

Original article

Project-based learning methodology in the subject Entrepreneurship and Management for self-learning



Metodología de aprendizaje basado en proyectos en la asignatura Emprendimiento y Gestión para el autoaprendizaje

Metodologia de aprendizagem baseada em projetos na área de Empreendedorismo e Gestão para autoaprendizagem

Erika Nicola Ordoñez¹  0009-0009-3006-9547  nicolaerika@hotmail.es

Miguel Ángel Salazar Almeida¹  0009-0007-1140-603X  msalazar5656_@outlook.es

Orvelis Alba Castellanos¹  0000-0002-7673-409X  oalbac@ube.edu.ec

¹ Bolivarian University of Ecuador. Ecuador.

Received: 7/05/2025

Accepted: 3/02/2026

ABSTRACT

Educational transformation poses new pedagogical strategies that allow the development of autonomous, critical and entrepreneurial skills in students. Therefore, this research aimed to propose a project-based learning methodology for the Entrepreneurship and Management course to improve self-directed learning among first-year high school students at the Mater Misericordiae Private Educational Unit. To achieve this, explanatory and field research was employed. This allowed for the initial establishment of the theoretical foundations of the course's teaching and learning process and the learning methodology under study, utilizing theoretical, empirical, statistical, analytical-synthetic, deductive-inductive, and historical-logical methods. Subsequently, a diagnostic assessment was conducted, employing empirical methods such as classroom observation, interviews,

surveys, and document analysis to understand the objective reality of the teaching and learning process and self-directed learning among the students. To address the stated objective, a project-based learning methodology is proposed for the Entrepreneurship and Management course to improve self-directed learning among first-year high school students. The systemic-structural and hermeneutic-dialectical methods were primarily implemented to analyze, interpret, and argue the theoretical and practical characteristics, the general structure, and the methodological steps of the methodology. Finally, the relevance and feasibility of the methodology were assessed. This assessment confirms that the didactic-methodological solution is an effective way to improve students' self-directed learning, allowing them to use it without difficulty and fostering the expected results in their learning experience.

Keywords: autonomous learning; didactics; business management; pedagogical method; process; educational project.

RESUMEN

La transformación educativa plantea nuevas estrategias pedagógicas que permiten el desarrollo de competencias autónomas, críticas y emprendedoras en los estudiantes. Por lo tanto, el presente trabajo de investigación tuvo como objetivo principal proponer una metodología de aprendizaje basado en proyectos en la asignatura Emprendimiento y Gestión para el mejoramiento del autoaprendizaje de los estudiantes del primer año de bachillerato de la Unidad Educativa Particular Mater Misericordiae. Para ello se aplicó la investigación explicativa y de campo que permitió, primeramente, la fundamentación de las bases teóricas del proceso de enseñanza-aprendizaje de la asignatura y la metodología del aprendizaje objeto de estudio, mediante el empleo de los métodos teóricos, empíricos, estadísticos, análisis-síntesis, deductivo-inductivo e histórico-lógico. Luego se realizó el respectivo diagnóstico, donde se aplicaron los métodos empíricos como: la observación en el aula de clases, la entrevista, la encuesta y análisis documental para conocer la realidad objetiva sobre el desarrollo del proceso de enseñanza-aprendizaje y el autoaprendizaje en los estudiantes. Para dar respuesta al objetivo planteado se presenta la propuesta de metodología de aprendizaje basado en proyectos en la asignatura Emprendimiento y Gestión para mejorar el autoaprendizaje de los estudiantes del primer año de bachillerato, para la cual se implementaron esencialmente los métodos sistémico estructural y hermenéutico-dialéctico que sirvieron para analizar, interpretar y argumentar las características teórico-prácticas, su estructura general y los pasos metodológicos de

dicha metodología. Por último, se logró valorar la pertinencia y factibilidad de la metodología; la misma que corrobora la alternativa de solución didáctico-metodológica para mejorar el nivel de autoaprendizaje de los estudiantes permitirá que la puedan utilizar sin ningún inconveniente y propiciar los resultados esperados en la práctica formativa.

Palabras clave: aprendizaje autónomo; didáctica; gestión empresarial; método pedagógico; proceso; proyecto educativo.

