Entrepreneurship Education Experience for Health Professionals and Bloom's Taxonomy Revised

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Abstract

The paper presents the experience of teaching entrepreneurship in a health-focused Higher Education Institution, based on Bloom's Taxonomy revised by Lori Anderson (2001). The teaching methodologies that were used focused on creativity, analysis, criticism, planning and interpersonal skills to develop the expertise needed to undertake and manage different types of businesses. Students were encouraged to propose business and healthcare solutions by employing creativity, ideation, planning, and management tools. Other practices like Brainstorm, the Edward de Bono's 6 Hats technique, the PIN - Positive, Interesting and Negative Points technique, and the Business Model Canvas proposed by Alexander Osterwalder for business modeling, among others, were used. The next step was the elaboration of Businesses Plans, using popular models or the project model proposed by the Project Management Body of Knowledge. At the time of the final evaluation, there was a business round with the presentation of the students' plans and questions, and comments with emphasis on the proposed ideas and solutions, as well as a self-evaluation. It was noticed that this exercise allowed the learning process to take place in a contextualized way, involving gradual degrees of complexity while being characterized as a process articulated to the daily work, in line with the curricular guidelines for the training of health professionals.

Keywords: Entrepreneurship, Creativity, Educational Project, Teaching Methodology.

1. Introduction

Developing an entrepreneurial mindset in the classroom environment is a challenge for any educator. Such an intent requires the implementation of effective integrated teaching and learning pedagogy that aligns intended outcomes with effective pedagogy. An entrepreneurial mindset is defined as the opening to create something new with value, dedicating the time and efforts paid, taking the corresponding financial, psychological, and social risks, and received as consequent rewards of satisfaction and economic and personal independence. (HISRICH; PETERS, 2004).

This text presents a teaching experience in entrepreneurship carried out in an university highly specialized in different health fields. The work aimed to develop didactic actions in a contextualized perspective and connected to the world of work, with students actively involved in the learning process.

According to Ferraz and Belhot (2010), in education, deciding and defining learning objectives means consciously structuring the educational process, to create opportunities for changes in thinking, actions and behavior. This structuring is the result of a planning process that is directly related to the choice of contents, procedures, activities, available resources, strategy, assessment instruments and methodologies to be adopted for a certain period of time.

Seeking to qualify teaching and improve results, considering the purposes and the need for effective planning and structuring, we chose to use Bloom's Taxonomy, revised by Anderson et al. (2001). Bloom's taxonomy presents as a system of classification, denomination and organization that results in a conceptual model for analysis, discussion and / or information retrieval. (FERRAZ; BELHOT, 2010).

As with any planned activity, it is important to have well-defined objectives, indicators, and targets, in addition to the mission and future vision and current and desired scenarios. According to Sternberg (2013), planning is a process that makes it possible to organize the paths to be followed in a more efficient, and effective way, using the best efforts and resources.

In the case of teaching entrepreneurship and the consequent expected behavioral changes, the instructional objectives involve domains that translate into a set of technical and behavioral skills – procedural, analytical, innovative, and relational. Such skills are essential to the entrepreneur and, if used properly, facilitate the success of an organization.

For Bauman (2007), teaching environments should be considered mirrors of society. However, the world and the school have evolved in different ways, and schools are no longer prepared to teach students. In such circumstances, preparing for life acquires a new meaning considering current social circumstances. (ALMEIDA; BRACHT; GOMES, 2009). Thus, it is necessary to reflect on current social, cultural, and technological changes without forgetting the hierarchy of values that must be configured and implemented. Such reflection should not be just rhetorical, as contemporary education seeks goals that will reflect the meaning and vision of social development that citizens expect.

A recurring question in academia is: how to teach people who stand out for their level of openness to novelty, for their ability to manage conflicts and adapt to change, and also for their ability to take advantage of the uncertainties that these processes generate?

Zabalza (2004), reflecting on university education, comment that learning needs to make sense not only in the academic sphere, but also to be mobilized in work contexts, with the ability to reflect on problems in a

complex, interconnected and dynamic way. Thus, there is a change in the way of understanding the teaching and learning processes, so that working with isolated content is no longer necessary, but integrated with the development of competent students in situations of professional action.

