APPLICATION OF PROJECT BASED LEARNING IN BUSINESS ADMINISTRATION COURSE: CONTRIBUTIONS TO LEARNING, SKILLS DEVELOPMENT AND PROFESSIONAL TRAINING OF STUDENTS

APLICAÇÃO DA APRENDIZAGEM BASEADA EM PROJETO NO CURSO SUPERIOR DE ADMINISTRAÇÃO: CONTRIBUIÇÕES NA APRENDIZAGEM, DESENVOLVIMENTO DE HABILIDADES E FORMAÇÃO PROFISSIONAL DOS ALUNOS

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ABSTRACT

The present study aims to identify what are the contributions of the application of the active methodology, Project Based Learning (PBL) in the learning, in the development of abilities and in the professional formation of the Bachelor of Business Administration students. A qualitative empirical study was carried out, through an open questionnaire, which generated a corpus of textual analysis treated by the content analysis technique. Altogether, 19 students participated in the study who developed the PBL methodology in the semester. Among the main results, it is observed that there were contributions from the PBL to the students' learning in the conceptual, procedural and attitudinal areas of the discipline. As for the development of skills by students, all those listed in previous studies were developed during the process, however, the most recurrent were: Communication; Team work; Planning/Organization; Make decisions; Problem solving; Interpersonal relationship. In addition, it was also possible to confirm the positive impact on the student's professional training, preparing him for the job market. The study contributed to validate the contributions that the use of the PBL methodology has, especially in the teaching of business, especially in subjects with a theoretical scope.

Keywords: Active Methodologies. Project Based Learning. Skills. Learning.

RESUMO

O presente estudo tem como objetivo identificar quais são as contribuições da aplicação da metodologia ativa, Aprendizagem Baseada em Projetos (ABP,) na aprendizagem, no desenvolvimento de habilidades e na formação profissional dos alunos em curso de Bacharel em Administração. Realizou-se estudo empírico qualitativo, por meio de um questionário aberto, que gerou um corpus de análise textual tratado pela técnica de análise de conteúdo. Ao todo participaram do estudo 19 alunos que desenvolveram a metodologia ABP no semestre. Dentre os principais resultados, observa-se que houve contribuições da ABP para a aprendizagem dos alunos nas áreas conceituais, procedimentais e atitudinais da disciplina. Quanto ao desenvolvimento de habilidades pelos alunos, todas as listadas em estudos anteriores foram desenvolvidas durante o processo, porém, as mais recorrentes foram: Comunicação; Trabalho em Equipe; Planejamento/Organização; Tomar Decisões; Resolução de Problemas; Relacionamento Interpessoal. Além disso, também foi possível confirmar o impacto positivo na formação profissional do aluno, preparando-o para o mercado de trabalho. O estudo contribuiu para validar as contribuições que a utilização da metodologia da ABP possui, em especial no ensino da administração, principalmente em disciplinas com escopo teórico.

Palavras-chave: Metodologias ativas. Aprendizagem baseada em projetos. Habilidades. Aprendizagem.

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1 INTRODUCTION

With the changes arising from the digital transformation, the educational scenario becomes more complex, demanding changes in the teaching-learning process (BENDER, 2014), demanding practices aimed at the development of autonomy that allows making decisions in a creative and fulfilling way with the use of technology (MORAN, 2017). Digital convergence had an impact on the conception of the cognitive process and the acquisition of knowledge, which combined with the economic and technological reality created innovative methods in the teaching process (BENDER, 2014; PASQUALETTO et.al, 2017).

The need imposed by this new reality has directly affected student training, including higher education students, thus questioning both the methodologies used and their efficiency in connecting with the demands required by the job market (FLINT, 2007). The fact is that traditional teaching methods based on a content and technical training are still adopted, with some recurrence (COLARES; OLIVEIRA, 2018).

As a way of adapting the teaching-learning process to innovations and market demands, it is proposed to apply strategies based on active learning (COLARES; OLIVEIRA, 2018; OLIVEIRA F.; OLIVEIRA D.; FERNANDES, 2020). One of these methodologies is Project-Based Learning (PBL), which in its dynamics encourages the cooperative participation of students while developing the ability to solve real problems through interactivity with technology (BENDER, 2014).