RESUMO

A transformação educacional propõe novas estratégias pedagógicas que permitam o desenvolvimento de competências autônomas, críticas e empreendedoras nos alunos. Portanto, o principal objetivo desta pesquisa foi propor uma metodologia de aprendizagem baseada em projetos para a disciplina de Empreendedorismo e Gestão, visando aprimorar a aprendizagem autodirigida de alunos do primeiro ano do Ensino Médio da Unidade Educacional Privada Mater Misericordiae. Para tanto, foi aplicada pesquisa explicativa e de campo, que primeiramente estabeleceu os fundamentos teóricos do processo de ensino-aprendizagem da disciplina e da metodologia de ensino em estudo, por meio da utilização de métodos teóricos, empíricos, estatísticos, analítico-sintéticos, dedutivo-indutivos e histórico-lógicos. Em seguida, foi realizado o diagnóstico correspondente, aplicando métodos empíricos como observação em sala de aula, entrevistas, questionários e análise documental para compreender a realidade objetiva do processo de ensino-aprendizagem e da aprendizagem autodirigida entre os alunos. Para atingir o objetivo proposto, apresenta-se uma metodologia de aprendizagem baseada em projetos para a disciplina de Empreendedorismo e Gestão, visando aprimorar a aprendizagem autodirigida de alunos do primeiro ano do Ensino Médio. Esta metodologia implementou principalmente os métodos sistêmico-estrutural e hermenêutico-dialético, que serviram para analisar, interpretar e argumentar as características teóricas e práticas, sua estrutura geral e as etapas metodológicas. Por fim, avaliou-se a relevância e a viabilidade da metodologia; isso confirma que a solução didático-metodológica para aprimorar a aprendizagem autônoma dos alunos permitirá que eles a utilizem sem problemas e promovam os resultados esperados na prática formativa.

Palavras-chave: aprendizagem autônoma; didática; gestão empresarial; método pedagógico; processo; projeto educacional.

INTRODUCTION

Education faces several contemporary challenges, including the need to transform pedagogical practices towards more active, reflective, and student-centered approaches. Rochina *et al.* (2020) state that: "through new methodological strategies, students can direct their concrete, appropriate, and fruitful activities, leading them to acquire reflective mastery of the subject" (p. 386); on the other hand, Villalobos (2022) also states that: "the focus should be on fostering the student's integral and dynamic participation in the educational process" (p. 47).

In the case of project-based learning, it is a methodological approach that relies on collaboration and consists of giving students a real-world task that interests them, which they must then solve on their own. This is confirmed by Zambrano *et al.* (2022) stated that: "educational institutions have a high responsibility in preparing human beings to integrate into society; it is necessary to review the usual ways in which teachers approach their pedagogical practice and to deepen and value new ways of proceeding" (p. 43). For their part, Hernández *et al.* (2020) stated that: "the importance of the information that can be obtained through evaluative processes and its interpretation in decision-making is to raise the quality of the teaching-learning process" (p. 11).

In several countries around the world, education is also implementing new and innovative methodologies that help students discover new facts, contributing to their cognitive development and allowing them to analyze and verify this information against reality. Loor and Alarcón (2021) indicated that: "Creative methodologies are planned processes oriented towards achieving meaningful learning in students" (p. 1), while it is true that these methodologies must be applied flexibly and dynamically to obtain positive and significant results in educational excellence.

At the national level in Ecuador, education gained momentum due to citizen demands; therefore, as time passed, the implementation of new and innovative pedagogical methodologies became noticeable, such as the flipped classroom, cooperative learning, project-based learning, and problem-based learning, among others. On the other hand, in the technical area, especially in the subject of Entrepreneurship and Management, there is a lack of methodologies that foster better self-directed learning among students. In this regard, Espinosa *et al.* (2025) explained that: "educational centers must offer information on Entrepreneurship and Management, which implies creating innovative methodologies and teaching models for those involved in this educational process" (p. 2).

