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Entrepreneurial Competencies and Performance of Undergraduate Programs: A Study of Its Relations Based on Center Directors' Perspective

Abstract

Context and Objective: The objective in this research is to evaluate how the universities' center directors perceive the entrepreneurial competencies of the course coordinators at the academic unit they manage, as well as how they are related with the performances of these courses according to the measures taken by the Department of Education.

Method: To reach this result, a survey was developed using Cooley's model (1990, 1991) to measure the entrepreneurial competencies. The statistical methods used included factor and correlational analysis. The sample consisted of 61 courses, divided among three universities: one public and two community colleges.

Expected results: Based on the findings, it can be confirmed that the coordinators' entrepreneurial competencies, according to their superiors' perceptions, are positive and significantly related when considering the set of competencies. When analyzed according to Cooley's proposal, however, the achievement competencies are not associated with the performance. A positive and significant association does exist between the planning and power clusters and performance. The practical implication of these findings can be related with the improvement of the academic units' management.

Key words: Entrepreneurial Competencies. Evaluation. Center Directors. Course Coordinators.

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1. Introduction

In emerging countries, one of the main drivers of development is higher education. It is not only responsible for leveraging economic and social advances, but also for transmitting the scientific and cultural experience accumulated by humanity. The importance of higher education and the institutions that promote it is linked to the expansion of cognitive resources, capable of meeting the demands of the changes the contemporary world is going through (Delors & Eufrázio, 1998).

In Brazil, after the enactment of Law 9.394/1996, which establishes the guidelines and bases of national education, there has been a significant increase in the supply of higher education courses and types of establishments. Despite the expanded offer, however, the universities join the set of functions traditionally associated with the transmission of knowledge linked to teaching, research and extension. This set of actions enables the preparation of competent professionals who, in their learning, carry out research on new technologies and innovations that meet the current competitive market and who also perform their social function through the community service.

In their main activity, universities strive to qualify new professionals to meet the needs of the labor market, which expects human capital capable of managing increasingly complex systems, whether in the area of industry, commerce or services. Investments in education contribute to the development of the society one lives in and not only increases the income but also the employability of the individual (Arrazola & Hevia, 2008). Given the changes due to globalization and their reflection in the business world, however, the university is expected not only to address its graduates' employability, but also that it contributes to the learning of entrepreneurship.

Entrepreneurship is a distinctive feature of an individual or even an organization. In the early twentieth century, Schumpeter (1949) defined entrepreneurship as taking risks and responsibilities in the design and implementation of a new business or in the transformation of an existing business. His definition included the idea of creative destruction by referring to the process of change that accompanies radical innovations. That is, for the author, entrepreneurship is an activity that changes the existing balance, with innovation as the main characteristic. McClelland (1971), on the other hand, considers the entrepreneur to be the creator of a new company or the manager who tries to improve an organizational unit by introducing productive changes. From McClelland's research, the study of entrepreneurship skills began as a necessary condition for the success of entrepreneurial initiatives.

At present, companies have been restructuring and rethinking their internal work processes, mainly due to market pressures from consumers, competitors, suppliers, governments and, especially, variables in the macro environment (Shabana, 2010). These restructurings aim to enhance efficiency, with the purpose of better acting in this competitive environment, thus guaranteeing survival in the market.

The impact of changing the competitive environment organizations are inserted in requires a constant search for new markets, new products, new business alternatives and greater efficiency in operating processes. Therefore, it is necessary to innovate. Innovation will be better acknowledged and received if it comes from stimulating environments of free initiative of internal entrepreneurship. (Santos, Lenzi & Casado, 2011). One of the foundations of entrepreneurship is linked to the entrepreneur's profile and the influence of the entrepreneur's emotional structure on the results of organizations or the implementation of innovation projects though. In this process, entrepreneurial organizations need to develop their intrapreneurial culture, while corporate entrepreneurs need to develop their skills and polish them in the framework of the organizational culture (Lenzi, 2008).

The theories of entrepreneurial culture are rooted in the theories of entrepreneurship. Discussions about this have broken the frontiers of the "new business" and have gained a place on the discussion list of large organizations. This has been occurring due to the growing need for sophistication of the economy and the production and service means, which require the formalization of knowledge that was previously obtained and recognized only empirically (Dornelas, 2008). In this sense, Feuerschütte, Alperstedt and Godoi (2012, p 511) point out that "In the last decades the evolution of the phenomenon of entrepreneurship has intensified as a result of the economic transformations, the reduction of the jobs and the mobilization of the professionals in search of new spaces to expose their talents".