The use of the Project-Based Learning (PBL) methodology and its investigation in the scientific field, in addition to being a recurring theme, have been applied in several areas of higher education such as: engineering (KOLOSKI et.al, 2019); Physics (PASQUALETTO et. al, 2017) Accounting (AZEVEDO; ARAUJO; MEDEIROS, 2017) and Administration (NEUMMAN, BORELLI, OLEA, 2016; SANTOS; 2020). In all the studies cited, there were indications for continuity in the investigation of methods as a contribution to the educational process.

Based on this context, the Bachelor of Business Administration course still needs more inclusion of active methodologies in the course curriculum, in particular, project based learning (NEUMMAN, BORELLI, OLEA, 2016). From this perspective, active methodologies are used in order to "bring the student to the center of the educational process" (PASQUALETTO et al, 2017, p.551), making him responsible for his own learning.

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However, it is necessary to understand in a more comprehensive way the contributions of the use of this methodology in higher education.

Therefore, the problem that guided the research was: How does the application of PBL contribute to the process of learning and developing skills of students in a Bachelor of Business Administration course? Thus, the general objective of the work was to investigate the contributions of the application of PBL in learning and in the development of skills, in particular, the way they can be incorporated into the teaching of administration (NEUMMAN, BORELLI, OLEA, 2016).

As an academic contribution, the study will allow us to discuss the benefits of applying active methods in the teaching of administration. Furthermore, from a practical perspective, it will make it possible to see in what ways the project-based learning methodology can contribute to the development of proactive, social professionals (BERBEL, 2011), prepared to work in a technological environment (BENDER, 2014) and transform the reality that are inserted (BACICH; MORAN, 2017).

2 LITERATURE REVIEW

2.1 PROJECT-BASED LEARNINGS

Project based learning is an active methodology. Active methodologies aim to develop "meaningful learning" (DIESEL; BALDEZ; MARTINS, 2017, p.284), and this occurs when we motivate students intimately (MORAN, 2018), namely, the learning starts to make sense to the students. The student, becoming the center of the educational process, not just receiving, but giving him an active role in all dynamics (FREIRE, 2007; BERBEL, 2011; BACICH; MORAN, 2018; DIESEL; BALDEZ; MARTINS, 2017). The result is the formation of a more critical and interested student, ready to contribute effectively socially and professionally (MORAN, 2015).

Project based learning (PBL) is based on the assumptions of constructivist theory. Teaching is carried out in conjunction with factors that allow the student to build knowledge through investigation and interaction with the environment (PIAGET, 1988; PASQUALETTO et al, 2017; AZEVEDO; ARAUJO; MEDEIROS, 2017; SANTOS (2020)).

The PBL's proposal is to offer the student a challenge through a project applied to reality, directed by a problem or task, which for solution will need to integrate theoretical knowledge, teamwork and technological development (BENDER, 2014; MORAN, 2018).

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The methodology denotes an action in the sense of solving a problem and not just knowing the objects, reiterating what Piaget (1988, p.229) said: "By acting is what one learns", highlighting the constructivist bias of the methodology.

The Project based learning methodology is looking for a real problem and developing a project to solve it. This process favors the integration between theory and practice (NEUMANN, BORELLI, OLEA, 2016; SANTO; 2020), incorporates interdisciplinary issues (BACICH; MORAN, 2018) and the development of knowledge, skills and attitudes (AZEVEDO; ARAUJO; MEDEIROS, 2017). This combination of factors has proven capable of involving students in investigations that transcend the limits of the classroom, even contributing to the community in which they are inserted (BENDER, 2014).

As a learning methodology, three potentialities can be highlighted in this practice. The first, according to Bender (2014, p.15), refers to training the ability to solve a daily problem, which is "highly motivating" for the student, since the solution will depend on the decisions adopted by them. Freire (2007) states that the challenge generated by a problem is a propeller for learning, especially in the case of adult education.

The second possibility that the methodology offers is to develop or improve skills and competences, especially those related to "critical and creative thinking and the perception that there are several ways to carry out a task" (MORAN, 2017, p.10). Pasqualetto et al. (2017) also adds that the PBL contributes to the development of social responsibility, the use of technological tools and the transposition of knowledge in different contexts.

A third potential or differential of the PBL is the development of projects that portray reality and whose solution depends on interdisciplinarity. In fact, most projects need the articulation of several disciplines or knowledge for their elaboration, this favors the student to understand the relationship between the disciplines and enabling him to be able to correlate various types of knowledge, ensuring better decisions (MORAN, 2017; BACICH; MORAN, 2018).

