - family and acquaintances; secondary - links around a given activity (network of links); and, tertiary - courses, books, trips, fairs and congresses.

Santos; Minuzzi; Cruz (2007) seek to highlight the importance of knowing the profile of the students.

... attention should be given to the entrepreneurial profile of the students who make up a group, which can originate in the family culture, linked to business and from this point on, focus on the development of the psychological traits linked to entrepreneurship (SANTOS, MINUZZI, CRUZ, 2007, p.8).

Therefore, the authors believe in the relevance in analyzing the characteristics of the students, personality traits, knowledge and skills. In this context, understanding the history, interests and expectations of students is fundamental for those who work with entrepreneurship, especially in the field of teaching and learning.

Thus, the objective of this research is to understand the entrepreneurial potential (aspects prior to the technical course) and the entrepreneurial characteristics of the final students of the technical education of an educational institution that in recent years has promoted and encouraged the culture of entrepreneurship in the school community.

The data analyzed were collected through the answers of the graduates of the Technical Course in Administration, Technical School based in the city of São Paulo, at the end of the first semester of 2017.

2 THEORETICAL BACKGROUND

The theoretical reference is based on the backgrounds of the student's entrepreneurial potential.

2.1 Backgrounds of students' entrepreneurial potential

Students enroll in Technical Education with experiences that can not be neglected, as they can influence the entrepreneurial potential of students, investigations on this are infrequent, and there may be a gap to be investigated. In addition to the school environment, each student since childhood has accumulated experiences and experiences both within the family, as well as in diverse and even professional social institutions, contributing to the construction of their identity and personal and professional choices.

Ferreira; Mattos (2004) argue that the student's entrepreneurial profile is influenced by factors beyond the academic environment, such as the historical-social context and the family culture. According to Dolabela (2001), the individual who possesses in his/ her social circles entrepreneurial people has a greater possibility of also becoming entrepreneurs.

In entrepreneurship studies it is possible to identify factors or characteristics that influence entrepreneurial behavior, Padilla-Meléndez et. al. (2014) divide these studies into two categories with respect to their areas of study: context and personal characteristics. Context refers to entrepreneurship education, regional differences, culture and social capital, while the second area focuses on developing an instrument to measure entrepreneurial orientation related to psychological characteristics.

According to Gurol; Atsan (2006) the factors are: individual, social and environmental. Social factors deal with personal, family, and life experiences; environmental ones examine contextual factors such as career opportunities, the impact of market conditions, and social disruption while individuals focus on the personality traits of entrepreneurs.

Figure 1 illustrates the personal and professional experiences of the student before entering the technical course, the potential and the entrepreneurial profile, expectations and evaluation of the contributions of the school environment in which the students are submitted.