In order to stimulate and develop the intrapreneurial spirit, many companies are investing in development programs for their collaborators. The main challenge is to offer motivation so that their employees can develop intrapreneurial behaviors. Dornelas (2003) comments that companies are starting to change their way of acting, presenting alternatives to stimulate and develop the intrapreneurial spirit of their employees and at the same time increase their profits.

Given this context, the general objective proposed in this study is to evaluate if the center directors perceive in the academic unit's course coordinators the entrepreneurial skills necessary for the course performance according to the measuring of the Department of Education. In order to do so, the managers' perceptions were assessed through a survey (Babbie, 1992) and, after ad hoc statistical procedures, the relationship between the perceived competencies and the performance measure was analyzed.

Studies of this nature can contribute significantly to teaching practices, seeking to direct actions in the scope of higher education that stimulate the presence of entrepreneurs as future agents of innovation. Likewise, the results achieved and their articulation with the theoretical framework can permit the planning of actions that contribute to the area of entrepreneurship at other educational levels.

After this introduction, the structure of this paper comprises the theoretical contribution necessary to understand the items to be studied, namely, entrepreneurial culture; intrapreneurship and entrepreneurial skills. Next, the methodological procedures are described, followed by the description and analysis of the data, where the obtained results are shown. Finally, the final considerations of the research and the bibliographic references used are presented.

2. Theoretical Framework

Next, the entrepreneurial culture and intrapreneurship and entrepreneurial skills are discussed.

2.1 Entrepreneurial culture and intrapreneurship

Entrepreneurship is an emerging and ever-evolving field of research, encompassing the themes of creation, innovation, and expansion of new ventures in the individual and organizational dimensions, with emphasis on intrapreneurship in existing organizations (Antoncic & Hisrich, 2003).

Today, as Shabana (2010) argues, companies are restructuring and rethinking their internal work processes due to market pressures from consumers, competitors, suppliers, governments and, above all, macro-environmental variables. Intrapreneurship is not only a way of seeking to increase the level of productivity and innovation of organizations, as Pinchot (1985) puts it. It is a form of coordination of the work and business processes in a more integrated way. In the same vein, Filion (2004) points out that, in order to be intrapreneurs, people need to have a high level of commitment to what they do and should be able to at least sustain the continuity of the action they initiate.

The ascent of intrapreneurship is closely related to the consolidation of an entrepreneurial culture. Culture as a concept has a diversified and extensive trajectory and can be used to represent sophistication. For example, naming a person as "cultured" may be used to describe customs and rituals that societies develop. In recent decades, it has referred to the climate and the practices the organizations develop when dealing with people (Schein, 2009).

The network of relationships between the economic environment and the influences of the manager's entrepreneurial culture needs to be open to changes. It is complex and constituted by external factors that are in constant interaction with the organization's internal factors. In addition, it serves to sustain the corporate culture, influences its performance and its ability to learn from the external environment and, therefore, its ability to be competitive. In this network, the economic environment itself and the relationship between the organization and the market stand out as external factors. Regarding internal subjective factors, relationships involve the human resources' characteristics and openness to change. Entities that do not develop the ability to perceive internal and external stimuli quickly and therefore transform them into new projects/improvements are bound to be excluded from the market (Minguzzi & Passaro, 2000).

Minguzzi and Passaro (2000) argue that external environmental factors can only be modified in the long run and that the economic environment is composed of actors present in the environmental system where the company operates (customers, suppliers, competitors, management, consultants). According to them, the entrepreneurial culture is constituted by subjective and internal factors of the organization and the entrepreneur. They refer to the entrepreneur's behavioral as a component of the entrepreneurial culture, emphasizing that the "cultural inventory" consists of the entrepreneur's personal qualities.

This conceptual discussion has made managers look for a "correct type of culture", aiming for it to serve as a reference to herald certain values. In this sense, managers associate organizational culture with effective performance, in a relationship in which, the stronger the culture, the more effective the organization (Schein, 2009). In addition, being a code of values and beliefs that shape a firm's decision-making patterns, the organizational culture drives its behavior in order to block a strategy or serve as a catalyst for it. It is typically triggered from the top down, starting from the main manager (Goodes & Company, 1999).

The entrepreneurial culture is shaped by factors that mainly involve the entrepreneurial profile, which in turn interferes in organizational performance, and innovation. Innovation is directly related to the ability to develop new technologies aiming for competitive advantages. A key point to be stressed is that the various fragments of behavior and culture, which involve the understanding of innovation, need to be built on the basis of a manager's systematic skill set or patterns of thinking and acting. And this building creates possibilities to implement innovative actions throughout the organization (Dougherty, 2004).

