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ENTREPRENEURIAL TRAINING EXPERIENCES IN HEALTH PROGRAMS

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ABSTRACT

The study explores entrepreneurial education as a crucial component in the dynamic landscape of healthcare, aligning with the professional profile expected for 2025, emphasising adaptability and critical thinking. The Final Course Project is presented as a course in entrepreneurial education, with initial student self-assessments showing strong performance (NPS scores of 79% and 93% for learning and performance, respectively), underscoring the relevance of the initiative. Student evaluations reveal opportunities to further strengthen the entrepreneurial culture in the classroom, with a positive evolution in the perceived relevance of the course to their professional development over the semester. Student testimonies highlight the discipline's positive impact, emphasising hands-on learning and the instructor's guidance. The outcomes also include the instructor's growth as a learning facilitator, introducing innovative educational practices. She emphasises academic planning and formative assessments. Her account highlights student engagement in business plan development, the cultivation of entrepreneurial skills, and the broadening of their professional perspectives.

KEYWORDS: entrepreneurship, entrepreneurial education, mentor instructor

INTRODUCTION

The complex dynamics of the contemporary world, marked by the particularities of the new generation of students, compel educational institutions to continuously reassess their pedagogical approaches. The rapid pace of technological advancement, the post-pandemic global context, and the profound transformations in the labour market converge into a challenging imperative: the pressing need to foster entrepreneurship. In this scenario, new professions emerge, professional qualifications are reconfigured, lifelong learning is established as a fundamental pillar, and socio-emotional skills rise to the centre of academic discourse. There is an increasingly robust consensus within the educational community regarding the crucial importance of incorporating the development of

competencies and entrepreneurial culture into higher education, recognising them as essential strategies to enhance the employability of future graduates (SOUZA et al., 2006).

According to SOUZA et al. (2006), developing an entrepreneurial profile in students means enabling them to create, lead, and implement creative processes, thereby offering the opportunity to design new life, work, study, or business plans—thus transforming them into active agents of their personal development. Within this context, higher education assumes a leading role—its function being to generate new knowledge, drive transformation, and enhance existing practices.

Entrepreneurship can be understood as a process involving initiatives to implement change, whether through new businesses, journeys, or experiences. According to the Aurélio Dictionary, to undertake (empreender) is the “attitude of someone who, on their initiative, performs actions or devises new methods to develop and energise services, products, or any activities related to organisation and administration.” Learning to entrepreneur is complex and challenging; it entails learning to think, to lead, to act, and to innovate, beginning with self-awareness. To be entrepreneurial is to be creative, persistent, and resilient. Learning to learn, learning to be and to coexist, learning to do, and learning to transform oneself and society are core competencies of the sustainable and successful entrepreneur.

The disparity between traditional academic training and the ever-evolving demands of the labor market—especially the lack of strong entrepreneurial orientation in higher education (OLIVEIRA et al., 2016)—constitutes a critical issue. Although entrepreneurship is part of the daily lives of many Brazilians, its formal incorporation into classroom pedagogical practices remains limited. In health-related programs, this gap becomes even more critical and urgent. Colichi (2018) emphasizes that health systems and services face complex challenges that transcend conventional solutions, demanding innovative approaches and proactive strategies, thus highlighting the imperative need to cultivate an entrepreneurial mindset among future professionals in the field. Moreover, a considerable portion of graduates from health programs pursue careers as self-employed professionals, service providers, and potentially as founders and managers of new ventures.

Considering these issues, students enrolled in the Final Course Project of the undergraduate programs in Biomedicine, Nutrition, and Physiotherapy at Faculdade Serra Dourada de Altamira were actively engaged in exploring the entrepreneurial environment. During the academic semesters of 2022, they internalised and applied fundamental concepts of entrepreneurship, developed structured business plans, refined their innovative projects, and expanded their professional outlook. By the end of this training period, students and faculty collaboratively conceived projects, developed entrepreneurial ideas, and drafted detailed business plans. They also critically analysed the inherent challenges of entrepreneurship and investigated the specificities of the local market. The present study explores the projects developed by students, their perceptions of the experience, the impact observed within the local academic community, and the reflections of the faculty members involved.

