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# Integrating project in entrepreneurship: formative game of education and extension in Federal Institute of Brazilian Education

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**Abstract**

*The research focuses its analysis on the integration of the labor market and students. The objective of this study was to show that the integrated university extension education could be a powerful learning tool from the perspective of active methodologies. The educational institution has as its basic need for existence the vocation to be inserted in the social problem, because it is part of the construction of the future of any society. The project with extension bias was consolidated with education actions involving disciplines, aiming to offer the opportunity for students to participate in the integration theory and practice in the various stages for the elaboration of the Project "Business Plan of the Artisan's House of Sinop/MT: undertaking and innovating". The quantitative methodology of experimental-participant nature was used, having its data collection phase the period from September 2016 to January 2017 in the city of Sinop/MT. The results showed that 62% were fully and 38% partially satisfied with the adopted methodology. It was found that the conceptual separation is not limiting, but a complementarity tool between the university pillars, being the success factor the integration that enables students to experience real situations.*

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**Keywords**: innovative didactics, educational project, Active Methodology.

## INTRODUCTION

The teacher has always been considered the central point of the pedagogical process of education and learning, from this view emanates that: there is no valid knowledge in this process without the teacher; it is up to the student to record what it is fluid. Pedagogical schools since the eighteenth century have questioned this model, due to a new critical consciousness born mainly of the European liberal revolutions and the American independence, which already recognized the student as an individual with rights, within a historical context of social recognition. [16].

The changes in perception about the pedagogical model and especially about the elaboration of knowledge, as well as how it can be potentiated, has been changing over the last centuries worldwide, giving opportunity to the emergence of experiences, practices and concepts that defend the interaction of mechanisms that contribute to the broadening of the vision process of learning and generation of competences. New methods emerged as well as ways of valuing and not only transmitting knowledge, but also of students' skills and attitudes that were previously fixed to the single pillar of education, in this sense came the extension and research to shape a new formative tripod.

In particular, the process of integrating education, research and extension makes it possible to develop new integration strategies between social needs and academic policies in general, but mainly to develop students' latent skills. Extension in this context acts as a form of dialogue between the educational institution and the community, seeking to find a more effective form of communication, to realize the composition of scientific and technical knowledge. Buarque (1986, p. 32) asserts that: "The scientific, technological and artistic knowledge generated at the university and research institutes are not unique".

An increasingly strong conception comes from the intersection of education-work through internships, and activities that bring the experience in the work environment still in the student's formation

phase, in order to develop knowledge, skills, attitudes, values and critical reflection (Stelet et al., 2017). Another very current aspect is the strategy that favors the education and learning environment called business games, based on simulation of reality at work focusing on the education and learning process, assuming that using this methodology activates the students get a better learning (Butzke & Alberton, 2017).

Extension as an educational, cultural and scientific process articulated with education can be the formal, unquestionable and effective instrument, linking theory to practice. It is important to think that the construction of knowledge in schools can be stimulated with society, in order to meet the demands of knowledge, ideas, skills, attitudes, resources and competences, essential for the formation of future professionals.

This paper portrays the perceptions of the dynamics undertaken in a project developed at the Federal Institute of Education of Mato Grosso (IFMT) – Sinop Advanced Campus/MT, entitled "Business Plan of the Artisan's House of Sinop/MT: undertaking and innovating with art and science". The aim of this study was to show that university extension integrated into education could be a powerful learning tool from the perspective of active methodologies. Demo (2001) shows that the educational institution has as its basic need for existence the vocation of being inserted in the social problem, because it is part of the construction of the future of any society.

## LITERATURE REVIEW

Currently, it is possible to verify the use of different education methodologies in the educational context aiming at solving problems in the construction of meaningful learning. At the center of these educational approaches are the idea of thematic contextualization and interdisciplinarity, with emphasis on the conception that aims to produce dynamic and interactive classes, where the teacher assumes the role of mediator of the education-learning process and the student gains an active role (Souza & Fonseca, 2017).