In the province of Manabí, there are also many educational shortcomings. Vargas (2024) explained that: "the shortcomings or problems that arise in education are created because they lack innovative methodologies, resulting in deficient service being provided to the public" (p. 13). However, students and teachers lack methodologies, as it is evident that they are not developing their skills. This is compounded by a lack of creativity and competencies when learning. It should be noted that schools and colleges today lack effective and innovative teaching strategies that would allow them to improve teaching and learning to achieve the best results, even though society has an obligation to evolve in all areas, and education is one of them.

Jarrín (2023), in his research, states that: "The major problems that arise from not applying innovative methodologies within the classroom" (p. 99), such as the project-based learning methodology, are that many students do not assimilate the knowledge imparted by their teachers, do not generate their own knowledge, and make their classes memorize, which can lead to the student becoming bored and showing a lack of interest in the subject of Entrepreneurship and Management.

In the Bolívar canton, in the city of Calceta, is the Mater Misericordiae Private Educational Unit, which offers private education based on the Ministry of Education's curriculum. It is worth noting that the school includes first-year high school students who take the subject of Entrepreneurship and Management. In this course, teachers are required to implement innovative methodologies, particularly project-based learning. This approach aims to help students master these methodologies to address existing weaknesses in critical thinking, independent thought, and problem-solving skills.

In Technical and Vocational Education, teachers use various teaching and learning methodologies daily, but they primarily employ specific teaching methods for the subject of Entrepreneurship and Management. However, according to diagnostic assessments based on various reports, evaluations, pedagogical tests, and other studies, it has been noted that there are, albeit apparent, obstacles hindering students' self-directed learning.

The research topic addressed—a project-based learning methodology for self-directed learning in the Entrepreneurship and Management course for first-year high school students at the Mater Misericordiae Private Educational Unit—falls within the research area of pedagogy and didactics, as part of the Master's Program in Pedagogy for Technical and Professional Training at the Bolivarian University of Ecuador. This research area aims to address various educational challenges in schools

and institutions at different levels. The overall objective is to propose a project-based learning methodology for the Entrepreneurship and Management course to improve self-directed learning among first-year high school students at the Mater Misericordiae Private Educational Unit.

MATERIALS AND METHODS

The methodology for developing the research and diagnostic study was based on the application of various theoretical, empirical, and statistical methods, using a mixed-methods (qualitative-quantitative) approach. This approach allowed for the timely and effective implementation of the methodological strategy and its research stages on the topic of project-based learning methodology in the Entrepreneurship and Management course, aimed at improving the self-directed learning of first-year high school students at the Mater Misericordiae Private Educational Unit in the city of Calceta. The following methods were used for this research:

Historical-logical: it was directly applied in the execution of the historical-logical analysis of the teaching-learning process in the subject Entrepreneurship and Management for first-year high school students.

Analysis-synthesis: allowed the epistemological characterization of the teaching-learning process of the subject Entrepreneurship and Management.

Hermeneutic-dialectical: it was used for the understanding of the inquiry, the interpretation and explanation of the theoretical knowledge that was collected about the object of investigation.

Systemic structure-functional: it was applied for the development of the project-based learning methodology in the subject Entrepreneurship and Management, to improve the self-learning of first-year high school students.

Interview: directed to the academic coordination, where verified information and assessment of the learning methodology in the subject Entrepreneurship and Management was obtained.

Survey: applied to first-year high school students at UEPMM: which allowed the collection of information on the development of the teaching-learning process of the subject Entrepreneurship and Management, as well as the application of methodologies and the realization of projects.

Classroom observation: This was used to collect detailed and objective information about the teaching-learning process of the Entrepreneurship and Management subject, and to visualize the teaching performance and development of students' self-learning in the classroom context.

Documentary review: allowed to investigate and delve deeper into the didactic fact or phenomenon of the teaching-learning process of the subject *Entrepreneurship and Management*, through the review of own documents, such as the study plan and the quarterly planning of the subject.

The statistical-mathematical method: enabled the respective analyses and quantitative and qualitative evaluation of the results obtained in the diagnostic assessment of the teaching-learning process in the Entrepreneurship and Management subject and the self-directed learning of first-year high school students. Therefore, it was also used to verify the validity of the project-based methodology proposed in the research.