According to Scott (2015), rethinking pedagogy for the 21st century is as crucial as identifying new skills that today's students need to develop. The didactic forms are historical and social constructions; therefore, the pedagogical models are linked to ways of conceiving how to learn and the demands that the professionals who are being trained bring from workplaces. Both the definitions of what to teach and the strategies that should be used in teaching are part of this historical movement, but perhaps at different paces. Traditional approaches that emphasize memorization or the application of simple procedures are unlikely to leverage as desired thinking or mobility skills today. To develop higher-order competencies as needed, those needed must engage in a thorough fulfillment, based on situations that have genuine, professional and community value.

Real-world experiences combined with ongoing engagement and creative, collaborative experiences, opportunities for students to build and organize the knowledge needed not only to undertake but to be citizens of the near future. These experiences promote learning that is different from the accumulation of information and that presents the mobility and uncertainty of knowledge, causing challenging postures and with creative potential.

Saavedra and Opfer (2012) argue that there is an urgent need for students to improve skills and ways of learning to face persistent global challenges. However, although there is a worldwide consensus that students need to develop skills such as thinking critically, communicating effectively, innovating, and solving problems through negotiation and collaboration, pedagogical models do not adapt at the same speed to face new challenges. The "broadcast" model of lecture or reading still prevails as the dominant instructional approach in education in much of the world. (SCOTT, 2015).

Such an approach generally leads most students to indifference, apathy, and boredom, not just in the case of entrepreneurship, whose teaching, a priori, should be dynamic. In this and other subjects, students need time to interact with 'mentors' and peers, practicing and applying newly acquired skills and knowledge. New or different learning should be evaluated and shared with colleagues through more creative and collaborative encounters that support individuals in adapting to a learning process with new problems and contexts. Choosing methods that place students in a situation of searching, studying, and researching is already configured in a more active professional learning strategy.

The business world, increasingly dynamic and competitive, less structured, and predictable, requires constant adaptation. Thus, the teaching environment must provide opportunities for this reality, allowing for seeking, experimenting, practicing, and applying new knowledge in a variety of contexts, with adaptation and integration.

Regarding the need for investment in teaching entrepreneurship in the health area, Terrim, Melo and Jácomo (2015) point to the financial imbalance in health institutions and the inefficiency of services as examples of weaknesses that can be minimized through entrepreneurial work.

The didactic-pedagogical experience reported here took place during the classes of an Entrepreneurship subject and had as a strategy the elaboration of business plans, in all its stages, with a focus on the health

area. This article presents the context of carrying out the pedagogical work based on the institution's pedagogical guidelines, the conceptual bases of Bloom's taxonomy and the method used in the teaching and learning process.

2. Context of the work carried out

At the university where the work was developed, Entrepreneurship has been worked on in several subjects, from different courses, since the mid-2000s, being incorporated into the 2013-2017 Goals Plan, Axis 2 Qualification of Teaching, Research and Extension – Promoting development of an entrepreneurial, innovative, and sustainable responsibility profile in academic training. In this sense, several actions have been implemented, such as the creation of the NITE (Center for Technological Innovation and Entrepreneurship) and the Entrepreneurship Laboratory, in 2016. In late 2017, the university became part of the Health Technologies Cluster, in South Brazil, which highlights the importance of the theme for the institution.

The university guidebook, in its pedagogical project, affirm that the teaching and learning processes are guided by actions in which the students are active subjects, critics and proposers. It also calls attention to the necessary link between teaching and work processes, directing training towards the development of competences, in line with what is proposed in the National Curriculum Guidelines for the Training of Health Professionals. Undergraduate courses that currently have subjects that involve the themes of entrepreneurship are Biomedicine, Nursing, Pharmacy, Medical Physics, Physiotherapy, Gastronomy, Health Management, Biomedical Informatics, Medicine, and Food Technology. In these courses, the term entrepreneurship appears as an axis, subject name or in contents. In graduate studies, the Health Education Program, Nursing and Information Technology and Healthcare Management also have Entrepreneurship subjects.

The syllabuses of these subjects point, for the most part, to the need to awaken or stimulate the entrepreneurial spirit, either by studying their behavior or by identifying and developing skills and competences related to professional and organizational success. The syllabus encompasses marketing concepts, techniques, and tools for creativity, planning and management, steps and processes for preparing a business plan, in addition to professional and business ethics.