Thus, reductionist education and learning models tend to be replaced or adapted for elaboration within a critical human-

interactive view, in order to change the transmissive education approach to one with an emphasis on active methodology, concerned with dialogic and interactivity, engaging the student in a participatory way in the reflections of emerging social problems (Backes et al.,2012). Although differences can be found between education methodologies, it is emphasized that there are common goals and aspects (Souza & Fonseca, 2017).

Several practices emerge in various fields of science, such as applied social sciences, health and engineering. Souza and Fonseca (2017) contribute to the construction of this reflection by presenting considerations about the education and learning process of Differential and Integral Calculus, using Problem Based Learning (PBL), proposing as a resource the articulated search of theoretical knowledge to possible professional practices to the students.

It is also emphasized the importance of extension activities in this context, from the understanding of their articulating role to education and research to promote the development of education, culture and technology, promoting the interaction of educational institutions, segments of society and the universe of work (Silva et al., 2016). Currently, university extension is proposed as a two-way street, as it provides gains for both the academic community and the external community served [10].

In this perspective, entrepreneurship emerges as a fertile bias to instrumentalize educational institutions to integrate the education and extension pillars, aimed at the development of strategies for vocational training in line with social reality. How to understand the role of this discipline in the process? It is a priority to understand its definition, which is very difficult and controversial in the literature and popular understanding, but it is possible to conceptualize it based on the narratives of the various authors who are dedicated to studying the subject. For Filion (1999) entrepreneurship can be seen as a discipline that studies entrepreneurial activity, while Dornelas (2012, p.28) explains, “Entrepreneurship is the involvement of people and processes that, together, lead to the transformation of ideas into opportunities. And the perfect implementation of these opportunities leads to the creation of successful businesses”. Schumpeter (1988), brings the idea that entrepreneurship involves a direct relationship

issues such as innovation, return on capital and investments made in enterprises.

We have the reflection and association of the activity of entrepreneurship with economic development, it is noticed that an interest beyond the economy, but also in the generation, development and management of companies (Chiavenato, 2007). In this context, entrepreneurship becomes a field of application of actions for the integration of practice with theory since it manages the teacher-oriented student relationship with the labor market in various dimensions of an enterprise.

Lemos and Cario (2017) in a recent study point to the importance of entrepreneurship in the educational environment, including the subject in course subjects, research groups and laboratories. The academic perception of this new thematic possibility is emphasized as a transversal mechanism that aligns the education of extension in several matrices of professional formation.

## METHODOLOGY

The project proposal aimed to train the management group and elaborate the business plan of the Sinop Artisans Association/MT, executed through the extension team formed to attend the public notice number 061/2-16 of the Federal Institute of Education of Mato Grosso (IFMT), also foreseeing the active participation of students in the context of education and supervised internship. The work was divided into 03 phases over 05 months, with practical actions and theoretical classes to assist the said Association in integrated work with the students linked to the classes of the Technical Courses in Human Resources and Technical in Commerce (2nd and 3rd Semesters), enrolled in the disciplines of Marketing, Purchasing Process, Material and Property Resources.

The content of the project activities was prepared using concepts, tips, examples and practical tasks, so that the education and learning process was enjoyable and that participants could relate what they are studying to their daily practice in their socio-professional space. Thus, two aspects were fundamental for success: the activities developed by the intern under supervision in the

organization and the students' field activities to relate the subjects and professional practice under the guidance of teachers.

The Active Methodology used in this project was planned in order to build with the problematization and exercises, solutions to the demands related to the needs of the Sinop Artisan Association/MT. The project also aimed to provide mechanisms that in a participatory manner were important in arousing and sharpening students' curiosity, in a participatory and active way in their own training process. [10].

The project was conducted through actions located in the organization based in the city of Sinop/MT, from September 2016 to January 2017 in order to insert the students in the space of local social actors.