RESULTS

Diagnosis of the current situation

The results obtained from the interview with Jessica Romero, M.Sc., were positive. In the interview, she answered various questions, revealing that the Entrepreneurship and Management course is taken by first, second, and third-year high school students that the course is taught by one teacher, and that four hours of instruction are given per week for each course.

Regarding the innovation of methodologies, the institution trains its staff to adapt these methods and teaching approaches to improve the learning and teaching process for both teachers and students. Furthermore, it was stated that the knowledge acquired is suitable for students to face the realities of the workplace, and their high level of competence is valued, which is why there is currently competition at the technical and vocational training levels.

Within the microcurricular plan designated for the 2023-2024 academic year, which is quarterly, the following information is presented: the subject, the disciplinary learning objective, and the learning outcome. This plan was developed by the subject teacher, taking into account the guidelines of the Ministry of Education. It also includes the performance-based skills, encompassing all the topics to be covered during the quarter, which in this case focus on the first stage of a business plan. Furthermore, the assessment indicators, which allow for the evaluation of knowledge, are presented.

On the other hand, the active methodological strategies for teaching and learning are also included, where each of the activities can be observed through the methodologies that will be carried out during the teaching-learning process of the first-year high school students at this institution. Finally, each of the activities that will be carried out to fulfill these strategies is indicated; in this case, several techniques are considered: brainstorming, consultations, observation, group and pair workshops, and games.

The analysis of the teaching and learning process in the Entrepreneurship and Management course for first-year high school students revealed that the teacher proposes didactic situations, has a strong command of the subject matter, and adheres to the curriculum plan; that is, the lesson plans. It was observed that the students understand the material presented by the teacher in class; furthermore, observation indicated that they are satisfied with the methodology used. On the other hand, neither teachers nor students have all the necessary materials and equipment to carry out the entrepreneurship projects, which causes frustration among the students when implementing their business ideas.

To carry out the diagnosis of the research work on the project-based learning methodology in the subject of Entrepreneurship and Management, and its impact on the level of self-learning in the first year of Baccalaureate students of the Mater Misericordiae Private Educational Unit, located in the province of Manabí in the canton of Bolívar in the parish of Calceta, a non-probabilistic, intentional sample was applied consisting of 20 students, a teacher of the subject of Entrepreneurship and Management and six authorities that are part of the UEPMM.

However, the main difficulty observed is the lack of materials and equipment for developing entrepreneurship projects, which is causing dissatisfaction among students. This has been confirmed by survey data, which shows that 15% of students are indifferent or disagree with the Entrepreneurship and Management classroom project. This type of dissatisfaction is causing a degree of student demotivation, which limits their opportunities for active participation, their sense of ownership, and their autonomy in carrying out actions related to their own learning process in this subject.

Significantly, it was noted that 50% of first-year high school students in the Entrepreneurship and Management course struggle to come up with a business idea. This indicates that the requirements of project-based learning methodology should be implemented more effectively and systematically.

This will strengthen students' self-directed learning and help them develop clearer and more in-depth ideas for potential businesses.

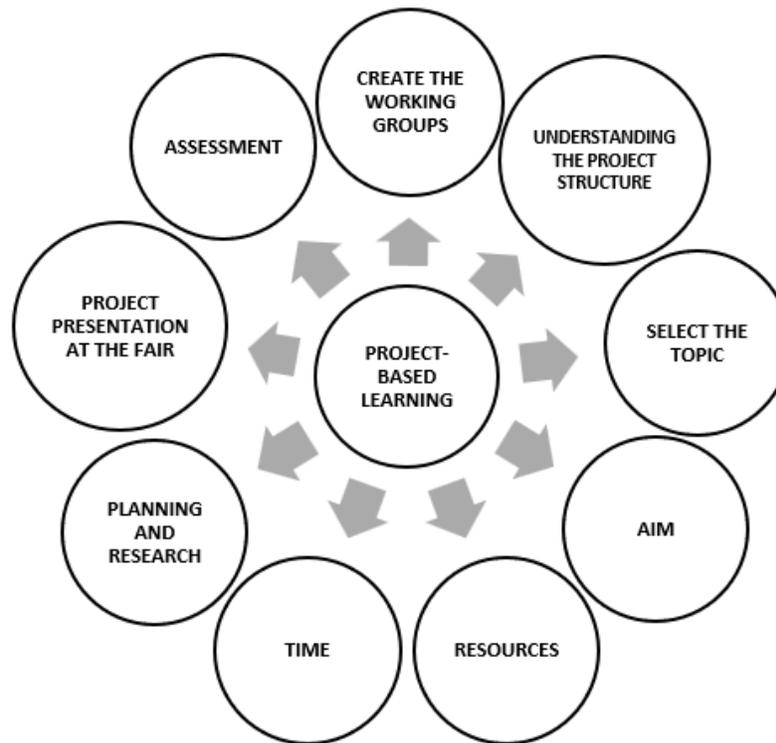
Ninety-five percent of the students indicated that they understand the type of methodology used by the teacher. This is a positive sign, but the goal is always for the knowledge to reach 100% of the students, which is where project-based learning can be implemented.

