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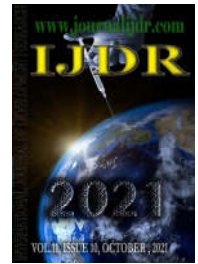
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RESEARCH ARTICLE

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CONTRIBUTIONS OF ENTREPRENEURSHIP EDUCATION ON THE FORMATION OF ENTERPRISES IN THE CONTEXT OF THE KNOWLEDGE SOCIETY

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ABSTRACT

This paper presents an analysis of the contribution of the Entrepreneurial Education course offered by the Ativa Business Incubator of the Federal Institute of Mato Grosso – IFMT in Brazil. This work aimed to understand how entrepreneurial education of Ativa Business Incubator has helped business owners to overcome their vulnerabilities that were found in the diagnosis of the process considering their business in the Knowledge Society. The businesses that were analysed attended the incubation process in 2021. We used a qualitative methodology to develop this case study. In the concern of the methodological procedures we first look for the vulnerabilities of the companies and then we face it with the Entrepreneurial Skills Course. Then, we make a confrontation between vulnerabilities we found in the SWOT matrix and the entrepreneurial training they receive by Ativa Business Incubator. The results show that Ativa offers a satisfactory course towards overcoming vulnerabilities of business.

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INTRODUCTION

Business incubation is conceptually considered a process that provides an empowering entrepreneurship. But more than that, the dialectic around this social phenomenon debates, at the same time, the concept of a purely capitalist business, and, contradictorily, social inclusion, solidarity economy, cooperativism, associations etc. When a university leads business through an entrepreneurship formation, there is an idea of having a business from which from more money is made by growing together, and not only competing. The word entrepreneurship has in its etymology the term entrepreneur, which means a person out of the ordinary, capable of making a difference, a visionary person, capable of generating value for society (HISRISH, 1986). The expansion of this meaning became the object of analysis by several researchers. Fillion (1999), for example, proposes two theoretical schools that characterize entrepreneurship and entrepreneurial activity. The economist school gives other meanings to the subject of entrepreneurship, including leadership, success, innovation, little fear of change, focus on seizing market opportunities.

The behavioral school focuses on the analysis and description of the behavior of entrepreneurs and their influence on business creation (FONSECA et. al., 2020). At the Federal Institute of Education, Science and Technology of Mato Grosso (IFMT), in Brazil, there is the Business Incubator called "Ativa", created in 2004, has passed through these 17 years of existence through the two schools, economist and behaviorist. In the beginning, it prospected and supported projects and ventures in agribusiness from rural communities and their students. In 2017 Ativa started a new management strategy aimed at raising the awareness of its students and workers on the theme of entrepreneurship and business incubation process. In 2019 an Ativa's branch office, installed in Barra do Garças Campus called "Dinâmica" was created and began an unprecedented incubation process with regional enterprises, giving Entrepreneurship Education for them, considering their reality of living in the Knowledge Society. This work aimed to understand how the training offered by Ativa Business Incubator contributes to overcoming situations of vulnerability evidenced in the initial diagnosis of the incubator process. The target audience was the core entrepreneurs teams involved in the 2021 incubation process

consisting of an investigation that required Ativa's team to return our focus to entrepreneurial learning in the context of the Knowledge Society, acquired from the training offered by Ativa, and how this learning could be translated into entrepreneurship education capable of leading the companies to overcome vulnerabilities in its business.

