Transformative Education: A Study on Entrepreneurship Practice with Young Students

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Abstract: This paper presents an account of the transformative education model that proposes the transformation of the student into an entrepreneur. For this project, a team of professionals with knowledge and experience in project methodologies, intellectual property, entrepreneurship, and other legal aspects was made available to students and teachers. One of the main objectives was to obtain a product ready for market insertion, which is of low or medium complexity. The pedagogical practice has resulted in the skills of mentor and facilitator teachers, allowing students to develop technical and social skills. These include problem-solving, systemic insight, risk accountability, decision making, discipline, the ability to innovate, undertake, and think creatively.

Keywords: Transformative education, SENAI, SENAC, SESI.

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I. Introduction

Suggesting pedagogical activities, through the elaboration of projects that solve real problems, began the twentieth century, with philosopher and educator John Dewey [1]. The author aimed to disseminate an education focused on the student's daily life and not only on future growth. This model represents the present in society, the reality in which students live in the present moment [2-3].

In this scenario, the Teacher should assume the role of guiding his students, but without exerting control over his initiatives. According to Dewey's proposal, the challenge would be to counteract the current education system, with its formative content transmitted segmented and unconnected with reality, with a traditional view of teaching, with strategies based on repetition and memorization [1-4].

The pedagogical practice based on project development is related to the needs of the so-called "society 4.0", which demands from organizations professionals who have skills to work in multidisciplinary teams, especially in the cases concerning the elaboration and execution of projects [5]. In this sense, youth education institutions must aim for cooperation and proactivity.

The SENAI Vocational Education Methodology advocates a teaching practice adhering to the pedagogical model committed to the development of the professional skills required by the world of work, allowing students, in the process of vocational training, to mobilize their knowledge in the generation of new ideas, exercising essential skills. For their professional performance, such as creative thinking, autonomy, and proactivity.

It is corroborating the pedagogical proposal of the National Service of Industrial Learning (SENAI), the National Service of Commercial Learning (SENAC), also adopted in its units innovative educational spaces, focusing on the development of not only technical but also behavioral skills in its students. In line with the demands of the Commerce, Goods, Services, and Tourism sectors.

Developing skills through pedagogical projects, combining theoretical and practical knowledge, is also one of the SENAC Guidelines. Besides, the projects developed by the students, as in the case of SENAI, are submitted to society in educational projects fairs and innovation shows, enabling students to develop skills such as resourcefulness, diction, argumentative capacity, among others necessary. To scientific and technological production.

II. Procedure methodology

This initiative takes place in a non-profit institution located in the Rio Grande do Sul. Since 1942, its objective is to promote the development of students, between 14 and 24 years old, in areas of industry, including students from different Social classes.

Since 2002 the school modernized its pedagogical performance committed to the development of the skills required by the world of work. This action allowed students to mobilize their knowledge in generating new ideas, creative thinking, and autonomy. However, since 2013, it has joined the program of integrative projects, a national initiative that aims to develop in its students the ability to work in groups and propose innovative actions involving students and teachers, as well as the educational community, in particular. Challenging projects that add value to society and improve manufacturing processes in the pursuit of economic and sustainable solutions.

We had a concern here in the Rio Grande do Sul to promote entrepreneurial characteristics and skills in our students, so that they were protagonists and bold enough to launch their products on the market as soon as they finished their courses. In this context, we have integrated into the program of integrative projects, real situations of the industries so that our students could, through solutions, create new products, not only for the company that launched the challenge but others that had the same demand. Thus, our students could, in practice, develop entrepreneurial skills such as initiative, negotiation skills, planning, project management, and even leadership as they work in groups of up to 5 students with one mentor teacher.

This practice is performed in a 12-month cycle, distributed in the following steps:

- Registration of the challenge by the industries;
- Selection of Challenges by technical banking;
- Disclosure of challenges to students;
- Field visits;
- 1st Meeting to stimulate entrepreneurship and innovation;
- Beginning of project development by the teams;
- Mentorships about data analysis, business models, and prototyping;
- Presentation of and products to the judging panel, companies, and society;
- Exhibition and awards of featured products;
- Final delivery of products to companies;
- Based on the lessons learned in 2017, we adopted the following strategies;
- Budgeting to support students in purchasing inputs for product development;
- Meeting with companies to publicize and disseminate the proposal;
- Regular meetings with teachers and students to enhance innovation and entrepreneurship skills;
- Awards events to highlight the projects with the best market potential;
- Stimulation, guidance, and support for students interested in patenting their products.

Since the first edition of this initiative, a team of professionals with knowledge and experience in project methodologies, intellectual property, entrepreneurship and legal aspects pertinent to the action has always been available to students and teachers, since one of the main objectives was that at the end of the process the students obtained a product ready for market insertion, which is of low or medium complexity. We gained through this pedagogical practice, it was the strengthening in the pedagogical team, competences focused on the profile of guiding and facilitating teachers, allowing students to develop technical and social skills, such as problem-solving, systemic vision, responsibility towards risks, decision making, discipline, the ability to innovate, to undertake and to think creatively.

III. Conclusion

As a way to improve the initiative, we seek to get closer to other educational institutions that have similar actions, inviting members of these institutions to be part of the evaluation boards of our projects, as well as making us available to compose other boards. From this approach, we create links with other partner institutions that also have expertise in the theme of innovation and entrepreneurship.

Since the first edition, in 2017, when we adopted this model, we were surprised by the results obtained. The testimonials from students, business owners, teachers, and even family members were exciting and very popular. It was evident that the initiative allowed students to experience experiences that they will also face in the most diverse contexts, providing them with the formation of their individuality in a more conscious way, as a transformation agent of their reality, which encouraged us to keep the proposal in mind. The distinction of this initiative is to provide our students with the opportunity to develop products that will solve real industry problems, which in this case act as clients of project teams by showing students how much they can innovate and undertake.

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