But for the project to really reach its potential in terms of active methodology, according to the Buck Institute for Education (BIE, 2008, p. 8), it is necessary to think about the project effectively. For that, some factors need to be taken care of: awaken the student's impulse or motivation; having a discipline as a guideline for the development of the central concepts of the project; create probing questions; require specific technological tools and skills; focus the result on a product that solves the problem; plan deliveries of multiple

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products that can be evaluated; to measure based on performance; and finally, promote cooperation.

The results of applying PBL as an active practice has been promising in the teaching learning process, which is what Azevedo, Araújo and Medeiros (2017, p.170) concluded, citing as benefits the development of critical and creative thinking and the development of knowledge, skills and attitudes of the students involved in the intervention. Neumann, Borelli and Olea, (2016, p.13) concluded that "learning by projects is a teaching approach with high levels of student involvement and performance", a conclusion similar was founded by Kosloski et.al (2019) who reported that the use of PBL provided the integration of technical and human aspects during the project. More recently, the results of the research by Santos (2020) showed the students' engagement in the project and how they sought solutions that integrated the data obtained from the investigation.

All results confirm the studies by Bender (2014) on the benefits of the methodology. However, it is still necessary to multiply the practice, through new research that addresses the implementation and/or empirical studies, enabling a better understanding of its contributions (PASQUALETTO et al, 2017).

3 RESEARCH METHODOLOGY

The present work proposes to investigate the contributions of the application of active methodologies, specifically of Project-Based Learning (PBL) in learning, in professional training and in the development of students' skills. The methodology was applied in the Fundamentals of Leadership discipline, of the bachelor's degree in Administration, being participatory research, of a practical or applied nature, and with a qualitative approach (LAKATOS E MARCONI, 2009). The project referring to this research was sent to the Research Ethics Committee of the Federal Institute of Education of Espírito Santo (CEP/IFES) and approved under Opinion No. 4.282.958.

The research sample is non-random, as the participants were students of the 7th period of the higher course in Bachelor of Administration. In all, 19 (nineteen) students participated, who developed the methodology. The semi-open questionnaire was used for the research, that is, it presented a mix of open and closed questions. But for this research, only open questions were used, except for question 5, which does not apply to the objective of this study.

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The questions were built based on the researched literature, to verify the learning, it was used as a basis for the theory about the contents, according to the studies of Coll (1997) that presents a vision of the concept of content, understanding it as everything that the student must learning for a complete development, based on three types of basic content: conceptual, procedural and attitudinal.

For questions related to the development of skills, a list was proposed based on the results found in studies by BIE (2008), Bender (2014), Moran (2014), Neumann, Borelli and Olea (2016) , Azevedo *et.al* (2017) and Santos (2020) , who have skills found in their studies and which will be used for ratification in this instrument.

The content analysis technique was chosen for the analysis and interpretation of data, as it seeks to discover the core of meaning that make up the communication, as well as the frequency of its appearance (BARDIN, 2011, p.49). The technique is organized in three stages: 1) pre-analysis 2) exploration of the material and 3) treatment of the results, inference and interpretation and later, realization of the regrouping in classes or categories. The first phase refers to the tabulation of all the responses of the interviewees, followed by fluent reading and the choice of indexes or categories in line with the research objective. In the second stage, a codification was proposed, for each category in line with the theory, considering the text clippings in record units and their classification in blocks. And finally, in the third stage, the treatment and interpretation of data was carried out based on the theory of learning, PBL and previous studies.

4 RESULTS AND DISCUSSIONS

The results achieved through the respondents' answers to the open questions of the survey will be presented below. The data were compared in order to identify the coherence between the results of this research and those found in previous researches.

4.1 LEARNING FACTOR

To assess whether the application of the Project Based Learning (PBL) methodology contributed to the participants' learning, the theoretical model of learning content was used as a basis, which relates effective learning to three aspects: procedural, conceptual and attitudinal (COLL, 1997; ZABALA, 1998).

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For the analysis of questions 1 to 3 of the questionnaire, the following categories were adopted: Contributions in Concept Learning; Contributions to the Learning of Procedures and Contributions to the Learning of Attitudes. The coding used within each category was based on the respondent, which will be identified by the R, with a total of 19 respondents. It is important to note that only one of the respondents did not justify any of the answers (R8) and some have not done so alternately on some issue.