The method applied in the project can be understood from the perspective of the active methodology, also based on the concept of Miter et al., (2008) which informs as characteristics the presence of directed actions so that the student can deepen and broaden the meanings elaborated through their participation and also demands from the teacher the permanent reflection, availability for the accompaniment, that presupposes the emergence of unforeseen and unknown situations.

In the organization field of study of the project, it was sought to meet the need for professionalization of management, as well as through the preparation of business plan was possible to reposition the business market, it can be seen that this field study can be justified as an active learning strategy for targeting PBL, as advocated by Powell & Weenck (2003):

- ✓ The project is not a set of subject assignments for students;
- ✓ The activities were divided into themes with defined missions in each theme;
- ✓ Focused student activity on teamwork, linking learning with problem solving/projects with open solutions;
- ✓ Each project problem was supported by a set of disciplines linked together by a theme related to professional reality;

The public directly benefited in the context of active methodologies consisted of 70 students from the Trade Technician, Human Resources Technician and FIC in Administrative Assistant courses of

the IFMT Campus Sinop. Students were divided into groups according to the periods and disciplines they were taking to formulate proposals for specific problem solving raised by the extension team and the intern. The proposals prepared by the education groups and under the supervision of the teachers were passed on to the team responsible for the extension project that formatted the proposals for the organization.

As a way to verify the perception about the impact of participation in the articulated education activities, a questionnaire was applied to 52 students in the final phase of the project, seeking to determine if the education activities associated with the extension increased their knowledge and were motivating for the study, a Likert scale was used to quantify the responses.

**Table 1. Summary of activities developed in the integrative entrepreneurship project (extension and education)**

| Period | Classes/Disciplines | Activity, problem and solution |
|---|---|---|
| September/ 2016 | ➢ Extension Team;<br>➢ No education class. | Technical meetings to mobilize and adjust the proposed methodology to be developed with Artisan House associates;<br>Visits to the Sinop Artisan House. |
| October/ 2016 | ➢ Extension and Internship Team;<br>➢ Human Resources Technical and Trade Technical Classes (2nd and 3rd Semesters);<br>➢ Disciplines: Marketing, Purchasing Process, Material and Property Resources | Mobilization and productive organization of the members of the Sinop Artisan Association;<br>Technical advisory services for improving the scope of the business;<br>Visits to the Sinop Artisan House. |
| November/2016 | ➢ Extension and Internship Team;<br>➢ Human Resources Technical and Commerce Technical Classes (2nd and 3rd Semesters);<br>➢ Disciplines: Marketing, Purchasing Process, Material and Property Resources | Marketing Research on the Sinop Artisan House; meetings to elaborate the organizational diagnosis focused on the market positioning of handicrafts in the city of Sinop;<br>Visits to the Sinop Artisan House. |

| | | |
|---|---|---|
| December/2016 | ➢ Extension and Internship Team;<br>➢ Human Resources Technical and Commerce Technical Classes (2nd and 3rd Semesters);<br>➢ Disciplines: Marketing, Purchasing Process, Material and Property Resources | Marketing Research on the Sinop Artisan House; meetings to elaborate the organizational diagnosis focused on the market positioning of handicrafts in the city of Sinop;<br>Visits to the Sinop Artisan House. |
| January/ 2017 | ➢ Extension and Internship Team;<br>➢ No education class. | Preparation and consolidation of the business plan for repositioning the Sinop Artisan House; Business Plan Presentation Meeting and Project Closing Workshop. |

Source: Adapted from Brasil (2017).

The Table 1, elaborated from the documentary analysis of the project, presents the students' participation modalities and allows dimensioning the comprehension of the scope of action and comprehension of the answers obtained about the adequacy of participation in the project.