2. THEORETICAL FRAMEWORK

2.1 Entrepreneurship as a Tool for Transforming Education

Entrepreneurship is defined as the process of creating and developing autonomous ventures grounded in systematic innovation. This practice goes beyond mere economic activity, configuring itself as a way of being, a worldview, and a mode of interaction. The entrepreneur is inclined to take risks and initiate new ventures, perceiving change not as a threat, but as a healthy constant. Although not always the primary agent of change, the entrepreneur actively seeks it, responds adaptively, and explores it as a strategic opportunity. From this perspective, entrepreneurship emerges as a cultural phenomenon intrinsically linked to the skills, practices, and values of a social group (DRUCKER, 1987; DORNELAS, 2005).

Entrepreneurial education has been widely recognised as an essential factor for a nation's progress. However, promoting entrepreneurship within the educational context poses a complex challenge, requiring the stimulation of new skills and attitudes that provide opportunities for developing potential, regardless of socioeconomic status or field of study (LOPES, 2014).

Entrepreneurial education holds significant transformative potential for both students and the academic community. It contributes to the development of autonomy and other hallmark entrepreneurial competencies such as effective communication, complex problem-solving, argumentation skills, the ability to formulate coherent proposals, empathy, and proactive leadership. Nevertheless, fostering an environment conducive to such transformation requires a prominent teaching role that evolves into that of a mentor instructor, employing active academic practices, innovation, and creativity in the teaching-learning process. Knowledge becomes a collective construct, the subject of critical reflection, while the instructor assumes the role of learning manager, challenged to understand the diverse situations and unique learning opportunities of each student. Guimarães and Santos (2020) emphasise that the instructor's mediation in the entrepreneurial education classroom is decisive for consolidating the entrepreneurial culture within the academic environment, strengthening entrepreneurial spirit and catalysing each student's potential. In this paradigm, the student takes on the leading role in the teaching-learning process, becoming autonomous and learning how to learn across multiple times and spaces, according to their own choices. Knowledge is constructed from various opportunities, closely aligned with professional practice, supported by technology.

2.2 Profile of 21st-Century Professionals

The COVID-19 pandemic reshaped the world of work and accelerated technological innovation, highlighting the urgent need to develop the previously mentioned skills.

To meet the demands of the current and future labour market, the World Economic Forum (WEF) underscores the importance of building educational systems with curricula suited to the 21st century, alongside the consistent delivery of widely accessible instruction. These systems should provide a

solid foundation for lifelong adaptation and the continuous development of new skills. In this context, preparing professionals for the future requires attentiveness to changes in the world of work, through the establishment of flexible curricula that align employer needs with the technical-scientific and socio-emotional competencies required for effective problem-solving.

3. METHODOLOGICAL DEVELOPMENT

The entrepreneurship projects were developed within the mandatory curricular unit Final Course Project, consisting of 80 hours per semester. Final-year students from the Biomedicine, Physiotherapy, and Nutrition programs were organised into groups of five. The projects were developed autonomously, with synchronous meetings held with the instructor throughout the academic semesters of 2022.

Inspired by the Design Thinking methodology, the work plan proposed by the instructor followed an academic structure divided into the following phases:

- Discovery Phase: for defining the goals of the entrepreneurial project
- Ideation Phase: for expanding knowledge and concepts
- Prototyping or Experimentation Phase: for building the value proposition
- Presentation Phase: for presenting the final product

Project monitoring was conducted using the Likert scale, a research instrument composed of response options that reflect a range of opinions on the topic. The scale was applied based on the following criteria: relevance of the venture, product or service; communication and argumentation skills; creativity; coherence among the academic program, theme, and presented venture; and punctuality. The final evaluation of the projects followed the academic calendar and consisted of an oral presentation (pitch) to the local academic community. The evaluators were faculty members from the respective programs, invited by the students.

At the end of the academic work, students completed a self-assessment using the Net Promoter Score (NPS) methodology, considering their learning outcomes and project performance. They also evaluated the development of the Final Course Project, the use of the business plan in shaping their venture, and the relevance of the final project as an entrepreneurial training experience.

Student and instructor experiences were collected and recorded through focal point interviews, aiming to identify strengths and opportunities for improvement.

4. RESULTS PRESENTATION AND DISCUSSION

Entrepreneurial education at Trivento Educação is anchored in an academic model that places students at the centre of the learning process and promotes their overall development (soft and hard skills). This model is guided by the enhancement of autonomy and self-awareness, the use of active academic practices, a strong connection with the labour market, the integration of technology, and the redefinition of the instructor's role as a mentor in the student learning process. As one of the strategies for implementing this academic model, the Final Course Project was offered in the final semesters of the aforementioned programs as an innovative academic initiative to conclude the undergraduate experience. Within this structure, students were allowed to explore entrepreneurship and were challenged to become entrepreneurs, developing business plans and engaging in related activities.