The category Contributions in Concept Learning indicates whether the methodology contributed to the learning of contents considered as conceptual which, according to Coll (1997), include: facts, concepts, principles, contents and rationalizations. In general, the answer was positive, only one student (R2) considered that there was not.

The students' answers (R1; R3; R13; R16; R18) indicate that the methodology helped to obtain the theoretical basis to carry out the application in practice, allowing a deeper understanding of the concepts of the discipline. In the view of other students (R4; R11; R12), the PBL allowed an effective understanding of the content and facilitated the understanding of the concepts studied, since first the project was based on a series of conceptual and explanatory content on the topic (R13). According to BIE (2018), the PBL aims to study relevant content, allowing them to be investigated in a broad way. All these facts complement the results of the studies by Santos (2020), where students pointed out that through PBL, it is possible to do applied work, a fact that enriches the study of the discipline.

It was also possible to verify that with practice, the students (R5; R9) reported that they were able to more easily retain and learn the concepts in depth. In fact, two respondents (R14; R15) made a comparison between the methodologies, showing that the active methodology allowed a greater absorption of knowledge, which would not have occurred, in the view of the respondents, if the traditional methodology had been used. This happens according to Diesel, Baldez and Martins (2017) because in the active methodology the student takes an active role, since it is necessary to research, reflect and discuss, leading them to the production of their own knowledge and autonomy in the search for solutions (BERBEL, 2017). 2011).

Another factor considered as a contribution, according to a respondent (R7), is that the methodology induces the student to make an effort to research the contents more, having as justification the delivery of a quality product, through the project offered to the community. This proves that PBL has been able to involve students, encouraging them to go beyond

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academic knowledge, as it provides students with motivation and commitment due to the project they are executing (BENDER, 2014; PASQUALETO *et.al* , 2017), making students see meaning in work (SANTOS, 2020).

Table 1 Contributions to the learning of conceptual content

CATEGORY: Contributions to Concept Learning	
Definition: In this category, the contribution of the methodology to the learning of the conceptual dimension must be identified, referring to the contents provided for in the curriculum. Check if it allows the student to understand "what one should know" (COLL, 1997).	
Codification	Verbalizations
Theory	R1 - it was possible to experience in practice the professional reality that we learned in theory. R2 - In the theoretical part, I believe that the methodology has not made much difference in learning. I don't see any other way to learn the theory if not through traditional methods such as reading and in the discipline it was no different. R13 - helping us to have a good theoretical basis before putting it into practice. R18- The projects demonstrate in a practical way what theory teaches us.
Concepts	R3 - The methodology was significant, as it helped to understand the concepts of the discipline in a more practical and in-depth way. R4 - the concepts of leadership are practical matters that happen in the course of daily activities. The concepts learned were well embedded in points where we need to use. R5 - because we are in practice, we are able to store the concepts more easily. R12- The applied methodology facilitated the understanding of the treated concepts.
Contents	R7 - I learned a lot by researching the contents that I am already applying in my organization. As we will have to deliver a work to the Institution's external public, we instinctively fight to provide higher quality content. R10- in parts I missed better developed content. R11- Experiencing in practice what was applied in the classroom allowed an effective understanding of the content studied, as it brought us closer to reality. R13 - First, the project was based on a series of conceptual and explanatory content on the topic. R15- since the project "forces" the student to learn the content. R-19- helps us learn and understand the content better.
Knowledge	R9 – The teacher provided guidance on the contents and, having knowledge of them, I was able to learn in depth by putting it into practice through the project. R11- The course provided a broad knowledge about the content studied. R14- The use of this methodology provided me with a better knowledge R15- I absorbed a lot of knowledge through the methodology, I imagine it would not be big if conventional methodology was used. R16- because it helps to improve the knowledge of the content covered.
Strands	R12- It made us see leadership and its aspects in a clearer and broader way.
Methodology	R14- because the methodology gave another view, and the learning became more interesting. R17- I found the methodology very interesting and dynamic.

Source: Prepared by the author

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Regarding the category Contributions in Learning Procedures, the objective was to identify whether the PBL methodology contributes to the learning of the necessary procedures in the context of the subject studied, which includes learning and developing the: "rules, techniques, skills, abilities and strategies in the execution of actions" (ZABALA, 1998, p.43). And as a general response from the respondents, all considered "yes", that is, there were contributions, as observed in table 2.