Research Elaborations: This investigation is about enterprises' management in the midst of a global health crisis, the pandemic caused by the COVID-19 virus. The authors' interpretation about the results required a method capable of qualifying it, that's why this is a qualitative research. Qualitative methods value the interpretation by the researcher with their opinions on the phenomenon under study (Pereira et al., 2018). Qualitative research is not framed in measurement, the focus of qualitative research is to understand and deepen the phenomena that are explored from the perspective of participants in a natural environment and in relation to context (Sampieri, 2013). Verifying the qualification of this study as a case study, Bogdan and Biklen (1994) suggest a practical spirit in the choice of investigation, as well as the way to collect data. Once we live in the Era of the Knowledge Society, there is a strong redefinition, for example, in the way companies are using social networks in the management of products and resources. The methodological procedures were based on two stages inherent to the incubation process developed by the Ativa's team: 1) understanding how the context of Knowledge Society affects the business and so indicating vulnerabilities from the diagnosis made with the enterprise, and 2) disclosure of the entrepreneurship educational process offered by Ativa Incubator through the Course of Entrepreneurship Skills.

The diagnosis was made through a semi-structured questionnaire with 7 sections in Google forms tool: 1) personal information, 2) business' information, 3) economic situation, 4) management, 5) use of technology, 6) difficulties, and 7) availability and motivation. Aiming to understand how these businesses were dealing with this much information and technology we have in the context of Knowledge Society the diagnosis included questions like: What is your education level? What is the enterprise's field? How long has the enterprise been in operation? What is your level of knowledge about digital marketing? Do you use any advertising and marketing tool or strategy? Detail the obstacles faced by your enterprise regarding the use of technologies. What do you believe are the biggest internal and external weaknesses or improvements in your company today?. The analysis was based on ten selected companies from a current incubation cycle (2021). As 80% of our target audience were women, we kept this proportion when choosing the ten companies. The choice was made by drawing lots involving 21 entrepreneurs. Next, we present and discuss the results found.

RESULTS OR FINDING

Vulnerabilities evidenced by the diagnosis: In IFMT's Ativa Business Incubator, the diagnosis methodology is based on two points: the five axes (Entrepreneur, Technological, Financial, Market and Management) of the CERNE - internationally known incubation methodology - and on the principles of Strategic Planning. This work, specifically analyzes one of the Strategic Planning tools that make up the methodology, the SWOT analysis. From Strengths, Weaknesses, Opportunities and Threats, the SWOT matrix is widely used around the world (Helms; Nixon; 2010) to guide decision-making in complex situations in order to improve business results. It is important to characterize the companies researched. Although educated, our audience includes beginner entrepreneurs, in which 80% have less than a year in their business. This is fundamental to know because, the shorter the project time, the less experience accumulated in relation to knowledge of customers and competition, quality of service provision, quality of service, sales, dissemination and marketing, the use of technologies etc., which naturally make them more vulnerable in relation to older ventures. This idea of inexperience support the fact that 50% of the enterprises still haven't their juridical license and identification, which prevent them from promoting and marketing their product on a larger scale, such as sales

to companies. Also prevent them from being able to take advantage of public policies aimed at regularized companies, such as financing and acquisition of equipment with better payment options. We also highlight the fact that 50% of these entrepreneurs in the sample have partners and 90% employees; 40% of this group add partners and employees. This is an impact factor on revenue that is not yet consolidated, and for us it translates into vulnerability. Below (Table 1) we present a summary of the results of the SWOT analysis carried out with the companies of our sample in relation to strengths and weaknesses, considering the concepts of weakness and vulnerability as synonyms. Our analysis chose keywords and the frequency with which they appeared in the column of vulnerabilities in table 2. Described on Graph 1. Based on our sample, the pattern established in Graph 1 points to particular cases in the frequency of zero to one, such as problems with delivery, lack of logo, difficulty in inventory control, need for consultancies and lack of time to devote yourself to the business. These are the most common vulnerabilities for start-up businesses that are also addressed in traditional ventures. However, in the following frequencies (one to two, two to three and three to four) we found needs better supported by an entrepreneurial training course.

The study of Raupp and Beuren (2006) carried out a survey of the types of support offered by Brazilian incubators. In the administrative aspect, they offer legal support, accounting and financial advice, assistance in marketing and management, business and marketing guidance and secretarial services. Financial support includes fundraising and investment, obtaining risk capital, subsidized interest and shared costs. The structure support involves individual modules, show room, reception, meeting rooms, support services, training, communication, cleaning and security, restrooms and pantry. We will see that many of these supports are offered by the Ativa Business Incubator.