Taking a general look at the diagnostic results, it can be seen that there is a good dynamic in the teaching-learning process of the Entrepreneurship and Management subject at the Mater Misericordiae Private Unit, with adequate interaction between teacher and students; however, there is still a percentage of first-year high school students who have some difficulty understanding all the indicators and objectives of the subject, which reflects that they do not show an adequate development of the level of self-learning, for which there is a need to make an adjustment to the didactic planning.

Project-based learning methodology in the subject of Entrepreneurship and Management to improve self-learning in first-year high school students at the Mater Misericordiae Private Educational Unit

To carry out the teaching-learning process based on the project-based learning methodology, it is proposed that a project be executed where a product or service is developed and that this can be marketed; in such a way that a business plan is essential that allows students to know the entire production and marketing process in order to obtain a profitability from it.

To this end, the implementation of project-based learning methodology is proposed. Graph 1 illustrates the series of steps involved in implementing this methodology for the Entrepreneurship and Management course. These steps are key to fostering self-directed learning among first-year high school students at the Mater Misericordiae Private Educational Unit.



Graph 1. Steps for the implementation of the project-based learning methodology

Assessment of the feasibility and relevance of the project-based learning methodology in the subject of Entrepreneurship and Management to improve self-learning in students of the Mater Misericordiae Private Educational Unit

To carry out this research, it is necessary to gather information on evaluative criteria regarding the feasibility and relevance of the proposed project-based methodology for improving teaching, learning, and self-directed learning among first-year high school students in the Entrepreneurship and Management course at the Mater Misericordiae Private Educational Unit. To this end, this survey questionnaire was administered to a group of eight individuals, comprising the school's leadership team (seven students and one teacher), who were key to the development of this activity. The results will allow for the implementation of an optimal methodology that will yield positive outcomes for the students.

The results obtained from the survey are shown in the following tables (Table 1 and 2) and figures (Figure 1 and 2).

Results of the survey applied to the authorities and teachers of the Mater Misericordiae Private Educational Unit

Table 1. Numerical values

	Scale values				
	1 (Not suitable)	2 (Not very suitable)	3 (Adequate)	4 (Quite Adequate)	5 (Very suitable)
I	-	1	2	4	1
II	1	-	2	3	2
III	-	-	4	3	1
IV	1	1	2	3	1
V	-	-	4	3	1