Table 2 Contributions to the learning of procedural contents

CATEGORY: Contributions to Learning Procedures	
Definition: In this category, the contribution of the methodology to the learning of the procedural dimension must be identified, that is, practical evidence of the methods. Check if it allows the student to understand "What one should know how to do" (COLL, 1997).	
Codification	Verbalizations
Practice	R2 - At this point of practical learning, the method was very efficient. R3- The methodology contributed to a more practical learning, as we work with leaders and as teams. R5- The theory was applied in practice, and with that we already have experience for the market. With the acquired experience we can grow professionally. R9- Through this methodology, I was able to identify in practice how the relationship between leader and subordinate works and the possible difficulties that may arise. R10 – in the practices, it was possible to perceive some learnings. R12- The contents covered through the methodology facilitated the daily practice of the concepts. R13-Because after explaining the theoretical content, I was able to apply it in a practical way in the project, fixing it more and more in my mind. R14- The practical classes are very interesting for learning. R18- We were able to practice faithfully.
Application	R4- showed how discipline theory and technical issues can help leaders in solving organizational issues R6- Applied theory and practice result in better performance. R7- Where there is more dedication, there is more learning. I was able to apply a lot of my organizational environment.
Methods and Skills	R4- I realized the importance of establishing a plan and following some methods of solving activities. The project helped the interpretation of some tasks and the establishment of deadlines for them; R9 - - Through the opportunity to practice the contents, I was able to develop new skills. R13- In addition, I was able to learn several new learning techniques and methods. As the project was done with the whole class, which made us practice group work, leadership, empathy, proactivity. R17- I found the methodology very interesting and dynamic.
Experience reality	R2- He delivered the power of the organization into the hands of the students, without leaving them abandoned, and made them live reality as it should be. R11 - By putting the theoretical content into practice, I experienced situations that I would never have imagined witnessing in theory. R19- because we had several examples of our daily lives and we carried out an activity as a team, which required us to practice as if we were within a work group.

Source: Prepared by the author

According to the justifications of the respondents (R2; R3; R4; R9; R10; R12; R13; R14; R18), most of them cited as a contribution the possibility that the methodology provides for a more practical learning, that is, allowing that identify the techniques and procedures necessary for the action to take place, including being able to apply them during the project. This same result was highlighted in the research by Santos (2020) showing that PBL provides the experience of applying content in a project and encouraging students to develop solutions.

The issue of the possibility of gaining experience for the market was also mentioned (R2; R11; R19), highlighting the possibility of professional growth through an environment that provides a practical experience of situations, which would not be possible, according to the student, working the content only in theory. This data was also proven in the study by Azevedo, Araújo and Medeiros (2017) who reported a positive result in relation to professional practice, since PBL favors the development of professional skills.

According to some respondents (R4; R7; R9; R13) it was possible to learn and develop techniques, methods and skills that help to resolve organizational issues. In fact, some applications of this learning are already being developed in the organizational environment in which they are inserted. PBL is indicated as one of the best methodologies to stimulate the development of skills (BENDER, 2014; AZEVEDO; ARAUJO; MEDEIROS, 2017), as it is considered as a "teaching approach with high levels of student involvement and performance" (NEUMANN, BORELLI, OLEA, 2016, p. 13).

Finally, in the learning factor, the category Contributions in Learning Attitudes was analyzed, in which the objective was to identify whether the PBL methodology offers any contribution to the student's personal learning, in the sense of learning values, attitudes and norms (COLL, 1997). In this category, most respondents considered that there were contributions, but one respondent (R11) no considered it, and another (R17) answered that only in parts, as shown in Table 3.

Most justifications (R2; R3; R7; R9; R11; R14; R15; R16) focused on the possibility of learning or developing some kind of attitude. It allowed them to do a self-analysis and work on some points such as: team spirit, assertive conversations, making decisions, reflection, thinking about others, respect, relating to people and how to behave in relationships with bosses, that is, it helped how to position oneself in society. Some of these attitudes were also found in the study by Azevedo, Araújo and Medeiros (2017) being highlighted by them: commitment, proactivity and respect for the opinion of others.