The curricular unit was designed by the instructor based on the syllabus and guided by the objective of enabling students to analyse the contexts in which health professionals currently operate, or may operate in the future, identify professional opportunities, and develop business plans. The abbreviated syllabus that structured the work development included understanding the characteristics and behaviour of the entrepreneur, analysing local markets and scenarios, identifying opportunities, and drafting business plans. The graduate profile served as a foundation for defining both the learning activities and the assessment moments.

At the beginning of the course, students answered a survey about the evaluation methods and their expectations for the discipline. The responses indicated that 63% of students considered group evaluation to be the most appropriate method for assessing the development of entrepreneurial projects, while 37% believed that class participation should also be considered an important assessment criterion. Expectations for the course were expressed freely, and notable responses included:

“I hope to be able to structure a well-designed project and overcome this fear of talking about the subject I love so much.”

“I hope it helps guide us and gives us a better understanding of the job market...” “After the explanations and clarifications about the subject, I hope to feel prepared to start something in the field of entrepreneurship...”

“I hope to further develop in the area of entrepreneurship, and completing the project will be a very important step in my business development journey, and at the same time, equip me to face situations that may arise throughout my professional life.”

“I hope this course helps me find my place within my academic training.”

“I hope to awaken my entrepreneurial mindset and discover new aspects of my field.”

The course activity consisted of creating a company based on a business plan that analysed the products and services offered, the target audience, the regional market context, and the strengths and weaknesses that could either enable or hinder the feasibility of the proposed venture. Although these are crucial elements, they are often unknown or overlooked by new entrepreneurs, who rely solely on the basic buy-and-sell dynamic, ultimately undermining the progress and sustainability of the business. A total of 80 students were impacted, and 16 projects were presented, as shown in Table 1.

Table 1 – Entrepreneurial Projects Developed by Students in the Biomedicine, Physiotherapy, and Nutrition Programs (2022)

ID	Program	Entrepreneurial Project
1	Biomedicine	Aesthetic Clinic – Minimally Invasive Procedures
2		Clinical Cytology Laboratory – Specialised Testing
3	Nutrition	Nutrition Clinic – Special Dietary Plans for Diabetes
4		NUTRILIF – Home-Based Nutritional Care
5		INSTITUTO NUTRI ENSINA – Food and Nutrition Education for Child Caregivers
6		MANJAR – Riverine Nutrition Project
7		NUTRICON – Nutritional Consulting and Advisory Services
8		MAG NUTRI – Natural Products
9	Biomedicine	LABOCAP – Cytology and Anatomical Pathology Laboratory
10		Contaminated Waste Disposal Company
11		Lótus – Hormonal Health Centre
12		Labocitoma – Breast Cytology Clinic
13		BIO STÉTIC – Advanced Aesthetic Services
14		Clínica Fisiovida – Physiotherapy Clinic for Pregnant Women

15	Fisioterapia	CEDAP – Specialised Clinic for Pelvic Floor Dysfunctions
16		Xingu Fisio. Rehabilitation for Hips, Knees, Ankles and Feet.

The formative evaluation marked the development of the projects, which included both a midterm and a final pitch. The assessment criteria and students' progress can be observed through the average scores, specifically ratings of 4 and 5, received by each group for the defined indicators. The data indicate that students evolved throughout the project, in alignment with the criteria that were collaboratively established and agreed upon.

Table 2 – Evidence of Student Development in Entrepreneurial Training.

Evaluation Criteria	Preliminary Review	Final Pitch
Relevance of the venture/product/service	100%	100%
Group's communication and argumentation skills	40%	59%
Creativity.	60%	84%
Coherence between the academic program, project theme, and proposed venture.	80%	91%
Punctuality in presentation.	80%	95%

The evaluators, faculty members invited to participate, assessed the projects and the instructor's initiative through open-ended comments. Highlights include: “*An excellent proposal based on the city's market analysis*”; “*Outstanding work with real potential to be implemented.*”

Students' self-assessment is shown in Figure 1. The results demonstrate that students recognise their own performance in the development of the projects. Both scores fall within the NPS excellence zone, with values of 79% and 93% for learning and performance, respectively. These results are highly relevant, especially considering this was the first offering of this innovative initiative.