Considering that people are resources and that the profile of the manager shapes the culture of the company, it is emphasized that the organization that fosters an entrepreneurial culture may stand out in relation to its competitors if it presents a set of distinguished resources and resource-based entrepreneurial management. In addition, Porter's position (1981) emphasizes that the improvement in the organizational performance innovates and updates the competitive advantages over time.

The corporate entrepreneur is the employee who stands out for his actions in the organizational environment, that is, who is an integral part of the entity. Intrapreneurs are agents of change because they are individuals who have ideas and turn them into profitable realities for the company. Pinchot (1985) already pointed out that the internal entrepreneurs are endowed with distinguished qualities and that the perceived characteristics highlight the innovative profile. This author points out that they are those who, based on an idea, receiving freedom, incentive and resources, dedicate themselves enthusiastically in transforming this idea into a successful product. Jennings and Young (1990) emphasize that corporate entrepreneurship is the process of developing new products or processes.

Wunderer (2001) mentions that the intrapreneur is an employee of the company who innovates, identifies and creates business opportunities, assembles and coordinates new combinations or arrangements of resources to add value. This assertion complements the concept developed by Pryor and Shays (1993), who pointed to intrapreneurship as the creation of an environment in which innovation can flourish and transform ordinary people into successful entrepreneurs who take on responsibilities and roles within the company.

Longenecker and Schoen (1975) established three core components of corporate entrepreneurship: 1) innovation - entrepreneurship is associated with innovative or creative action and involves the creation of products, services, processes, business, markets, alternative materials and structural changes in the organization; 2) autonomy - the entrepreneur should enjoy autonomy to make the decision to use resources, set goals, choose strategies for action and seek relevant opportunities; and 3) risk proneness - every entrepreneurial initiative involves some degree of risk and, the greater the factor of innovation, the greater the uncertainty.

Intrapreneurship consists of a system that accelerates innovations within organizations, as Pinchot (1985) argues, exploiting opportunities and aiming to earn above-average returns by making better use of the collaborators' entrepreneurial talents. These, in turn, are free to act, although with constraints as they are not the owners of the business. According to Zilber and Brancalião (2008) however, this action should take into account the environment the company is inserted in and the identification of opportunities that can generate new business.

2.2 Entrepreneurial competencies

The interpretations on competence are based on the conceptions of different areas of the human and social sciences, based on which their foundations and concepts are elaborated. Among the models, it is important to highlight the model that considers that competence needs to be observed in the action to be identified and understood. And as a result of its expression, it reveals how the subject articulates his resources to face situations of work and personal life. It can thus be understood as a construct that encompasses different personality traits, skills and knowledge.

From an organizational perspective, Prahalad and Hamel (1990) explain that competence would be the ability to combine, mix and integrate resources, products and services. Le Boterf (1997, 2003), from an individual perspective, states that it is not just a state or knowledge that one has and is not the result of training. According to him, competence is a concept under construction, is based on individual characteristics and will arise in the professional context.

Another definition from the same individual perspective is that of Durand (2006), who considers it as a broad combination of personal characteristics, skills and knowledge, which result in behaviors that can be evaluated and observed. On the other hand, competence according to Nassif, Andreassi and Simões (2011, 38) "can be considered as a final level of an individual's characteristic, approaching different personality traits, abilities and knowledge, starting from the influences of experiences, training, education, family and other demographic variables". Drejer (2002) defines it as a phenomenon composed of four elements: technology, people, organizational structure and organizational culture. In this same sense, Paiva Jr, Guerra, Oliveira, & Alves (2006) affirmed that they are necessary at the individual, group, organizational and societal levels and that entrepreneurial competencies reflect effective actions of the entrepreneurial leader, being framed at the individual level. According to Munck, Souza and Zagui (2012, p. 378) "when observing individual competencies as a development tool, the organization will be concerned with carrying out a planning that envisions this as a promising device for emancipating organizational competencies".

According to Snell and Lau (1994), entrepreneurial competencies are the combination of entrepreneurial actions, being a body of knowledge, motivations or directions, attitudes or views that can contribute to the devising or practice of the business in different ways. Man and Lau (2000), in turn, consider competencies to be superior characteristics that make the individual stand out due to different personality traits, skills and knowledge, manifested in attitudes. As Le Boterf (2003) adds, these traits are influenced by traditional and family education and experience.