Table 3 Contributions to the learning of attitudinal contents

CATEGORY: Contributions to Learning Attitudes	
Definition: In this category, the contribution of the methodology to the learning of the attitudinal dimension must be identified, that is, it involves not only the behavioral aspect, but also includes socio-moral values, skills, attitudes and norms. Check if the student was allowed to understand "How it should be" (COLL, 1997).	
Codification	Verbalizations
Behavior	R3- also helped to develop team spirit and characteristics of a leader. R7- And through this study, I realized that I had to learn to delegate more in my work environment. "I, as a manager, used to do a lot of things that didn't apply to my role, now I'm giving other members of my team the opportunity to learn new things and stand out". R14- This learning made me open my mind more to deal with my bosses, relationships with people, among others. R15- I believe that the discipline demonstrated how to behave towards society, until then being one of my main deficiencies. R16- It helps how to position yourself in such events and projects. In parts, it has a lot of content to be explored, studied and absorbed for personal learning.
Attitudes	R2 - Having to deal with different people and making decisions in partnership was of great importance to develop the ability to work in a group. R3- since it was a new way to develop my communication, learn to deal better with colleagues, and talk to people I didn't have much contact with before. R9- It allowed me to communicate in a more assertive way. R11- It helped me to make decisions and allowed me to think more carefully about each subject studied. R12- It changed my perspective on several concepts, allowing me to improve in some aspects and develop skills that were, until then, intrinsic. R18- It served as a "laboratory" to simulate a leadership position.
socializing	R3-Because I have worked as a team, I believe that my social life has improved. R4- We verified how we should be attentive to deadlines and social interaction. R5- what was learned will be taken to our personal life and especially to our workplaces. R13- We practice many other values that are very necessary for a good social life. R17 - The methodology teaches us a group dynamics, a very interesting experience. R19- because it was necessary to act in this methodology as a work team, which improved our social life

Source: Prepared by the author.

The methodology promoted, according to the reports (R7; R11; R12), an inner reflection, making it possible to think more carefully about each subject studied and even change the perspective on various concepts (values) providing a basis for improvement when

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being human and skills that, according to the student, were intrinsic until that moment. These statements are in agreement with what Zabala (1998, p. 47) reports as necessary for attitudinal learning to take place, the student needs to link what was experienced in an affective way, establishing relationships that will lead him to internalize and reflect on the values involved . . And this is what the PBL does, through the project it is possible for students to go through a process of review and reflection (BIE, 2018).

Another topic addressed in the justifications (R3; R4; R5; R13; R17; R19) was the contribution to improving social life, since it was possible to practice values that are necessary for a good coexistence. It is observed that the way some see the environment and relationships was positively impacted, bringing changes in attitudes. According to Moran (2017) active methodologies with projects, in the case of PBL, are the basis for the beginning of a process of change, which causes a sensitization of the student in order to involve him more deeply.

4.1.2 Professional Training Factor

In question 4 of the form, students were asked how the methodology contributes to their training as future administrators. In general, everyone agreed that there are contributions to professional training; the justifications can be seen in table 4.

The answers demonstrate the impact that the PBL methodology had on their training as professionals, especially in the development of skills and abilities, in their experiences and in their professional growth.

In relation to new competences, skills and attitudes learned, the following can be mentioned (R2; R3; R4; R10; R11; R16): Group management, ability to make decisions, socialization, teamwork, effective communication, organization, planning, commitment, knowing how to listen and self-assessment. All of these listed by the respondents are characteristics that the administrator needs to have when entering the job market. Ratifying that one of the benefits provided by PBL is the ability to stimulate the student, serving as an interface for students to develop and explore their skills (BENDER, 2014). Other studies also found similar results, such as Santos (2020) found that group work and commitment are positive aspects of the methodology.

As a contribution, the factor considered here as experience and experience was also listed, because according to them (R1; R5; R6; R8; R11; R12; R17; R19) the discipline can be practiced, through the exchange of experiences made possible with teamwork, and this is of

great contribution, leaving the student one step ahead of those who have not experienced the methodology. According to Freire (2008) and Berbel (2011) one of the factors that drive learning is the construction of knowledge from the student's previous experiences, serving as a preparation for future professional practice, stimulated by the application of active methodologies, in this case, the ABP.