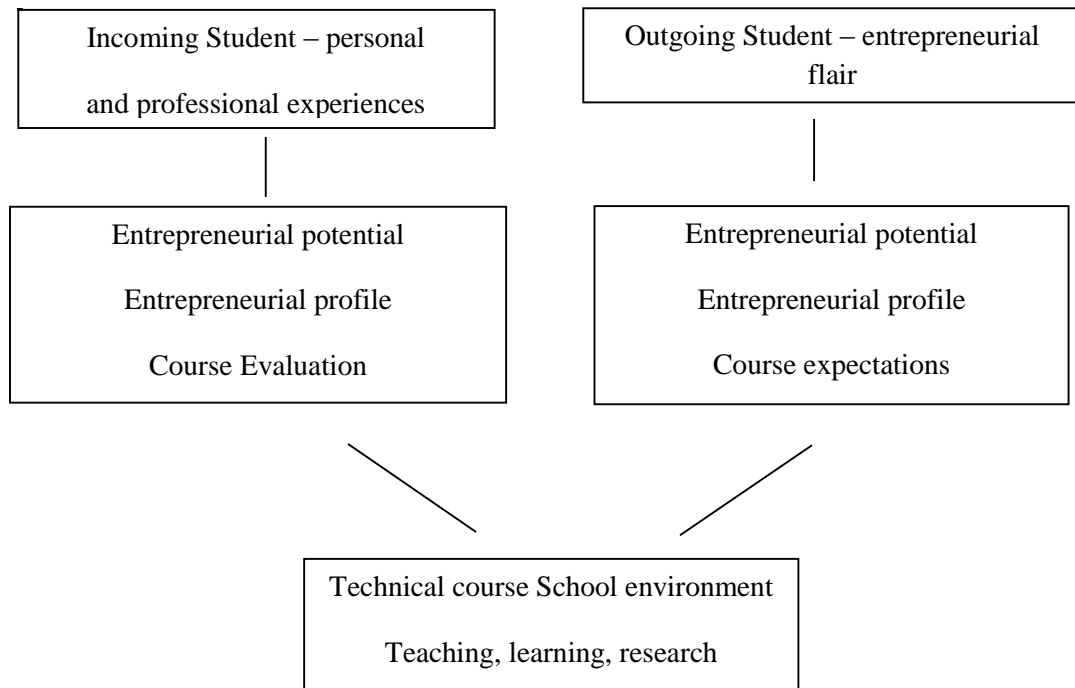


Figure 1 – Technical course student’s backgrounds and expectations
Source: prepared by the author

2.2 Entrepreneurial Behavioral Characteristics

Menezes (2003) claims that the entrepreneur, through creative and innovative behavior, knows how to transform contexts, stimulate collaboration, create personal relationships, generate results, do what he likes to do, with enthusiasm, dedication, optimism, self-confidence and a need of achievement.

Entrepreneurship is seen as an engine of economic progress, job creation and social adjustment playing a critical role for developing country economies (GUROL, ATSAN, 2006)

In this context of change and technological advancement, the employment structure changes and new careers, qualifications and occupations arise, requiring the teaching and learning system to develop new skills. These competencies need an environment that provides this development and it is the responsibility of educational institutions to play the role of fostering the entrepreneurial culture (SOUZA et al., 2006).

McClelland founded McBer & Company, a consulting firm in partnership with Management Systems International (MSI), and has conducted a number of studies and training focused on entrepreneurial skills (BARTEL, 2010). The United States Agency for International Development (USAID) partnership resulted in a questionnaire capable of measuring entrepreneurial behavioral characteristics, initially in emerging countries.

Subsequently, the United Nations Conference on Trade and Development (UNCTAD), Harvard University and David McClelland, developed the EMPRETEC methodology based on previous studies (UNCTAD, 2010).

In this formulation, three major constructs (Realization Need, Planning and Power) were used with ten characteristics, concomitantly the questionnaire has 55 statements, five of them for each of the ten characteristics and five for use as scale correction factor, each characteristic

varies from 5 to 25 points, the author considers that from 15 points the participant already has a propensity to undertake. This questionnaire is in Paletta (2001).

Chart 1 shows the distribution of the ten Entrepreneurial Behavioral Characteristics (EBCs).

EMPRETEC Model		
Need of Accomplishment	Necessity of Planning	Necessity of Power
Search for opportunities and initiative	Setting goals	Independence and self-confidence
Commitment	Systematic planning and monitoring	Persuasion and contact networks
Persistence	Information search	
Run calculated risks		
Quality and efficiency requirements		

Chart 1 - Entrepreneurial behavioral characteristics
Source: adaptation Empretec Model - prepared by the author (2017)

3 METHOD

The data collection instrument was based on studies carried out by Brazilian Higher Education Institutions (HEI) and adapted for technical education, the questions were formulated in order to reflect the particularities of this level of education.

Because it is easily attainable and familiar to the population studied, a questionnaire type survey on line was used to send, apply and retrieve the instruments of this research, which in addition to the low cost, allows to reach the participants while maintaining their privacy and enabling them to respond to the instrument at a time of their most convenience.

This privacy promoted by the tool makes it possible to obtain authentic material close to the reality experienced by the participants, not allowing the questionnaire to be forwarded to those who chose not to collaborate with the research. Thus the result of the research is based not only on the quantity of questionnaires answered, but on the qualitative perspective of the answers obtained.