For Antonello (2005), entrepreneurial competencies are a set of skills and attitudes that enable individuals to print their vision, strategies and actions in the creation of tangible and intangible value for society. In this same line of thought, Lenzi (2008) and Santos, Lenzi and Casado (2011) argue that they originate in the constant results of corporate entrepreneurs. Lenzi (2008:46) states that "just as a person can polish his own skills, an entrepreneur can build and tailor his individualities to create entrepreneurial competence."

Through a theoretical review, Mitchelmore and Rowley (2010) presented four categories of competency analysis: a) business and management competencies: focus on resource development, operational and strategic aspects; b) human competencies and relationships: focus on culture, leadership and people; c) conceptual and relationship competencies: focus on communication, relationship with stakeholders and decision making; and, d) entrepreneurial competencies: focus on innovation.

Based on Rosa and Lapolli (2010), Schmitz adopted as a concept of entrepreneurial competence the "behavior, skill and attitude of an individual who, in the face of critical work situations, gets inspired to seek solutions, which will result in institutional benefit and fulfillment of the individual's need for accomplishment". His qualitative study, developed in the university context with institutional managers, showed that independence and self-confidence were the most recurrent.

Developing a quantitative research in order to identify the entrepreneurial skills and to be able to relate them to the different aspects of the entrepreneurs and the businesses they develop implies the use of classifications. Among the existing ones, for this study, the classification by Lenzi (2008) was chosen. It is based on the work of Cooley (1990, 1991), which highlights ten characteristics of entrepreneurial conduct, grouped into three clusters, namely:

1. achievement cluster, consisting of the search for opportunities and initiatives (BOI), calculated risk-taking (CRC), demand for quality and efficiency (EQE), persistence (PER) and commitment (COM);
2. planning clusters, which encompasses the search for information (BDI), establishing goals (EDM), and systematic planning and monitoring (PMS);
3. power cluster, including persuasion and networking (PRC) and independence and self-confidence (IAC).

This model is currently used by the United Nations Development Program (UNDP), and also by the Brazilian Micro and Small Business Support Service (SEBRAE), for entrepreneurship training programs such as the Program for Entrepreneurs and Future Entrepreneurs (EMPRETEC).

3. Material and Methods

The data for this study were produced with the center directors (or equivalent position) at three universities, being one public and two community colleges. For this purpose, a survey was carried out using a questionnaire, in which the respondents were asked to evaluate the competencies of the course coordinators (or equivalent position) who are subordinate to them. All the directors received the research instrument in person due to the confidentiality of the data.

The questionnaire, in accordance with Cooley's (1990, 1991) proposal, contained a first part related to the entrepreneurial competencies of the achievement cluster, including: search for opportunities and initiatives (BOI), calculated risk-taking (CRC), demand for quality and efficiency (EQE), persistence (PER) and impairment (COM). The second part included all three competencies of the planning cluster: search for information (BDI), setting goals (EDM), and systematic planning and monitoring (PMS). Finally, the third part comprised the two competencies of the power cluster, which are related to persuasion and networking (PRC) and to independence and self-confidence (IAC).

For each of the competencies, the center director answered three questions regarding the competency he believed the coordinator possessed. The answers were to be given on a five-point interval scale, and then the three values were added up for statistical processing. Scores equal to or greater than twelve (12) indicate the presence of this competency.

Sixty-one (61) questionnaires were considered in which there were no missing data in any of the thirty questions. Of this number, thirteen came from the public university and the remaining 48 were distributed equally between the two community colleges. In the data processing, the factorial model and correlation analysis were used.

The analysis of common and specific factors, commonly called factor analysis, was used in an exploratory way. Before performing the analyses, Cronbach's alpha coefficient was calculated for the set of the ten competences and the item-total correlation, according to the procedure suggested by Churchill Jr. (1979). Next, the Kaiser-Meyer-Olkin (KMO) and Bartlett's sphericity tests (BST) were used to confirm the feasibility of using factor analysis. To extract the factors, the principal components method was used, which does not require multinormality, and the factors were extracted according to the Kaiser criterion, that is, based on eigenvalues greater than one when using the correlation matrix to generate those values.

Other restrictions applied were that the factor loadings should be greater than or equal to 0.60 in magnitude and the commonality greater than or equal to 0.4. The variance extracted by the factor in the case of one-dimensionality should be greater than or equal to 50%. The Kolmogorov-Smirnov test was used to evaluate the normality of the distribution of the sums of the three values for each competence, and asymmetry and kurtosis were calculated (Hair Jr., Black, Babin, Anderson, & Tatham, 2009). Finney and DiStefano (2006) state that data with asymmetry coefficients of up to 2 and kurtosis up to 7, in module, can be considered almost normal.