Table 4 Contributions to professional training

CATEGORY: Contributions to Vocational Training	
Definition: In this category, the contribution of the methodology to the professional training of students in the area of administration should be identified.	
Codification	Verbalizations
Competencies, Abilities and Attitudes	R2 - Group management, ability to make decisions together and development and division of activities. R3- Teamwork, improved communication, characteristics of a leader, socialization. R4- Organization, planning, deadlines, dialogue and enlightened conversation and commitment to solving activities. R10- We learn to work in a group. R11- It allows you to develop skills from the beginning that an administrator must have when entering the job market R16- Knowing how to listen to the other; understand the situation/problem before making any decision; Self-evaluation.
Experience and Living	R1 - Learn in practice how leadership works. R5- All learning helps for our future, this stage had a great contribution. R6 - It depends on what actions will be taken post-learning. Overall I find it beneficial. R8- Because by participating in a project you exchange experiences with other people and learn more. R11 - The administrator who has practical experiences regarding a given situation is one step ahead of one who does not. R12- Dealing with the topic of leadership through the methodology facilitated the practical understanding of the concepts, which consequently contributed to my training as an administrator. R17- the methodology allows us to dialogue, to live our experiences. R19- Because we carry out the work as a team and in the future in a company I will need this knowledge to work in a group.
Professional growth	R7- It will contribute a lot to my training as an administrator and is also already contributing to my growth in my organizational environment. R9- The course offered through this methodology brought several contributions to my training, since the contents developed are very relevant to my area and learning about them in practice was a great differential. R13- I was able to learn everything that a future administrator needs to know about the act of leading and even put this into practice in a project whose objective was to pass this on to other administrators. R14- The subject was Leadership and the project was entirely about that. R15- It contributed a lot, because I have other views than the administration after this learning method. R18- Provides some basis.

Source: Prepared by the author

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And another field that the methodology collaborated with the students was to allow a growth or maturation in professional issues, most of them already work in the administrative area, so according to the student (R7) the contribution is already immediate, as it helped him in the growth of the current organizational environment, and according to (R15) also contributed new views on the management profession. Still, in this context of professional learning, it was reported (R9; R13; R14) the relevance of the contents that were worked and practiced, which is a great differential, especially with regard to leadership, the subject studied. The reports corroborate the study by Azevedo, Araújo and Medeiros (2017, p.169) indicating that "PBL provided a learning environment focused on relevant and current issues of society and companies, that is, problems related to professional practice".

It can be said that the success of the teaching and learning process lies in being able to prepare students for the problems that may arise in professional life (KOLOSKI et.al, 2019), and according to the results obtained here, it is inferred that the PBL corroborates with the preparation of the professional future by developing skills, abilities, attitudes and allowing them to experience similar experiences to those that occur in the job market, preparing them for how to act in certain situations.

4.1.3 Skills Factor

Another objective of the study was to investigate the contribution of the PBL methodology to the development of skills in students. Question 6 provided a list of 10 (ten) skills, already identified in previous studies, and asked them to indicate which of them were developed or improved by them during the practice of the methodology.

In this regard, all participants were unanimous in considering that PBL contributes to the development or improvement of skills. According to the interviewees, all the skills listed were developed or improved throughout the process, and some were more recurrent than others, as can be seen in table 2.

The communication skill was considered by most students, in a total of 15 (fifteen), as the most developed skill during the application of PBL. In the work of Azevedo, Araújo and Medeiros (2017), it was listed as the 4th benefit of using PBL, because according to the students, the methodology favors communication skills, a fact also confirmed by Neumann, Borelli and Olea (2016) and by the BIE (2008).

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Table 2 Skills developed in the PBL

ABP Skills Development		
Skills	**Recurrence**	**Percentage**
Communication	15	78.9%
Team work	14	73.7%
Planning / Organization	12	63.2%
Make decisions	12	63.2%
Problem solving	11	57.9%
Interpersonal relationship	11	57.9%
Use of technologies	9	47.4%
Critical Thinking	6	31.6%
Creativity	6	31.6%
Logical reasoning	5	26.3%

Source: Prepared by the author

In this research, teamwork was learned or improved by 14 (fourteen) students, being the second most developed skill among students. In other studies, teamwork was considered the most used and developed skill in PBL. For example, in the study by Azevedo, Araújo and Medeiros (2017), according to the students, teamwork was considered the main skill developed. As in the study by Santos (2020), in the students' perception, group work is the most positive aspect of the methodology.

The planning/organization and decision-making skills were identified by 12 (twelve) students as developed or improved with the methodology. Planning/organization was also present in studies by Neumann, Borelli and Olea (2016) and Azevedo, Araújo and Medeiros (2017) as a skill improved by students in their respective research. And as mentioned by Bender (2014) planning and organization are essential for successful execution in the PBL. Regarding the ability to make decisions, Moran (2017) cites it as one of the objectives of active methodologies, as students will show that they are involved in the process, a situation offered by the PBL (BIE, 2008).