Between 2013 and 2015, the research project 'Analysis of the Entrepreneurial Profile of University Students' sought to know the profile of undergraduate and graduate students and identify some needs in entrepreneurial training, becoming an input in the planning of subjects. In this perspective, courses, subjects, and contents were readjusted to minimize the identified gaps. Theoretical contributions such as Gartner (1990), Shane and Venkataraman (2000), Bruyat and Julien (2000), Andrade and Torkomian (2001), Davidsson (2005), Corbett (2007), Ries (2012), Azambuja et al. (2015), and Carvalho (2016) helped to outline the direction of the Entrepreneurship subjects in the institution.

Authors such as Shane and Venkataraman (2000) state that individuals must have prior knowledge and cognitive skills to value this knowledge, to be able to identify new opportunities. Corbett (2007) stresses that learning must be experiential. The concept of entrepreneurship, according to Hisrich and Peters (2004), refers to the process of creating something new with value, dedicating the necessary time and effort, taking

the corresponding financial, psychological, and social risks and receiving the consequent rewards of satisfaction and of economic and personal independence.

The author of this article was responsible for the research project “analysis of the student's entrepreneurial profile”. This project raised concerns about how to analyze and measure the effectiveness of the teaching process, especially in relation to creating awareness about the importance of entrepreneurship and the development of skills needed by the entrepreneur.

3. Bloom's taxonomy and the teaching of Entrepreneurship

As an auxiliary tool in planning, structuring and systematization, we chose to use Bloom's taxonomy revised by Anderson et al. (2001), which consists of a hierarchical organization structure with increasing complexity of educational objectives. Bloom divides learning possibilities into three major domains: cognitive, covering intellectual learning; the affective, covering aspects of awareness and grading of values; and the psychomotor, covering task execution skills. (FERRAZ; BELHOT, 2010). It is understood that this characterization of domains contributes to the didactic organization of the teacher, who can map the actions to be developed with students in a balanced way and with different levels of complexity.

Table 1 shows an example of the application of Bloom's taxonomy in entrepreneurship curricula.

Table 1: Bloom's taxonomy exemple

Cognitive Level according to Bloom's Taxonomy	Learning Content Descriptions	Learning activities (What should students know and do at this level?)
Knowledge	Knowledge of facts, terminology, access to information, specific facts, ways and means of dealing with specifics, conventions, trends and consequences, theoretical structures, classifications and categories, criteria, methodology, abstractions, principles and generalizations.	• Report to classmates about successful entrepreneurs they know • Write a short essay about an entrepreneur you admire in real life • Combine knowledge and classroom activity with business descriptions and backgrounds from prominent entrepreneurs in various business sectors
Comprehension	Conceptual understanding, interpretation and extrapolation	• Distinguish basic and potential problems from entrepreneurs • Identify and discuss appropriate decisions in different circumstances • Understand the sequencing of

		processes in entrepreneurial activity
Application	Application of concepts in the use of abstraction in particular and in concrete situations.	• Group entrepreneurs and business characteristics by sector, business regions or specific term • Discuss and outline business ideas to undertake • Analyze and discuss (case studies) the gaps of several local and international businesses
Analysis	Analysis of organizational elements, relationships, and principles	• Identify the main problems and potential risks faced by entrepreneurs • Compare viable business ideas and their costs • Compare the main characteristics of entrepreneurs in different sectors • Compare local and international entrepreneurs.
Synthesis	Synthesis of ideas in the production of communications and unique plans.	• Outline business strategies • Suggest solutions • Illustrate an appropriate model for a business
Evaluation	Evaluation leading to judgments on the value of materials and methods for certain purposes	• Discuss current business interest issues • List and evaluate entrepreneurs of local and global success, justifying the choice.

Source: Prepared by the author. Translated and adapted from Latip, Zhao e Said (2009).

According to Thomazzi and Asinelli (2009), in the review proposed by Anderson et al. (2001), the authors incorporated both the type of material to be learned (content dimension) and the process used by students to learn (process dimension). This two-dimensional structure allows the teacher to clearly define instructional objectives and align them with learning assessment techniques.

These two dimensions are illustrated in the Dimensions Table, which serves as a tool to facilitate the development of clear and meaningful instructional objectives. This model is particularly useful because it emphasizes the importance of metacognitive knowledge and skills, which are essential for both higher-order thinking and problem solving. The teaching of each content element (factual, conceptual, etc.) can be organized into any of the six levels of the learning process. In the dimension axis of the cognitive learning process, this review uses verbs instead of nouns, which means the link to the concept of learning as an action of the subject.