The factor scores for the different courses were then generated. In order to do so, we used the ten competences as a set and also separately, according to the clusters proposed in Cooley's model, that is, achievement, planning and power. Factor scores were used to evaluate the relation between competencies and course performance, measured by the preliminary course concept (CPC) the Department of Education assigns through a specific method. These concepts are available on the homepage of the Brazilian Institute of Educational Studies and Research Anísio Teixeira - INEP.

4. Results

The competency data in the sample obtained, which comprised 61 valid questionnaires and 30 variables, were transcribed to a spreadsheet for preprocessing. Initially, the values attributed by the center directors were added to the competencies of the coordinators and ten new variables were created. The value 12 was taken as an indicator that the competency was present in the coordinator according to the center director.

Thus, the competency that was most present was the search for information (BDI) with 46 occurrences, followed by persuasion and networking (PRC) with 42 and commitment (COM) with 40 scores equal to or higher than 12. The least frequent competencies were (BOE) with only 29, demand for quality and efficiency (EQE) and setting goals (EDM) with 30 occurrences of values equal to or greater than 12. In the evaluation of the center directors, 12 coordinators possess the ten manifest competencies and nine others have no added score equal to or higher than 12, which means that they do not manifest any competency according to the directors.

Then, before carrying out the factorial analyses, the procedures described in the previous section were performed. Thus, following the suggestion by Churchill Jr. (1979), reliability was evaluated through Cronbach's alpha and item-total correlations to confirm the fit of the data. Cronbach's alpha corresponded to 0.9084, well above the suggested minimum of 0.7. In turn, the item-total correlations were higher than 0.5 for all competencies. In both cases, it is confirmed that the data are fit to proceed with the factor analysis. Ratifying this condition, the KMO and BST tests were performed. The coefficient for the Kaiser-Meyer-Olkin test was 0.814 and the p-value of Bartlett's test was 0.000. Thus, it was verified that the data are feasible for processing using factor analysis.

Although the extraction method used in the factor analysis does not require multinormality, the normality of each of the competencies was evaluated, considered as the sum of the values of the three questions used. Therefore, the Kolmogorov - Smirnov test was used and, because the presence of normality had to be rejected for all ten competencies, asymmetry and kurtosis were calculated. As shown in Table 1, all values are within the ranges suggested by Finney and DiStefano (2006) to be considered quasinormal.

Table 1
Descriptive statistics of competencies

Competencies	Mean	Standard Deviation	Asymmetry	Kurtosis
BOI – Search for Opportunities and Initiatives	10.98	2.419	-0.514	0.099
CRC – Calculated Risk-Taking	11.66	1.999	-0.399	-0.193
EQE – Demand for Quality and Efficiency	11.10	2.166	-0.263	-0.923
PER - Persistence	11.72	2.318	-0.637	0.069
COM - Commitment	12.31	2.248	-0.422	-1.095
BDI – Search for Information	12.39	2.131	-0.718	0.895
EDM – Establishing Goals	11.10	1.981	-1.179	1.955
PMS – Systematic Planning and Monitoring	11.69	2.384	-0.509	-0.408
PRC – Persuasion and Networking	12.16	2.091	-0.621	-0.156
IAC – Independence and Self-Confidence	11.56	2.592	-1.089	1.211

Source: research data (2014).

Next, the exploratory factor analyses were executed, through which further adjustments were made. The competencies were addressed using the sets of the model by Cooley (1990, 1991) and considering the ten competencies simultaneously. When using the minimum values described in the methodological procedures, the factors presented in Table 2 were obtained.

Table 2

Factor loadings, explained variance and percentage of variance extracted by the factor for the set of competencies as a whole and for the achievement, planning and power clusters

Competency	Factor 1	Competency	Factor 1	Competency	Factor 1	Competency	Factor 1
CRC	-0.8600	BOI	-0.6898	BDI	-0.6747	PRC	0.8534
EQE	-0.8075	CRC	-0.8811	EMD	-0.8428	IAC	0.8534
COM	-0.7819	EQE	-0.8609	PMS	-0.8666	**Var. Expl.**	**1.4564**
BDI	-0.6486	COM	-0.8648	**Var. Expl.**	**1.9165**	**% of Var.**	**0.7282**
EDM	-0.7682	**Var. Expl.**	**2.7412**	**% of Var.**	**0.6388**		
PMS	-0.8209	**% of Var.**	**0.6853**				
PRC	-0.7651						
IAC	-0.6122						
Var. Expl.	**4.6481**						
% of Var.	**58.10**						

Legend:
BOI – Search for Opportunities and Initiatives
CRC – Calculated Risk-Taking
EQE – Demand for Quality and Efficiency
PER – Persistence
COM – Commitment
BDI – Search for Information
EDM – Establishing Goals
PMS – Systematic Planning and Monitoring
PRC – Persuasion and Networking
IAC – Independence and Self-Confidence

Source: research data (2014).