Training offered by the IFMT Ativa Business Incubator: The Ativa's Entrepreneurship Skills Course has nine thematic modules, all offered remotely during the Covid-19 Pandemic, whose content is presented in a didactic and interactive way, with examples potentially contributing to the entrepreneurs' perception about the necessary study to the detriment of their vulnerabilities and how to act in the Society of Knowledge. They are: Validation, Canvas, Prototyping, Financial and Tax Management, Professional Presentation, Marketing for Entrepreneur, Tools and Systems for Business Management, Creativity and Innovation and Intellectual Property. We present below a summary of the formative approach of each module. The entrepreneurial education proposal summarized in Table 2 expresses essential steps in the process in which knowledge for entrepreneurship is able to add economic values to the enterprise. Authors such as Cope (2003) corroborate this idea by recognizing entrepreneurial education as a dynamic process of awareness, association and application capable of transforming the experiences and knowledge learned into functional results.

Krugüer, Büger and Minello (2019) also point out that entrepreneurial education helps students to develop knowledge in certain areas, and that in the future these actions can collaborate with the economic and social growth of a country through the implementation and expansion of educational actions in high schools, and even at universities. The incubation process practiced by IFMT's Ativa Incubator carries this concept of education associated with entrepreneurship quite alive. It also cares about the importance of contextualizing knowledge in the era of globalization. Nowadays, we live a phenomenon of a society who access information at the reach of a hand all the time and produce knowledge in the same frequency. It changes how people act, consume and what they expect of a business. A simple crossing of the data selected in Graph 1 and the training described in Table 2 shows that there is a relevant convergence between the training offered and the vulnerabilities found. This convergence has in its structure the concepts of education and entrepreneurial learning and association between educational institutions, particularly universities, and fostering the enterprise through incubations (Plonski, 1999).

Table 1. Synthesis of strengths and vulnerabilities of the companies in the sample based on SWOT analysis

Nr	Company's field	Forces	Weaknesses (vulnerabilities)
1	Craft Beer	It has 5 brands of beers, its own production, passion for craft beer production and technical knowledge of the product.	Lack of equipment, limited sales, limited time for manufacturing, high price of the craft product compared to other consolidated beers companies in the market.
2	Health	It has technical knowledge, and is already a regulated, viable and profitable company.	Lack of training in administrative and financial management, there's no marketing work to attract customers.
3	Rural assistance	It has a qualified technical team, carries out public fundraising, an "impact business".	It has no legal formalization, needs legal and accounting consultancy, management training.
4	Craftsmanship	Own production, low cost product and partnerships prospected.	Has Marketing, Personal Presentation and Sales Channels issues.
5	Residential and commercial automation	Product and services expanding in the market, it has an intern to carry out the administrative and marketing work.	Difficulty in financial management, inventory control, need a software to manage these controls, difficulty in building partnerships.
6	Technological Education	It has a prototype, has a qualified team, just started a partnership to test the product and knows the competition.	Company under construction and testing, difficulty to pricing the service/product, has no working capital, no marketing done about the company.
7	Agricultural research and remote sensing	It is located in an agricultural region, with few competitors, has resources to purchase equipment, technical knowledge and innovative service in the market.	In the prototyping stage, does not have management knowledge, sales price formation, personal presentation and marketing and does not have a visual identity/brand, does not have marketing channels.
8	Entrepreneurial Education for Women	It has a Platform, it has partners, and is a registered micro-company.	It needs an active employee to feed the platform, it needs to make use of new technological tools.
9	Food	Opportunity of partnering in delivery restaurants and cafeterias, team is aware of the costs and manufacturing of the product, has a workforce and the company is profitable.	Preclusions about legal regularization, the entrepreneur needs to make face-to-face delivery and acquire more equipment for manufacturing and preserving the product.
10	Production of seedlings and plant micropropagation	Resource for investment, technical knowledge, only one competitor in the State and partnership with IFMT Juina to use the laboratory.	It is in the prototyping stage, needing to purchase laboratory equipment and instruction in management.