Table 2, with the systematization, can be seen below:

Table 2: Dimensions

Content dimension	Process dimension					
	Remembering	Understanding	Applying	Analizing	Evaluating	Creating
Factual						
Conceptual						
Procedural						
Metacognitive						

Source: Prepared by the author. Adapted from http://www.desenhodidatico.com.br/taxonomia-de-bloom-revisada-2001/#comment-3794

The content dimension axis was introduced by Anderson et al (2001), and the different levels are defined below:

- Factual content: learning material composed of data, facts, events, occurrences, experiences, etc.;
- Conceptual content: learning material composed of definitions, concepts, rules, principles, explanations, etc.;
- Procedural content: learning material consisting of activities, situations, tools and practical resources;
- Metacognitive content: learning material composed of information that encourages reasoning, criticism, discovery, problem solving and decision making.

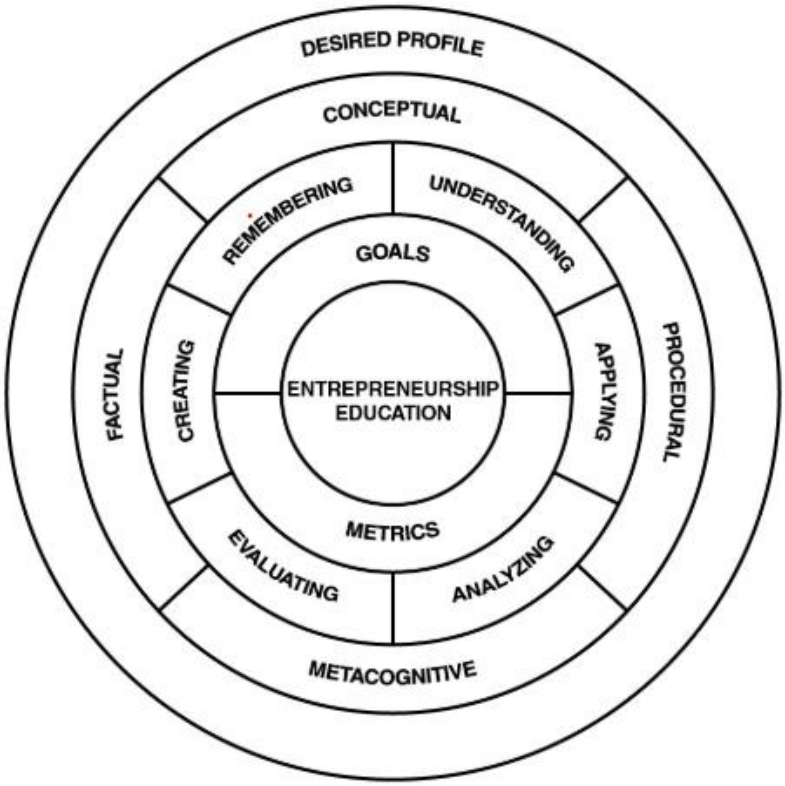
In the dimension axis of the cognitive learning process, the main changes in relation to the taxonomy originally proposed by Bloom are the following:

- Level 1 – Knowledge – became “Remember”;
- Level 2 – Understanding – became “Understanding”;
- Level 6 – Assessment – moved to Level 5 – Assess;
- Level 5 – Synthesis – moved to Level 6 – Create.

4. Work methodology

One of the challenges that arose was the convergence between Bloom's revised taxonomy and the objectives and indicators of teaching entrepreneurship. As teaching indicators, we considered those expressed in the syllabuses of the subjects, the domains addressed in the Survey of Entrepreneurial Students' Profile, which make up the profile expected to undertake, and the result of the self-assessments carried out at the end of each semester. Empirically, the increasing quality of the projects developed was also considered, as well as the number of companies opened by former students. An attempt to integrate all these concepts and needs can be seen in Figure 1:

Figure 1: Entrepreneurship Education



Source: Prepared by the author

The outermost radial, 'Expected Profile', refers to the profile of an entrepreneur. The following radials refer to the dimensions and verbs of Bloom's revised taxonomy. The next radial refers to teaching/learning goals and metrics. At the center, there is the entrepreneurial training recommended by the research and applied in the subjects.