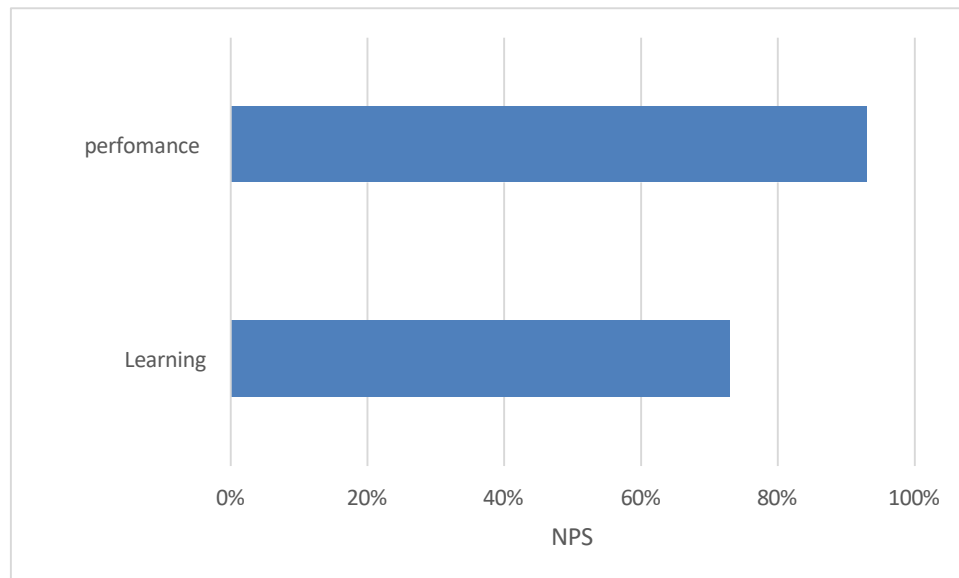


Figure 1 – Student Self-Assessment in Entrepreneurial Training

When evaluating the instructor’s initiative, results confirmed the excellence of the professor’s work, as shown in Figure 2, with the exception of the perceived value for professional qualification. This exception may be attributed to the existing gap between entrepreneurial culture and classroom experience, as well as a potentially misguided perception students have regarding their future professional practice. It is widely recognised how essential entrepreneurship is in the future job market. These findings reveal the magnitude of the responsibility associated with this project.

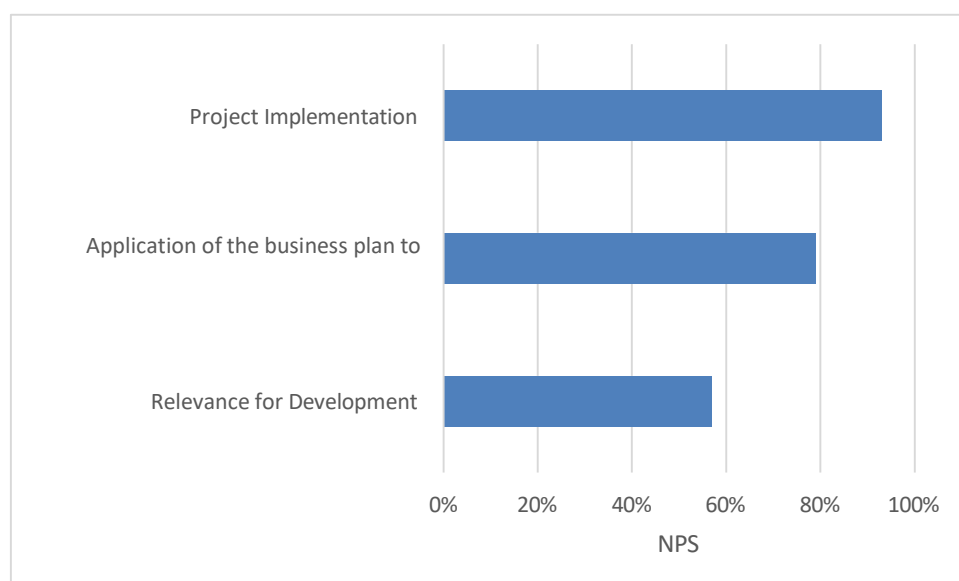


Figure 2 – Student Evaluation of the Project Developed in the Final Course Project Discipline (2022)

In response to the results presented in Figure 2, and aiming to deepen the understanding of the classroom context, students were invited to reflect on their experience of developing an entrepreneurial project as their Final Course Project. They evaluated the use of the Business Plan for their venture, their satisfaction with the discipline, and the innovative nature of having a final paper oriented toward entrepreneurial learning process. The results reinforce students' positive perception and sense of value, as evidenced by the excellence level of the indicator used. As shown in Table 2, the development of the Entrepreneurial Project as a Final Course Project is recognised by students as an innovative solution for entrepreneurial education. In their self-assessment, the positive and relevant aspects of their performance and learning throughout the project are clearly evident.