The ability to solve problems and relate to others was identified by 11 (eleven) students as developed during the project. Problem solving is seen as an essential and necessary skill that PBL works (BIE, 2008; NEUMANN, BORELLI AND OLEA, 2016), because according to Bender (2014) the methodology demands that the student obtain new solutions to the problems in question. . As for interpersonal relationships, a term used in this research, but also cited as collaboration by Bie (2008) and Bender (2014), is identified as a necessary skill in PBL and is consequently developed in the process.

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Next, the ability to use technologies was verified, which was significant for 9 (nine) students. Since the scope of the project involved the use of technology, it was foreseeable that they would improve their technological capabilities. The PBL methodology has as one of the principles the use of technology, Bender (2014) is pragmatic in stating that technological resources support the practice, which results in new skills in the use of different types of available technologies.

The next skills refer to critical thinking and creativity, in this case, they were listed by only 6 (six) students as developed. Both are also confirmed, not as main ones, but are present in the studies of Neumann, Borelli and Olea (2016), Azevedo, Araújo and Medeiros (2017) and Moran (2017), as they are worked on during the project stages by the students.

Finally, with less impact, logical reasoning was considered by 5 (five) respondents as improved or developed throughout the methodology. It is understood that this result is also related to the type of project developed, which did not require much of logic, and therefore did not require this skill from the students. But it is seen as one of the skills that can be developed in the application of PBL (BIE, 2008). From this perspective, it is clear that PBL is a methodology that emphasizes the development of skills necessary for the 21st century (BIE, 2008; BENDER, 2014).

5 FINAL CONSIDERATIONS

From the results found, it was possible to confirm that Project-Based Learning is still a methodology little used in teaching administration, only four students had already studied with the methodology, and all of them are only one semester away from completing the course. This shows that most teachers still use traditional teaching methods, and the inclusion of active learning strategies, especially PBL, is a challenge to guide students in the learning process (NEUMANN, BORELLI AND OLEA, 2016; DIESEL, BALDEZ and MARTINS, 2017).

In general, the results indicate that the PBL methodology proved to be effective in all aspects analyzed regarding: Learning Professional Training - Students' skills, as already observed in previous studies such as Neumann, Borelli and Olea (2016), Azevedo, Araújo and Medeiros (2017) and Santos (2020).

Regarding the contribution of PBL to the learning process, the methodology proved to be efficient, favoring the learning of conceptual, procedural and attitudinal contents, resulting

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in the student's growth and development in an integrated way (ZABALA, 1998). The data showed that the learning was clearer and deeper in the concepts and theories, allowing them to be learned more easily. At the same time, the methodology enabled practical learning and the development of new methods for solving problems. And it contributed to the students' personal affective bond, resulting in the development of attitudes such as: team spirit, assertive conversations, reflection, thinking about others, respect, relating to people and relationships with bosses.

In addition to the objectives of the study, it was possible to understand the positive impact of the methodology on the professional training of students. Due to the ABP's ability to prepare this individual for the reality of the market, helping to develop skills, abilities and attitudes through experience, making them better assimilate the peculiarities of the profession.

Ultimately, it was verified which skills students believe they have improved or developed with the help of PBL. All the skills listed referring to previous studies were found in this study, namely: Communication; Team work; Planning/Organization; Make decisions; Problem solving; Interpersonal relationship; Use of technologies; Critical Thinking; Creativity and Logical Reasoning. However, only the first six were considered developed or improved for most students. It is important to highlight that such skills are directly related to the discipline used as the basis for the project: Fundamentals of Leadership. Thus, it is concluded that the PBL contributes to the development of skills, but these will be more recurrent depending on the nature of the project worked on in the methodology.

As a limitation of the study, it is mentioned the impossibility of using the interview as research instruments, in view of the suspension in view of the suspension presential classes, classes, due to COVID-19 and the time and internet restrictions of some students. The use of the interview with the students would allow a better conduction of the questions, making the answers more directed to the proposed objective, and would not have answers without justifications, providing broader data for the study.

For future studies, it is recommended to continue research in higher education, especially in the area of administration, especially in subjects with a more theoretical profile and that require practice for a more meaningful learning. In a complementary way, based on qualitative studies, it is suggested the elaboration of a quantitative questionnaire, to measure the learning of conceptual, procedural and attitudinal contents and the degree of development of students' skills during the application of Project Based Learning.

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