In the different Entrepreneurship subjects, in the institution's various undergraduate and graduate courses, students are encouraged to generate creative, innovative, viable and sustainable ideas, both financially and environmentally, linked to the health area. Thus, a didactic path was planned that would address the different domains necessary for the development of the so-called 'entrepreneurial spirit', in addition to the essential skills, abilities and attitudes of those who intend to start a business. The design involved the domains that make up the entrepreneurial profile, developed by the Polytechnic Institute of Leiria and the University of Porto (IPL, 2007), and later used in the research developed at the institution in question. They are: observing and exploring, having a critical and creative sense, taking risks, decisions and responsibilities, communicating, inspiring and motivating, planning and organizing, carrying out orderly and meticulous work, and having perseverance and vitality. Some of these domains were emphasized during teaching practices, considering the results of the research on the entrepreneurial profile of the institution's students and the relationship with the domains of the revised Bloom's Taxonomy

Initially, the subject is presented with an explanation of the method and a 'contract' (agreement) is made with the students. Then, topics such as the current panorama of the business world, both at the local and

global levels, new work relationships, the impact of entrepreneurial activity and economic development, in addition to reasons to undertake, typology and entrepreneurial behavior are discussed. These first meetings try to show the importance and possibilities of undertaking, from the creation or repositioning of new businesses or products, social initiatives to intrapreneurship.

Working groups are formed, in which the teacher tries to interfere as little as possible. The teacher only opines on the number of participants in the groups, but not on the type of enterprise. Thus, the creative and decision-making process for a type of business begins, preferably in the area of Health, without neglecting the concepts of planning and market research. Creativity tools are introduced such as (i) Brainstorm (OSBORN, 1953), from the simplest to a more structured model, with definition of theme, tasks and deadlines; (ii) the PIN (Positive, Interesting and Negative Points) (DE BONO, 2002), a technique to help and improve an idea or proposal; (iii) the '6 Hats of Edward de Bono' technique (DE BONO, 1985), a useful technique for analyzing decision making taking into account different points of view, helps to distance habitual thinking styles in order to achieve a vision broader scope of a given situation, focusing and analyzing six ways of thinking about a given subject; (iv) the SCAMPER tool (EBERLE, 1996), a technique to stimulate creative thinking that helps to exercise creativity, proposing, in the form of an acronym, 7 angles to generate ideas; and (v) the Nine Windows Technique (SIQUEIRA, 2013), a visual tool that allows analyzing the situation from different perspectives, especially thinking about the problem to be solved in terms of TIME and SPACE.

During the creative process, Marketing concepts and the Marketing mix or the 4Ps (Products, Price, Place, Promotion) proposed by McCarthy (1960) are also addressed. The '5W2H' (SLOAN, 2010), the SWOT Analysis by Andrews and Christensen (1961) and the PEST Analysis (or PESTAL/STEEPLED) (AGUILAR, 1967) are also part of the 'toolbox', helping to create entrepreneurial solutions.).

When the groups already have a reasonable idea about the business, they move on to the screens proposed by Osterwalder and Pigneur (2010), starting with the idea generation screen (Idea Canvas), then moving on to the Empathy screen (Persona Canvas), the value generation screen (Value Canvas) and the business generation screen (Business Model Canvas). In addition to the screens, Simon Sinek's Golden Circle (2009) and the steps of 'Stand Up, Start Up and Scale Up' are also addressed, being Stand Up (creation/conception), Start Up (implementation) and Scale Up (growth), as proposed by the Strategyzer platform (2017).

The learning path starts from awareness, behavior and attitudes about entrepreneurship, from business conception, from the development of business plans, from the various problematizations, until reaching the growth planning and sustainable expansion of the enterprises. Students build their business plans through online tools, such as the Brazilian Micro and Small Business Support Service (SEBRAE) or Business Model Fiddle. The tools range from marketing issues, legal, tax and accounting aspects, among other formalities in the process of setting up a company, such as forms of financing and management models.

As a complement to the creation of a business, the body of knowledge of project management, coined by the Project Management Institute - PMI/PMBOK (2013), is addressed as follows: Integration Management, Scope, Cost, Quality, Acquisitions, Resources, Communications, Risk, Schedule and Stakeholders.