## RESULTS AND DISCUSSIONS

This study presents a literature-driven explanation of the influence of motivation on student learning by integrating extension activities into curricular education. In the first axis of the research it was verified the power of motivation produced by the extension activities in the study of the curricular subjects, where, the results verified that 58% fully confirmed this stimulating condition of the extension and 42% partially (Figure 1). Context-based cross-sectional education and learning methods are noticeably more effective in stimulating students by creating factors that interest, motivate, engage and inspire students through their variety of pedagogy (Birchinall, 2013).

This result contributes to understanding that academic performance is directly influenced by the involvement of students in extracurricular activities, providing a favorable learning condition (Kuan et al., 2019). Arquero et al. (2015) show that highly motivated students are more likely to develop deep knowledge and seek recognition with high marks, on the other hand, unmotivated

students have no interest in knowledge itself or high grades. (Figure 1).

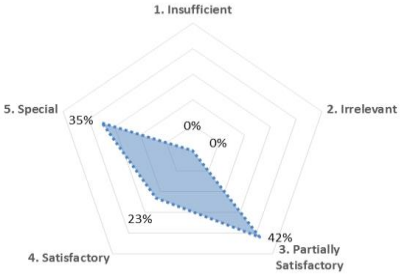


**Figure 1. The project as a motivating factor for curricular study**

Depending on the curricular flow of the subjects implemented in the courses, it may or may not favor the development of skills and attitudes in students (Conway et al., 2011). The new learning in this research was perceived as a factor that provides conditions to stimulate professional attitudes and skills in the wide assessment of respondents with 69% (Figure 2). Learning from different methodologies is effective in improving skill in the process of acquiring scientific knowledge and in developing positive attitudes in students (Chuaa and Chuaa, 2017; Dwianto et al., 2017).


**Figure 2. New learnings in attitude and skill development**

This study describes the educational game of extension and education in the context of the entrepreneurship discipline. In this context, framing the problem of generating professional experience as a positive activity in vocational training was assessed as very important by 61%. It is inferred that the contextualization of the problem can make it difficult to identify lasting solutions, and planning and

strategy development contribute to finding solutions based on professional experience. (Southgate et al., 2013).

It appears that the formation of professional competence is highly relevant from the process of study of professional subjects performed in education activities associated with extension, increasing knowledge and becoming motivating for the study of professionals (Osadchyi, 2017).

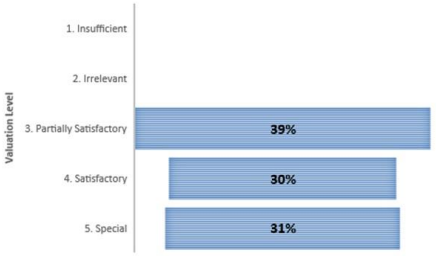


**Figure 3. Experience as a positive differential in vocational training**

As expected, there were no answers that would fit in the "irrelevant" or "insufficient" category, thus, a quantitative analysis of the results revealed that the perception of the respondent students was 62% fully and 38% partially related to the satisfaction of the adopted methodology. Obviously, the result requires further quantitative research to assess learning gains. [14].

The results showed that the field approach of the entrepreneurship discipline associated with the Marketing, Purchasing Process, Material and Property Resources disciplines, through extension can be used as a complementarity tool, allowing the student to experience real situations to improve their professional education. Pires & Quintella (2015) show that encouraging entrepreneurship is also seen as an important strategy for addressing the business sector, thus making it possible to link the labor market with the school.

## CONCLUSION

This extension project contributes to the strengthening of the belief in entrepreneurial education and its social contribution power, so that a

community supported by technology can be reached. It is believed that the development of extension projects integrated to education can be carried out as part of education strategies within the scope of active methodologies providing the approximation of theory and practice.

The extension project reported here articulated with education demonstrated the concern of the Federal Institute of Education of Mato Grosso, with the surrounding community, disseminating technological knowledge and fulfilling its institutional mission of "Educating for Life and Work". The conceptual separation between education and extension is not limiting, but a complementarity tool between the university pillars.

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