With each of the factors extracted in the multivariate analysis, the factor scores were calculated for the different courses. Then, the correlation analyses with the preliminary course concept (CFC) coefficients were executed, taken from the homepage of the Brazilian Institute of Educational Studies and Research Anísio Teixeira – INEP.

The analysis of the relationship between the factor scores deriving from the joint processing of the set of competencies, excluding the search for opportunities and initiatives (BOI) and persistence (PER), and the preliminary course concept (CPC), a correlation was found between these variables. In Table 3, the correlations between the competencies and the CPC were shown.

Table 3

Correlations between preliminary course concept (CPC) and factor scores of set of competencies (a) and clusters: achievement (b); planning (c); and power (d).

Correlation (A)	Set	Preliminary Course Concept (CPC)
Set	1	0,2563 P=0,046
Preliminary Course Concept (CPC)	0,2563 P=0,046	1
Correlation (B)	**Achievement**	**Preliminary Course Concept (CPC)**
Achievement	1	0,1593 p=0,220
Preliminary Course Concept (CPC)	0,1593 p=0,220	1
Correlation (C)	**Planning**	**Preliminary Course Concept (CPC)**
Planning	1	0,2571 p=0,046
Preliminary Course Concept (CPC)	0,2571 p=0,046	1
Correlation (D)	**Power**	**Preliminary Course Concept (CPC)**
Power	1	0,2963 p=0,020
Preliminary Course Concept (CPC)	0,2963 p=0,020	1

Source: research data (2014).

As presented in Table 3a, a positive and statistically significant ($p < 0.05$) association exists. For the achievement cluster, the calculation of the linear correlation coefficient did not demonstrate a significant result, as shown in Table 3b, which reveals a p-value superior to 0.05. For the planning cluster, the scores are again significantly correlated with the CPC (Table 3c). The same is true for the factor scores of the power cluster (Table 3d).

5. Final considerations

The purpose of this research was to analyze the relationship between the entrepreneurial skills the center directors perceive in the coordinators of the courses under their administrative responsibility and the performance of the courses those teachers coordinate. Therefore, a representative sample of 61 courses was selected, belonging to three universities in the state of Santa Catarina, being one public and free and two community and paid colleges. Thus, the main research problem was to evaluate if the perceived competencies are associated with the performance of the several courses, according to the measure the Department of Education uses, through the indicator called the preliminary course concept.

Before looking for the answer to this question, the behavior of the ten entrepreneurial competencies in Cooley's model (1990, 1991) was analyzed in the sample, chosen to develop this study. Thus, the data were processed considering the sum of the three questions that measured each of them. The results indicated that the three clusters they were divided in, according to the model, are not confirmed as dimensions of the construct when factor analysis was performed. The solution obtained was one-dimensional after the exclusion of the competencies search for opportunities and initiatives and persistence.

Regardless of this condition, individual analyses were also performed for each of Cooley's proposed clusters of achievement, planning and power. It was verified in these analyses that the planning cluster exhibits erratic behavior according to the center directors, with the competency that refers to persistence differing from the other four.

After recognizing those conditions, the associations that motivated this study could be evaluated. Consequently, the data treatment was divided into two different moments: one in which the construct was addressed generally and another where each cluster of the Cooley model was considered independently.

As a response to the initial inquiry, it can be concluded that the entrepreneurial skills the coordinators possess, according to the center directors, are positive and significantly related to the performances of the courses those teachers coordinate. When separating the competencies according to the clusters they were divided in according to the model used, however, shows that it is the achievement cluster that is not significantly linked to the performance. This is consistent with the fact that all the competencies the directors perceived behave in a one-dimensional way when excluding two of them that belong to the achievement cluster.

These findings may contribute to the improvement of academic management from both the theoretical and practical points of view. In the first aspect, by putting up for debate the importance of entrepreneurship not only for student training, but also as a necessary action for the managers to consider. From the practical point of view, it is the responsibility of the center directors to monitor the performance of the courses, taking into account the entrepreneurial capacity they perceive in the coordinators. According to the results presented here, the achievement cluster can be emphasized, as planning and power are clearly associated with performance.