At the end of the semester, students are evaluated for their business plans and for the proposed solutions to the different problems that arise for each type of business. Business evaluation involves aspects such as market opportunity, level of innovation, group management capacity, group financial skills, investment

attractiveness and marketing capacity.

A new personal assessment is also proposed, seeking a critical reflection and verification of whether there was success in the purpose of stimulating the entrepreneurial spirit and improving knowledge, skills and attitudes on the subject.

5. Conclusions

So far, knowledge and use of Bloom's revised taxonomy has proven useful in planning subjects, selecting, and systematizing content, and evaluating learning.

Over the semesters, different types of businesses were presented, from the simplest, with low investment and low complexity, to the most complex, with larger investments. This panorama indicates that the didactic organization is suitable for groups with students from different levels of learning, with each group producing from its initial reference point, but all develop competences with the teaching and learning proposal.

As mentioned above, the institution where the research was carried out is focused on Health, therefore the proposed businesses plans should be in the health field. The greatest emphasis was on ideas and solutions, on stimulating creativity and on the ability to solve problems, ask questions and find answers.

Based on the research of the entrepreneurial profile and on the results of personal assessments, it is believed that there was development of students towards 'Entrepreneurship'. The increase in propensity or intentionality over the years was not measured, which led to a new research project that seeks to map the companies that emerged on the initiative of former students and students who have attended courses related to the subject of entrepreneurship, both in graduation and post-graduation at the institution, as well as the performance of these subjects in the entrepreneurial career.

It is also perceived that it is important to broaden the discussion on the teaching of entrepreneurship, developing employability beyond the economic utility, generation of economy, income, in order to value behavioral and attitudinal change, encouraging proactivity and exploration of opportunities.

The use of the revised Bloom's Taxonomy, in addition to motivating the teaching and learning processes, provided subsidies to advance in degrees of knowledge complexity, allowing the teacher to observe how and in what way the student evolved. It also contributed to the organization of an approach linked to the world of work, extrapolating the culturally installed trend in university training processes of proposing content in a watertight manner. The development of skills related to work and professional life, with all its unpredictability, is in line with what the Curriculum Guidelines for the Training of Health Professionals propose. Installing an active process of teaching and learning expands, both for the teacher and student, the possibilities of elaboration and of complex and creative constructions, favoring the development of an 'entrepreneurial mentality'. The discussion of the questionnaire used in the research on the entrepreneurial profile, mentioned above, and the elaboration of the conceptual map, on the other hand, favored the process of assimilation and reflection, helping the student to internalize information and build meanings.

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References

AGUILAR, Francis J. 1967. **Scanning the business environment**. New York: Macmillan.

ALMEIDA, Felipe Quintão de; BRACHT, Valter; GOMES, Ivan Marcelo. **Bauman e a Educação**. Belo Horizonte: Autêntica, 2009.

ANDERSON, L. W.; KRATHWOHL, D. R.; AIRASIAN, P. W.; CRUIKSHANK, K. A.; MAYER, R. E.; PINTRICH, P. R.; RATHS, J.; WITTROCK, M. C. A taxonomy for learning, teaching, and assessing: a revision of Bloom's **Taxonomy of Educational Objectives**. Longman: New York, 2001.

ANDRADE, R.F.; TORKOMIAN, A. Fatores de influência na estruturação de Programas de Educação Empreendedora em Instituições de Ensino Superior. Anais do II Encontro de Estudos sobre Empreendedorismo e Gestão de pequenas empresas, Londrina, 2001.

AZAMBUJA, M. S.; TRINDADE, C. S.; MAGALHAES, C. R.; KATO, S. K.; CAZELLA, S. C.. Análise do Perfil Empreendedor dos Discentes do Curso de Enfermagem em IFES do RS, 2015.

BAUMAN, Zygmunt. **Los Retos de la Educación en la Modernidad Liquida**. Barcelona: Gedisa, 2007.

BRUYAT, Chirstian; JULIEN, Pierre-André. Defining the field of research in entrepreneurship, **Journal of Business Venturing**, Volume 16, Issue 2, 2001, Pages 165-180, ISSN 0883-9026.

CARVALHO, T. Entrepreneurial motivations: what do we still need to know? **Journal of Small Business Management**, v. 49, n. 1, p. 9-26, 2016.