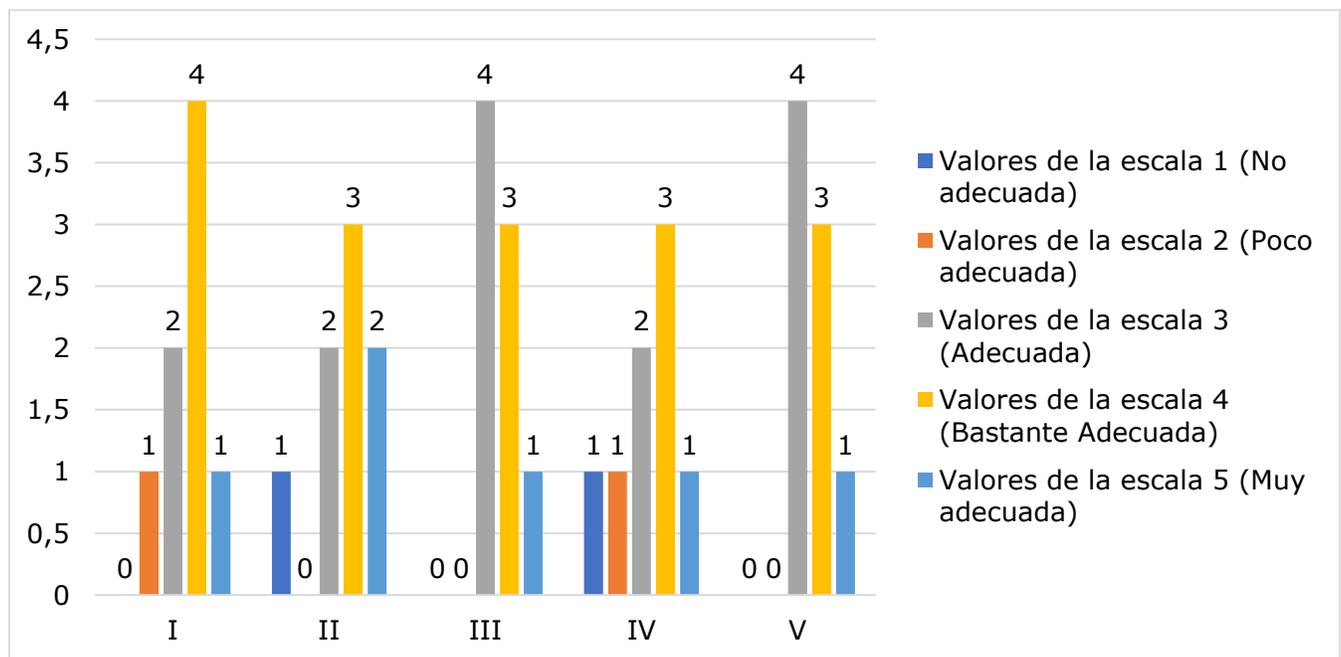
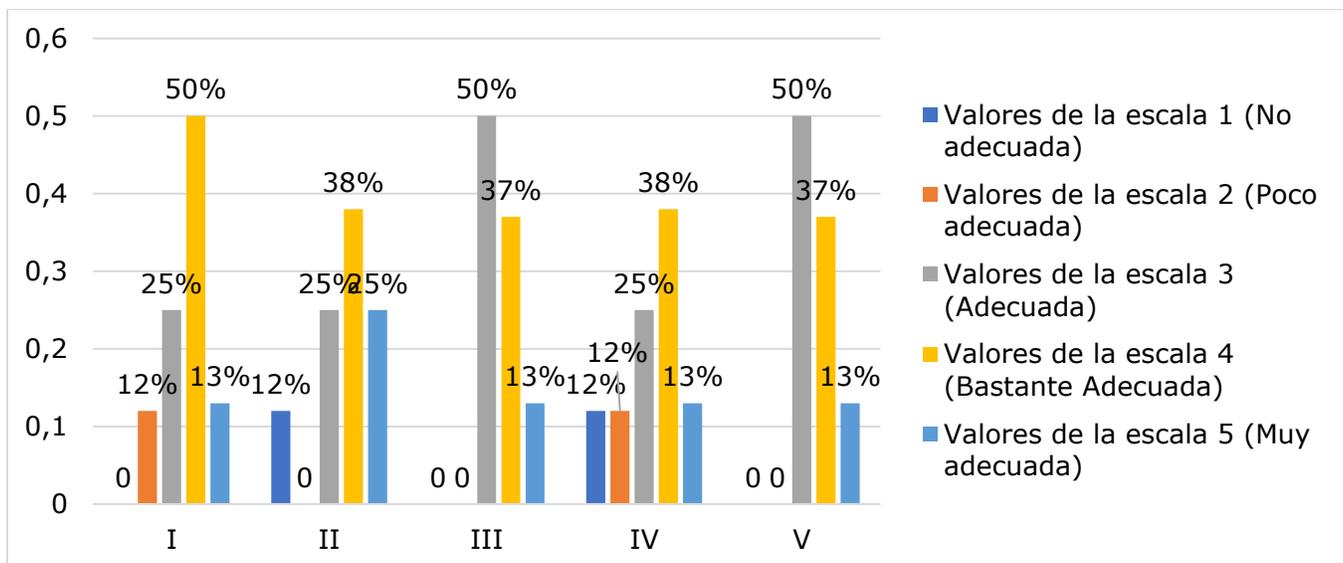