Source: Ativa Incubator – IFMT. Adaptation: Authors

Table 2. Synthesis of the training offered by Ativa Incubator through the Entrepreneurship Skills Course

MODULE	DEFINITION	APPLICATION METHODOLOGY
VALIDATION	Validation is a way to find out if an innovative idea is valid or not. It can be understood as an action interposed between the idea and the problem, in which the validation of the problem must, as a matter of priority, guide a solution, in this case the idea.	Validation is research that carries nuances of the scientific method, including a hypothesis for a problem, data collection (usually questionnaires), data collection methodology and data analysis. These steps prove, or not, the hypothesis for the problem, bringing the idea to action.
CANVAS	Canvas is a tool for business modeling, a visual map of how the project is structured, conceptually and structurally translating the project.	Visual map that addresses enterprise concepts that define business models, such as value, customers, production, partners, cost structure and revenue sources.
PROTOTYPING OR MVP (Minimum Viable Product)	Prototyping is to make a representation of a product or service in order to be able to test it, to obtain feedback that will guide in making a decision regarding it.	Prototyping reduces costs, as it will still be possible to reformulate the final product/service based on feedback. The methodology consists of making the idea a reality through a more basic version of the product or service.
FINANCIAL AND TAX MANAGEMENT	Part of a company's business plan whose guidelines include the idea of making the business profitable, establishing control tools to ensure that the cash flow and the fulfillment of the proposed goals for the short, medium and long term.	The course offers methodological alternatives, such as the 5W2H and its seven questions, the PDCA and the SWOT Analysis, very useful for defining strengths and company's weaknesses in relation to the competition. When it comes to financial management, routines such as cash flow, bank reconciliation, paying bills, checking receipts and generating reports are essential.
PROFESSIONAL PRESENTATION	It is about presenting an idea, launching a product or service, in order to arouse the interest of the target audience.	The methodology recommended by the course is based on Pitch. In business, it is a presentation tool that combines care with the presentation time and the content presented.
MARKETING FOR ENTREPRENEUR	Marketing is the business communication strategy, the link between the company that offers a product or service and its potential customer.	Marketing methodology is conceptually subordinate to strategy. Highlighted in the course is SMP (segmentation, target market and positioning). Consumer needs and product/service differentiation guide the best communication strategy.
TOOLS AND SYSTEMS FOR BUSINESS MANAGEMENT	It is softwares capable of organizing business management through data control and storage. Easily accessed by smartphone. A graph and a spreadsheet of your cash flow stored in your cloud is an example of this control and storage.	Spreadsheets, text editors, presentation editors, cloud storage systems, etc. are great tools for managing small businesses. The methodology, therefore, is to organize and control.
CREATIVITY AND INNOVATION	Creativity is a way to promote a transition from current reality to a desired situation in the future, connecting points, producing new and useful ideas that will result in a satisfactory and accepted product or service.	The methodology of creativity and innovation finds its application in the creation, to give life to an idea. Improvements on ventures are common before this module. The online market is a good example
INTELLECTUAL PROPERTY	It is the right related to information and knowledge that can be incorporated in an unlimited number of copies of an object and not in the copied object itself. In this sense, intellectual property is not translated into objects and copies, but into information or knowledge reflected in these objects, being, therefore, intangible.	Copying safeguarding the author of intellectual production is different from copying taking possession, given the authorship of another. In business, we can name commercial and industrial brands as intellectual production, symbols through which companies are seen and remembered. Safeguarding the right to ownership of these brands is fundamental in identifying these companies in their marketing strategies.