Nonetheless, the tabulation provided by this tool has not been used to analyze the results because it is limited to percentage calculations, which would make it impossible to reach the objectives of this research, so they were transported to an Excel spreadsheet.

The research can be defined as descriptive, since it makes use of a questionnaire for data collection in order to study the characteristics of a specific population.

At the time of the research, at the end of the first academic semester of 2017, the Technical School had 74 students from the Technical Course in Administration who attended the course of Entrepreneurship during the course.

The questionnaire was sent to the target public through personal email based on the database of the Academic Secretary of the school unit, six of them were invalidated because the message did not reach the recipient, making up a population of 68 respondents. The graduated students, made up 91.89% of the total of students, of this total 46% of the sample declared as male.

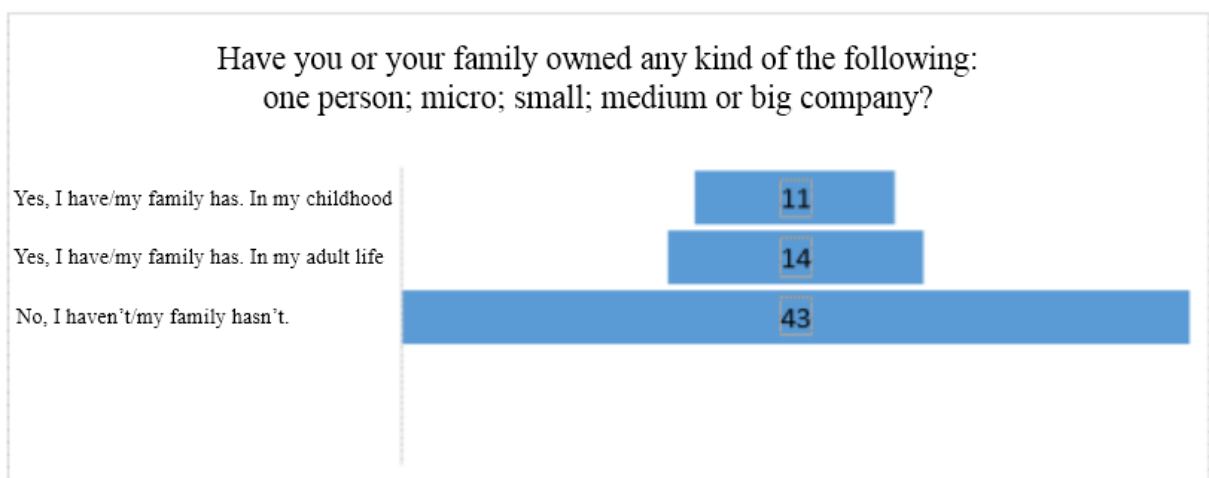
The codes used to identify the ten Entrepreneurial Behavioral Characteristics EBCs are organized in Chart 2.

Code	Entrepreneurial Behavioral Characteristics (EBCs)
SOI	Search for opportunities and initiative
PER	Persistence
COM	Committment
QER	Quality and efficiency requirements
RCR	Run calculated risks
SG	Setting goals
IS	Information search
SPM	Systematic planning and monitoring
PCN	Persuasion and contact networks
ISC	Independence and self-confidence

Chart 2 – Identification of characteristics
Source: Prepared by the author

4 RESULTS AND DISCUSSION

The age range of the target population in this study varies between 20 and 49 years, however the predominant range (36.66%) is between 31 and 40 years, all students of the night period. Most of them do not have any kind of business ties as owner members, even when extended to their closest relatives, as shown in Graphic 1.



Graphic 1 – Owner experience
Source: prepared by author

Most respondents (51.47%) suggest that they would have support from both family members and close friends as to whether to opt for an entrepreneurial career.

According to 44.50% of respondents, students are encouraged to have creative or entrepreneurial ideas at school and note that at school there is a minimum infrastructure available to students such as library, computers with internet, classes on entrepreneurship in the regular curriculum, lectures or programs focused on entrepreneurship.