Figure 1. Numerical values

Table 2. Percentage values

	Scale values				
	1 (Not suitable)	2 (Not very suitable)	3 (Adequate)	4 (Quite Adequate)	5 (Very suitable)
I	-	12%	25%	50%	13%
II	12%	-	25%	38%	25%
III	-	-	50%	37%	13%
IV	12%	12%	25%	38%	13%
V	-	-	50%	37%	13%

**Figure 2.** Percentage values

It is important to understand the evaluation of project-based learning methodology by assessing whether its offerings align with the structure and whether the steps are coherent, after applying these questions. Seven people, representing 88% of those surveyed, indicated that they believe implementing this methodology is appropriate, as it will allow students to acquire better knowledge and be more effective in the business world and in everyday life.

Following the established format, participants were asked if the proposed project-based methodology for improving the teaching-learning process and student self-directed learning met all the established requirements and if the proposed steps were relevant to enhancing this learning process. The response indicated that 88% of respondents, equivalent to seven people, considered the methodology's requirements adequate, as the steps outlined in the methodology were fundamental for launching a project with a business structure.

DISCUSSION

According to the research conducted, the educational unit under study must comply with the appropriate curriculum, as established by the Ministry of Education. Furthermore, it was also stated that a teacher performance evaluation is carried out annually to implement corrective actions and ensure the provision of quality education at the Mater Misericordiae Educational Unit. Therefore, they would like to receive a proposal on innovative methodologies for teachers of the Entrepreneurship and Management subject at the institution. Ávalos *et al.* (2021), in this regard, have pointed out that "for more than two decades, educational institutions have been rethinking different methods, models, and methodologies to apply them in the process of a new self-directed learning" (p. 117).

The planning document includes a section (interdisciplinary learning) that outlines the name of the interdisciplinary project, its objectives, skills, indicators, strategies based on reflection, knowledge, application, and activities. It should be noted that the planning design does not include curricular adaptations for students with special needs, whether physical or mental, because the first-year high school student population does not include any specific cases. Botella and Ramos (2019) state that "The planning is based on a basic structure for constructing school content; that is, it is not an activity to enrich teaching, but rather to include two or more subjects" (p. 127).

Regarding the project-based learning methodology, it is necessary to determine if it possesses emergent properties and a relevant structure to improve the teaching-learning process for first-year high school students in the Entrepreneurship and Management course. It was found that 100% of respondents agreed that the proposed methodology has the essential aspects that will help improve students' academic lives by implementing new methods, techniques, and methodologies that are of great importance to their academic development. Martínez (2021) states that "It is necessary to apply activities whose purpose is to fulfill the training objectives in real-world environments" (p. 19);

likewise, activities for the development of professional competencies, autonomous decision-making, and collaborative skills in the educational field.

Furthermore, a typology of project-based learning situations is available that contributes to the scope and content, thereby enabling students to have a better teaching-learning process in the Entrepreneurship and Management subject. 76% of the participants, corresponding to six people, agree with the typology of situations presented in the application process, all of which benefits student self-directed learning. Cabal *et al.* (2021) explain that "self-directed learning is a tool that promotes the construction of scenarios for reflection and self-criticism in students and teachers" (p. 1002).

The structure offered in the project-based learning methodology follows a methodological sequence or order, facilitating a more effective teaching and learning process for the Entrepreneurship and Management course. This structure received 100% affirmation, meaning that all participants agreed with the order in which the methodology is implemented and that, as a result, students can improve their self-directed learning in the Entrepreneurship and Management course.