Regarding the confrontation we propose between the skills and competences offered by the Entrepreneurship Skills course and the vulnerabilities found in Graph 1, we observe that:

- Regarding Validation, one of the companies is in the testing stage, and another, is in the design stage.;
- Regarding Canvas, there was no vulnerability in any of the companies in the sample;
- The Prototyping / MVP appeared as vulnerability in three companies in the sample;
- In relation to Financial and Tax Management, the diagnosis showed financial management (two companies), management, only (three companies), working capital, accounting consultancy, legal consultancy and administrative management (one company each), and price/pricing as vulnerabilities the product (three companies);
- Two companies have accused the Personal Submission vulnerability;
- Regarding the Marketing for the Entrepreneur module, we had sales (two companies) and marketing (4 companies) vulnerabilities;
- Regarding the Business Management Tools and Systems module, we identified the vulnerability of equipment and new technologies (four companies), and inventory control (one company);
- The Creativity and Innovation module has relevant adherence to delivery vulnerabilities (one company), partnerships/employees and sales (two companies each);
- Regarding the Intellectual Property module, we had the logotype vulnerability (one company).

Looking at Graph 1, time is the only related vulnerability that entrepreneurs did not find support in the course modules. It is not specifically about time management in the enterprise, but the time available to it. The efficiency of this meet between formation and need is the first sure step in education and Ativa's Entrepreneurship Skills Course has this characteristic. The dynamics of this training also include periodic business monitoring in order to constantly assess the progress of training and the necessary changes in the enterprise. The second step, more important than the first, is the association of the theory disseminated in training with the practical exercise, application and verification of the theory in the enterprise itself. The protagonism of the entrepreneur appears at this moment. Authors like Freire (2006) defend this idea of training based on practice and reflection on practice, a living proposal in incubators, especially in ours. Faced with the vulnerabilities of their enterprise, the entrepreneur, directly responsible for the construct that will lead them to overcome, has in the incubation process a fundamental partner of critical reflection of thinking 'their being'. If changing is part of the overcoming perspective, moving this 'being' from naive business knowledge to epistemology of undertaking is a possible presupposition only with the presence of practice. The questioning about the business itself becomes more effective and critical if it occurs during the training, due to the possibilities of intervention that it will have at that time. Valle (2002) points out that professional identity is part of a dynamic and contingent reality, outside the vocational reality. This complexity of the vocational reality makes it a habit much more conditioned to experience than simply to wanting, and leads us to the perception that, from an educational point of view, it is in the professional identity that we must invest.

CONCLUSION

By proposing a teaching-learning concept of entrepreneurship grounded in practice, the authors not only demonstrate a relevant empirical reading of the incubation process, but engender a discussion with important educational learning theories, including Behaviorism (Skinner, 2006), The Social Interactionism (Vigotsky, 2008) and Meaningful Learning (Silva, 2020). Our analyzes and data showed that the contribution of the training offered by the Ativa, IFMT's Business Incubator, is doubly guided towards overcoming

vulnerabilities, on the one hand it has a structured curriculum with concepts capable of confronting the vulnerabilities of its entrepreneurs team, and on the other hand it practices monitoring that analyze the practical application of the training offered, offering solutions through direct mentorship and advisory services. Being at the head of an enterprise while seeking to develop skills and competences (in incubation) related to this enterprise is an exercise in protagonism, as it structures theory and practice in a constant coming and going of studies, reflection, transformation etc., fundamental to entrepreneurial learning and business success. We believe that this is a work that guides co-responsibilities. The Business Incubator team shows the importance of a course structured according to the needs of the target audience and also the importance of the inseparability of theory offered with the practice performed in the enterprise.