CHRISTENSEN; Andrews. **Problems of General Management**: Business Policy - A Series Casebook, p. 3-140, 1961.

CORBETT, Andrew. (2007). Learning Asymmetries and the Discovery of Entrepreneurial Opportunities. **Journal of Business Venturing**. 22. 97-118. 10.1016/j.jbusvent.2005.10.001.

DAVIDSSON, P. Researching Entrepreneurship. NJ: Springer, 2005.

DE BONO, Edward. Six Thinking Hats: An Essential Approach to Business Management. **Little, Brown, & Company**. ISBN 0-316-17791-1, 1985.

DE BONO, Edward. **O Pensamento Lateral**. Um Manual de Criatividade nova era, 2002.

EBERLE, B. Scamper. **On**: More Creative Games and Activities for I imagination. Prufrock Press Inc., 1996.

FERRAZ, Ana Paula do Carmo Marcheti; BELHOT, Renato Vairo. Taxonomia de Bloom: revisão teórica e apresentação das adequações do instrumento para definição de objetivos instrucionais. **Gest. Prod.**, São Carlos, v. 17, n. 2, p. 421-431, 2010. Disponível em: <http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-530X2010000200015&lng=en&.=iso>. Acceso em: 01 de ago de 2019. Disponível em: http://dx.doi.org/10.1590/S0104-530X2010000200015.

GARTNER, W.B.. What are we talking about when we talk about entrepreneurship? **Journal of Business venturing**, v. 5, n. 1, p. 15-28, 1990.

HISRICH, Robert D.; PETERS, Michael P. **Empreendedorismo**. 5 ed. Porto Alegre: Bookman, 2004.

Instituto Politécnico de Leiria. UP, 2007. Manual de Empreendedorismo Disponível em: <http://www.empreender.aip.pt/ / >. Acesso em: dezembro, 2012.

LATIP, Hamrila Abdul; ZHAO, Fang; SAID, Superi Awang. Entrepreneurship education: to foster the right pedagogies, 2009.

MCCARTHY, E. Jerome. BASIC MARKETING, A MANAGERIAL APPROACH. Richard D. Irwin, Inc., Homewood, Illinois, 1960, 783 p.

OSBORN, Alex Faickney. **Applied Imagination**, 1953.

OSTERWALDER, A.; PIGNEUR, Y. (2010). Business Model Generation. 1st ed. New Jersey: John Wiley & Sons,Inc.

Project Management Institute. (20’3). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

RIES, E.. **A startup enxuta**. São Paulo: Leya, 2012.

SAAVEDRA, A.; OPFER, V. 2012. Teaching and Learning 21st Century Skills: Lessons from the Learning Sciences. **A Global Cities Education Network Report**. New York, Asia Society. http://asiasociety.org/files/rand-0512report.pdf.

SCOTT, C, **The futures of learning 2**: What kind of learning for the 21st century? OECD: Paris, 2015.

SHANE, S.; VENKATARAMAN, S., The promise of entrepreneurship as a field of research, Academy of Management. **The Academy of Management Review**, 2000.

SINEK, Simon. Start with why. Penguin books, 2009.

SIQUEIRA, Jairo. **Criatividade Aplicada**: habilidades e técnicas essenciais para a criatividade, inovação e solução de problemas. Do autor, 2013.

SLOAN, M.C. (2010). Aristotle's Nicomachean Ethics as the Original Locus for the Septem Circumstantiae. **Classical Philology**. **105**: 236-251. Doi: 10.1086/656196.

STERNBERG, J. (Eds.) **Teaching thinking skills***:* theory and practice. New York: Freeman, 2013, p. 252-259.

TERRIM, Sara; MELO, Adler Araújo Ribeiro; JÁCOMO, Alfredo Luiz. Empreendedorismo em saúde: relato de um modelo de Empresa Júnior em Medicina. **Rev Med** (São Paulo). 2015, abr.-jun. 94(2): 94-8.

THOMAZZI, Áurea Regina Guimarães; ASINELLI, Thania Mara Teixeira. Prática docente: considerações sobre o planejamento das atividades pedagógicas. **Educar em Revista**, [S.l.], v. 25, n. 35, p. p. 181-195, dez. 2009. ISSN 1984-0411.

ZABALZA, Miguel A. **O ensino universitário**: seu cenário e seus protagonistas. Porto Alegre: Artmed, 2004.