Some limitations may be mentioned, such as not having considered in the analyses the coordinators' self-assessment of their entrepreneurial skills or how long the directors and coordinators have occupied their mandate. It is therefore suggested that future studies include other aspects that may enhance the understanding of the results achieved. In this sense, a topic of greater academic and practical interest is to analyze the entrepreneurial orientation the course, the center or the university itself can manifest.

References

Antonello, C. S.(2005). A metamorfose da aprendizagem organizacional: Uma revisão crítica. Ruas, R.L., Antonello, C.S., & Boff, L.H. *Os novos horizontes da gestão*: aprendizagem organizacional e competências. Porto Alegre: Bookman.

Antoncic, B. &Hisrich, R.B. (2003).Clarifying the intrapeneurship concept. *Journal of Small Business and Enterprise Development*, *10*(1), pp. 7-24. doi: https://doi.org/10.1108/14626000310461187

Arrazola, M. &Hevia, J. (2008). Three measures of returns to education: an illustration for the case of Spain. *Economics of Education Review*, *27*(3), pp. 266-275. doi: https://doi.org/10.1016/j.econedurev.2006.10.004

Babbie,E. (1992). *The practice of social research.* Belmont: Wadsworth.

Churchill JR., G.A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, *16*(1), pp. 64-73. doi:https://doi.org/10.2307/3150876

Cooley, L. (1990). *Entrepreneurship Training and the strengthening of entrepreneurial performance*. Final Report. Contract. Washington: USAID.

Cooley, L. (1991).*Seminario para fundadores de empresa*. Manual del Capacitador. Washington: MSI.

Delors, J. , Eufrázio, J.C. (1998). Educação: um tesouro a descobrir. Relatório para a UNESCO da Comissão Internacional sobre Educação para o século XXI. São Paulo: Cortez, MEC, UNESCO.

Dornelas, J.C.A. (2003). *Empreendedorismo corporativo*: como ser empreendedor, inovar e se diferenciar em organizações estabelecidas. 2. ed. Rio de Janeiro: Elsevier.

Dornelas, J. C. A. (2008). *Empreendedorismo*: transformando ideias em negócios. 3. ed. rev. e atual. Rio de Janeiro, RJ: Campus.

Dougherty, D. (2004). *Organizando para a inovação*. Handbook de estudos organizacionais, *3*, pp. 337-360.

Drejer, A. (2002). *Strategic management and core competencies*. Quorumbooks, USA.

Durant, T. (2006). *L'alchimie de la compétence*. Revue française de gestion, *160*, pp. 261-292.doi: 10.3166/rfg.160.261-292.

Feuerschütte, S. G., Alperstedt, G.D.,& Godoi, C.K. (2012).*Empreendedorismo e competência*: *um ensaio sobre complementariedade e convergência dos construtos*. Revista Eletrônica de Gestão Organizacional, *10*(3), pp. 509-538.

Filion, L.J.(2004).*Entendendo os intraempreendedores como visionistas*. Revista de Negócios, *9* (2), pp. 65-80. doi: http://dx.doi.org/10.7867/1980-4431.2004v9n2p%25p

Finney, S.J., & Distefano, C. (2006). Non-normal and categorical data in structural equation modeling. In: Hancok, G.R., &Muelleer, R.O. *Structural equation modeling*: a second course. Charlotte, NC: Information Age Publ.

Goodes, M.R.& Company, W. (1999).Transformando a cultura de uma empresa global: em empregado de cada vez. In: Dauphinhais, G.W. &Price, C. *Abrindo o jogo*. Rio de Janeiro: Editora Objetiva.

Hair Jr., J.F., Black, K.W.C., Babin, B.J., Anderson, R.E. & Tatham, R.L. (2009).*Análise multivariada de dados*. 6. ed., Porto Alegre: Bookman.

Jennings, D.F.& Young, D.M. (1990). An empirical comparison between objective and subjective measures of the product innovation domain of corporate entrepreneurship. *Entrepreneurship Theory and Practice*, *15*(1), pp. 6-20.

Le Boterf, G. (1997). *Construire la compétence collective de l'entrepriese*. Gestión, Paris, *22*(3), pp. 82-85.

Le Boterf, G. (2003). *Desenvolvendo a competência dos profis*sionais. 3 ed., Porto Alegre: ArtMed.