The entrepreneurs show the relevance of reflections on the triad study, practical application and reflection on the results, in a constant back and forth during and after training, in order to monitor the success of the action or the need to reframe in the next action. Furthermore, this paper also guides the next steps of Ativa's incubation process 2021. This work gives rise to approaches aimed at monitoring the researched group's undertakings in relation to entrepreneurial education in addition to learning and approaches that reflect the theory used here as a result of business performance in ventures whose incubation process has already been completed. Our goal for future work is to produce work with such approaches in the coming months. Finally, we hope that this work will serve as a kickoff to the Ativa Business Incubator team, including the other branch fillials that in the future will also adhere to the implanted incubation process, in relation to scientific productions that publicize the work they already perform for years, and in the same way that it can add intellectual values to the incubation process practiced in all Ativa branches, especially the Barra do Garças. We would like to thank the Reach Out Chairman (Pró-Reitoria de Extensão) and Research Chairman (Pró-Reitoria de Pesquisa) of the IFMT and the Research Support Foundation of the State of Mato Grosso (FAPEMAT) for their assistance.

REFERENCES

- Bogdan, Robert; Biklen, Sari. 1994. *Investigação qualitativa em Educação: uma introdução à teoria e aos métodos*. Porto – Portugal: Porto.
- Cope, J. 2003. Entrepreneurial learning and critical reflection discontinuous events as triggers for 'higher-level' learning. *Management Learning*. 34, 429-450.
- Fillion, Louis Jacques. 1999. Empreendedorismo: empreendedores e proprietários – gerentes de pequenos negócios. *Revista de Administração*. 34 2, 5-28. Recuperado de https://www.academia.edu/1168821/Empreendedorismo_empreendedores_e_propriet%C3%A1rios_gerentes_de_pequenos_neg%C3%B3cios.
- Fonseca, Danilo Amaral da et. al. 2020. A aprendizagem empreendedora na Incubadora de base tecnológica do CRITT/UFJF. *Revista Unifeso - humanas e sociais*. 5 5, 40-53.
- Freire, Paulo. 2006. *Pedagogia da Autonomia: saberes necessários à prática educativa*. 33ª Ed. Rio de Janeiro: Paz e Terra.
- Helms, M. M., Nixon, J. 2010. Exploring SWOT analysis – where are we now? *Journal of Strategy and Management*. 3 3 215-5110.
- Pereira, A. S.; Shitsuka, D. M.; Parreira, F. J. & Shitsuka, R. 2018. *Metodologia de Pesquisa Científica*. [e-book]. Santa Maria. Ed. UAB/NTE/UFMS. Recuperado de https://repositorio.ufsm.br/bitstream/handle/1/15824/Lic_Computacao_Metodologia-esquisa-Cientifica.pdf?sequence=1.
- Plonski, Guilherme Ary. 1999. Cooperação Universidade-Empresa: Um Desafio Gerencial Complexo. *Revista de Administração*. 34 4, 5 - 12. Recuperado de <https://repositorio.usp.br/item/001069034>.
- Raup, Fabiano Maury; Beuren, Ilse Maria. 2006. O suporte das incubadoras brasileiras para potencializar as características

- empreendedoras nas empresas incubadas. *Revista Adm.* 41 4, 419-430.
- Sampieri, R. H.; Collado, C. F. & Lucio, M. P. B. 2013. *Metodologia de Pesquisa*. 5 ed. Porto Alegre, AMGH.
- Silva, João Batista. 2020. A teoria da aprendizagem significativa de David Ausubel: uma análise das condições necessárias. *Research, Society and Development*. 9 4, 1-13.
- Skinner, Barrhus Frederic. 2006. *Sobre o behaviorismo*. 10 ed. São Paulo: Cutrix.
- Valle, Ionde Ribeiro. 2002. Da “identidade vocacional” à “identidade profissional”: a constituição de um corpo docente unificado. *Revista Perspectiva*. 20 n. Especial, 209-230.
- Vigotsky, Lev Semenovitch. 2008. *Pensamento e Linguagem*. 4 ed. São Paulo: Martins Fontes.