Table 2 – Student Evaluation of the Entrepreneurial Project as Final Course Project

Category – Course Evaluation	Evaluation (NPS)
Development of the Entrepreneurial Project as Final Course Project	93%
Use of the Business Plan in the Development of Their Venture	79%
Student Self-Assessment	
Performance in the Entrepreneurial Project as Final Course Project	93%
Perceived Learning in the Course	79%
Relevance to Their Professional Formation	64%

However, the results from the student self-assessments reveal opportunities for further development of an entrepreneurial culture within the classroom. While students perceive their performance and learning in entrepreneurial education as excellent, they do not yet fully recognise its relevance to their professional formation. When comparing the results from Figure 2 and Table 2, we observe a positive shift in students' perception of the impact of entrepreneurial education on their future careers, as these results reflect data collected at the beginning and end of the academic semester, respectively.

The following are selected excerpts from the instructor's reflections on the experience:

“Developing the Final Course Project was wonderful! Breaking away from the traditional thesis format was amazing—we could truly feel the excitement of creating something. Every class was a learning experience. Our advisor was absolutely amazing!”

“Only compliments—I learned so much in every stage of the project. Every bit of knowledge gained was extremely valuable for our final project. Professor Raquel was incredible, always helping and guiding us with empathy. My eternal gratitude to her.”

“We basically had no idea how to build a business. Professor Raquel gave us incredibly valuable tips. It was truly great. This project gave us solid preparation for entrepreneurship. Now we really understand what it means to manage a business. Even if we don’t open our own company, this understanding will be incredibly useful—it allows us to help develop a business toward success,” said student Maria de Melo Souza.

“The business plan had a real impact on my life – it might even give me a second chance to pursue my own business.”

The outcomes of this project include the professional development of the course instructor, who served as a mediator of student learning, innovating in educational practices through the use of active methodologies, constructive dialogue, and technology as a tool to enhance classroom connection. In her evaluation, the instructor responsible for the academic project emphasised the importance of academic planning and formative assessments, recognising them as essential instruments for both student development and academic training. *“Each week in class, our students had the opportunity to present the stages of their business plans. They received continuous feedback for improvement and gradually developed key skills and competencies such as initiative, persistence, efficiency, planning ability, organisation, creativity, commitment, among others—essential qualities for becoming an entrepreneur. The students’ engagement was evident as they were challenged to create their ventures, allowing themselves to dream bigger, understand the relevance of these professionals in the labor market, and generate innovative ideas—thus opening a wide range of possibilities for their professional success, especially considering many had never before experienced such a formative personal or professional journey.”*

5. CONCLUDING REMARKS

The successful implementation of entrepreneurial education within the Final Course Project for graduating students in the health sciences, aligned with an academic model that values holistic development and strong ties to market demands, represents a significant milestone in the training of future professionals. Embracing the belief that entrepreneurship extends beyond financial activity and embodies the realisation of innovative ideas and growth across multiple dimensions, the initiative challenged students from Biomedicine, Nutrition, and Physiotherapy to apply theoretical knowledge through the creation of business plans. This hands-on experience enabled students to explore the healthcare market and identify opportunities for professional engagement. Student evaluations indicated high levels of satisfaction with both their

performance and learning outcomes, demonstrating the effectiveness of the active methodology employed. The analysis of student perception revealed a growing recognition of the relevance of

entrepreneurial education in their professional training. Throughout this process, the instructor's role as a mentor, facilitating learning and connecting students' goals with real-world market challenges, proved to be essential. Knowledge was built through the exchange of ideas and the resolution of practical problems, always grounded in the principles of sustainability, ethics, and technological innovation. These initial results highlight the powerful potential of entrepreneurial education to prepare healthcare professionals who are proactive, innovative, and equipped to meet the demands of today's job market.

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