The diagnostic assessment of the project-based learning methodology in the Entrepreneurship and Management course at Mater Misericordiae Educational Unit revealed that it is not applied systematically, negatively impacting students' self-directed learning. To improve this, a structured methodology was designed, including an introduction, objectives, and a project example. This approach optimizes the teaching and learning process and strengthens self-directed learning among first-year high school students. Furthermore, the evaluation of the proposal through surveys of school administrators and teachers confirmed its relevance and feasibility, demonstrating its potential to enhance academic development and autonomous learning skills.

REFERENCES

- Ávalos, C., Arbaiza, N., & Ajenjo P. (2021). Calidad educativa y nuevas metodologías de enseñanza-aprendizaje: retos, necesidades y oportunidades para una visión disruptiva de la profesión docente. *Innovaciones Educativas*, 23(35), 117-130.
<https://doi.org/10.22458/ie.v23i35.3477>

- Botella, A., & Ramos, P. (2019). Investigación-acción y aprendizaje basado en proyectos. Una revisión bibliográfica. *Perfiles educativos*, 41(1), 127-141.
https://www.scielo.org.mx/scielo.php?script=sci_arttextypid=S0185-26982019000100127
- Cabal, C. C., Cedeño, M. M., & Macías, E. N. (2021). Habilidades de autoaprendizaje en los docentes y los estudiantes de la "Unidad Educativa Leonie Aviat" para el fortalecimiento de la personalidad. *Polo del Conocimiento científico - profesional*, 6(6), 1002-1017.
<https://dialnet.unirioja.es/servlet/articulo?codigo=8016962>
- Espinosa, L. E., Torre, S., & Navarro, G. J. (2025). Transformación Educativa en las universidades públicas: Innovación, Emprendimiento y Competencias del Siglo XXI. Estudio de caso Centro Universitario de los Altos. *Iberoamericana para la Investigación y el Desarrollo Educativo*, 15(30), 2. https://www.scielo.org.mx/scielo.php?script=sci_arttext_plus&pid=S2007-74672025000100140&lng=en&tlng=es&nrm=iso
- Hernández, M., Villarroel, V., & Zambrano J. (2020). Dimensiones e indicadores para la metaevaluación de los aprendizajes: reflexión y propuesta del campo teórico de la evaluación en educación superior. *Cubana de Educación Superior*, 39(1). 1-22.
http://scielo.sld.cu/scielo.php?script=sci_arttextypid=S0257-43142020000200003
- Jarrín, J. J. (2023). Aplicación de metodologías activas en modalidad e-learning en el año 2022: caso carrera de comunicación. *Uisrael*, 99-113.
<https://doi.org/10.35290/rcui.v10n1.2023.682>
- Loor, K. K., & Alarcón, L. A. (2021). Estrategias metodológicas creativas para potenciar los Estilos de Aprendizaje. *San Gregorio*, 1(48), 1-14. <https://doi.org/10.36097/rsan.v0i48.1934>
- Martínez, M. (2021). Aprendizaje basado en proyectos como estrategia de formación profesional. *RIDE*, 12(1), 1-29. <https://doi.org/10.23913/ride.v12i23.1093>
- Rochina, S. C., Ortiz, J. C., & Paguay, L. V. (2020). La metodología de la enseñanza aprendizaje en la educación superior: algunas reflexiones. *Universidad y Sociedad*, 12(1), 386-389.
<https://rus.ucf.edu/cu/index.php/rus/article/view/1469>

Vargas, E. Z. (2024). Problemas metodológico-didácticos del profesor novel: aprendiendo a enseñar en la práctica. *Cuadernos de Investigación Educativa*, 15(1), 13.

http://www.scielo.edu.uy/scielo.php?script=sci_arttext&pid=S1688-93042024000101203

Villalobos, J. (2022). Metodologías Activas de Aprendizaje y la Ética Educativa. *Revista Docentes*, 13 (2), 47-58. <https://doi.org/10.37843/rted.v13i2.316>

Zambrano, M., Hernández, A., & Mendoza K. (2022). El aprendizaje basado en proyectos como estrategia didáctica. *Conrado*, 18(1), 172-182.

http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1990-86442022000100172

Conflict of interest

Authors declare no conflict of interests.

Authors' contribution

The authors participated in the design and writing of the article, in the search and analysis of the information contained in the consulted bibliography.



This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License