Entrepreneurship is considered essential by 70.58% of respondents who also signal the importance of entrepreneurship education at all levels of education. Most respondents feel confident in the knowledge acquired in school and point out public policies of government as not decisive in their decisions (Table 1).

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1) I prefer to be my own boss rather than having a secure job.	3	4	26	24	11
2) A career as an entrepreneur is attractive to me	2	2	13	36	15
3) If I had the opportunity and resources, I would like to open a company	0	4	6	30	28
4) Being an entrepreneur would entail great satisfaction for me.	0	3	15	30	20
5) I believe that if I started my own business, it would certainly be successful	2	4	23	25	14
6) My parents and other family members support my future career as an entrepreneur.	1	3	29	19	16
7) My close friends agree that entrepreneurship is a logical choice for me	3	10	35	13	7
8) In my school, students are encouraged to have creative or enterprising ideas	6	10	22	23	7
9) In my school there is a minimal infrastructure such as library, computers, classes on entrepreneurship, lectures or programs focused on entrepreneurship	2	7	22	31	6
10) It is possible not to depend on government actions and take risks in order to have my own company	3	11	23	24	7
11) If I tried to start a business or business myself, I would succeed.	2	3	21	24	18

12) If I want to, I can become an employee on my own after completing my studies	5	8	17	24	14
13) Starting my own company would probably be the best option to apply my knowledge acquired in the Technical Course	4	18	18	17	11
14) I consider the subject of entrepreneurship essential in the current economic situation	1	2	17	24	24
15) Entrepreneurship should be taught in Technical Education	1	3	4	26	34
16) Other initiatives, other than formal classes, would be interesting on the subject of entrepreneurship	0	2	14	21	31
17) My Technical Course prepares students to be entrepreneurs	7	14	21	17	9
18) I particularly like and am willing to spend on new and innovative things like exotic foods, trips to new places, buying innovative products	3	8	21	23	13
19) Following traditions and customs are important to me.	6	5	26	22	9
20) I am confident in my knowledge to start to undertake	3	13	19	25	8
21) I have the leadership and the necessary ability to be an entrepreneur.	1	6	26	23	12
22) I have already completed entrepreneurship studies on my own or in the Technical Course	3	13	21	19	12
23) My professional goal is to become an entrepreneur.	4	8	25	18	13

Table 1 - Questionnaire versus respondents
Fonte: elaborado pelo autor

Thereafter, the expectation of the senior students of the technical education sample researched 45.29%, aim to become entrepreneur indicating better use of the connection between innovation, opportunity and business management.

5 CONCLUSIONS

Students with potential and entrepreneurial profile positively evaluated the school environment, indicating that there was satisfaction regarding what was accomplished in the scope of teaching and research. However, students enter technical education with high expectations of learning, indicating that the institution, despite offering good alternatives for students to undertake, cannot fail to expand and update its practices.

Based on the results obtained in the research, a planner profile is found, with a sociable leadership, forward-looking vision, risk-takers with the purpose of achieving the desired objectives, recognizing their role in generating and disseminating values as an entrepreneurial potential for the development of new business.

The challenge for the institution is to develop a plural and flexible environment as much as possible, since students who do not have an entrepreneurial profile also do not value methodological changes in class or update in the curriculum for this purpose.

It can be noticed that formal entrepreneurship education fosters the entrepreneurial intention and orientation of young people, especially those coming from technical education. The entrepreneurial characteristics influence the behavior of these students in a significant way, the family history as well as the educational level appear as characteristics in the business potential.

The importance of entrepreneurship in Brazil has increased significantly in recent years and the current studies approach the subject from different perspectives, the student's role of technical education in the creation of new business is already a reality and is expected to expand in the coming years.

Efforts should be promoted for the ongoing development of relationships between school and business sector, minimum curriculum and teacher training, infrastructure and optimization of resources available for theoretical and practical classes.

By focusing on students of technical education, the contribution of this article is to boost reflections for the study of entrepreneurship, which can offer subsidies to educational managers, researchers, the productive sector and the whole community who is involved in cognitive, emotional and environmental aspects of professional education.

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