Lenzi, F.C. (2008). *Os empreendedores corporativos nas empresas de grande porte*: um estudo da associação entre tipos psicológicos e competências empreendedoras. Tese de doutorado,Universidade de São Paulo, São Paulo, SP, Brasil.

Longenecker, J. & Schoen, J.E. (1975). The essence of entrepreneurship. *Journal of Small Business Management*.

Mant, T.W.Y. & Lau, T. (2000). Entrepreneurial competencies of SME owner/managers in the Hong Kong services sector: A qualitative analysis. *Journal of Enterprising Culture*, *8*(3), pp. 235-254. doi: https://doi.org/10.1142/S0218495800000139

McClelland, D.C. (1971). *Entrepreneurship and achievement motivation*: approaches to the science of sócio-economic development. In: Leygel, P. (org.). Paris: UNESCO.

Minguzzi, A. &Passaro, R. (2000). The network of relationships between the economic environment and the entrepreneurial culture in small firms. *Journal of Business Venturing*, *16*, pp. 181-207.

Mitchelmore, S. & Rowley, J. (2010). Entrepreneurial competencies: a literature review and development agenda. *International Journal of Entrepreneurial Behaviour& Research*, *16*(2), pp. 92-111. doi: https://doi.org/10.1108/13552551011026995

Munc, L., Souza, R.B. &Zagui, C. (2012). A gestão por competências e sua relação com ações voltadas à sustentabilidade. *REGE*, *19*(3), pp. 371-389. doi: http://dx.doi.org/10.5700/issn.2177-8736.rege.2012.49909

Nassif, V.M.J.,Andreassi,T.&Simões, F. (2011). Competências empreendedoras: há diferenças entre empreendedores e intraempreendedores? *Revista de Administração e Inovação*, *8*(3), pp. 33-54. doi: https://doi.org/10.5773/rai.v8i3.858

Paiva Jr, F.G.O., Guerra, J.R.F., Oliveira, M.A.F. & Alves,V.S.(2006). A contribuição das competências empreendedoras para a formação de dirigentes em sistemas de incubação. *Anais Encontro Nacional de Engenharia de Produção*, Fortaleza, CE, Brasil, 26.

Pinchot, G. (1985). *Intrapreneuring*. New York, NY: Harper & Row.

Porter, M. (1981). The contributions of industrial organization to strategic management. *Academy of Management Review*, *6*(4), pp. 609-620. doi: 10.2307 / 257639.

Prahalad, C.K.& Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, *68*(3), pp. 79-90.

Pryor, A.K.& Shays, E.M. (1993). Growing the business whithintrepreneurs. *Business Quartely*, London.

Rosa, S.B.&Lapolli, E.M. (201). Santa Catarina: um estado que é uma vitrine de talentos. In: Lapolli, E.M., Franzani, A.M.B. & Souza, V.A.B. (Orgs). *Vitrine de talentos*: notáveis empreendedores em Santa Catarina. Florianópolis: Pandion.

Santos,S.A. dos, Lenzi, F.C. & Casado, T. (2011). *Talentos inovadores na empresa*: como identificar e desenvolver empreendedores corporativos. Curitiba: Ibpex.

Schein, E.H. (2009). *Cultura organizacional e liderança*. São Paulo: Atlas.

Schmitz, A.L.F. (2012). *Competências empreendedoras*: os desafios dos gestores de instituições de ensino superior como agentes de mudanças. Tese de Doutorado,Universidade Federal de Santa Catarina, Florianópolis, SC, Brasil.

Schumpeter, J.A. (1949). *The theory of economic development*: an inquiry into profits, capital, credit, interest, and the business cycle. Cambridge: Harvard University Press.

Shabana, M.A. (2010). Focusing on intrapreneurship: an employee-centered approach. *Advances in Management, Kolhapur*, *3*(12), pp. 32-37.

Snell, R., & Lau, A. (1994). Exploring local competences salient for expanding small business. *Journal of Management Development*, *13*(4), pp. 4-15. doi: https://doi.org/10.1108/02621719410057032

Wunderer, R. (2001). Employees as "co-intrapreneurs" - a transformation concept. *Leadership & Organization Development Journal*, *22*(5), pp. 193-211. doi: https://doi.org/10.1108/EUM0000000005676

Zilber, S.N., &Brancalião, H.F. (2008). Da identificação de oportunidades a ação intraempreendedora: estudo de caso no setor sucroalcooleiro brasileiro. *Anais do Encontro Anual daAssociação Nacional dos Programas de Pós-Graduação emAdministração*, Rio de Janeiro, RJ, Brasil, 33.