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Pedagogy Applied in the Teaching Process in Regular Basic Education (EBR): Systematic Review Article

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Abstract

The development of new trends in education and in the field of applied pedagogy on teaching-learning, presents a wide variety of contributions that allow teachers to work with more management strategies for their class sessions making them to become innovative teachers for the different models of education. The methodology used in this research was the PRISMA method that allows to carry out research by reviewing academic works, being checked 4,459 academic works in three databases such as Scopus, Scielo and Dialnet, and excluded 4,425, leaving 34 academic works, and likewise the filtration was carried out again, finally excluding 4 academic works that presented duplicity of publication in the databases, leaving for the research 30 academic works that were applied in this article, in total 4,429 were excluded at the end. As a result, the pedagogical applications in learning-teaching are very significant due to the multiple ways of presenting systems and models in this area that favor EBR. In the discussion, researchers revealed that even the changes of strategies and pedagogical models do not help to improve the educational quality of learning in students; nevertheless, most of the researchers agree that these changes of paradigms and pedagogical models do help in the educational improvement of students. In conclusion, pedagogical applications in the field of learning-teaching bring much benefit in good classroom management developed by the teacher.

Keywords: Pedagogy, Pedagogical Application, Teaching, Learning, Teaching-Learning

INTRODUCTION

In these times of continuous changes in education, many ways of how to achieve a high academic level education in EBR (Regular Basic Education) are modeled and for this purpose, programs are implemented by teachers from all over the world, which allow students to develop performance skills in the use of new technological and pedagogical tools, making them fully compatible with technology according to the regions in which their country is located, considering that there are still countries that do not have the best conditions for improvement due to the lack of technologies making impossible the use of pedagogical tools; the studies that are carried out to improve the teaching-learning process are contextualized from the scientific-humanistic and technical professional-teaching (Sepulveda et al.,2022) and (Jiménez et al.,2021).

(Vidal, 2020), mentions that having as reference what happened on the planet regarding the Covid 19, the educational systems improved their strategies due to this difficult situation because of the isolations and how new paradigms shifts in education has strengthened the educational system from teachers and students, in practice (Gordón et al.,2021), using technological resources and ICT tools as allies, (Gil-Quintana et al.,2023), being the best of pedagogical innovations capable of strengthening the teaching-learning process, this makes education a complex system due to the variety of ways of carrying out an education applied to learning and teaching.

UNESCO (2015), mentioned that it is necessary to develop goals in education during certain period to then raise the objectives that are being improved in countries and nations, strengthening education as an institution with its demands and challenges, it is important to know the demographic trend to meet the needs of the educational population, seeking to promote peace, security and democracy; within its contribution UNESCO supports the integration of information and communication technologies from the conceptual to the practice.

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The teaching-learning process is a dynamic and complex phenomenon that involves the transmission of knowledge, skills and values between a teacher and a student. It shows that there is a shared relationship where interactions, experiences and discoveries that provide the basis of intellectual and personal growth are incorporated. In this analysis, we will explore the multiple dimensions of this process, from the planning of teaching to the assimilation and application of knowledge by students.

The problematic reality found in the educational system is: the teacher will be able to apply designs that allow to improve learning-teaching with the studies found in the review of academic works? and this question arises because the current information related to education is immersed in great changes and approaches that make education very integrated in all fields of knowledge.

Likewise, EBR constitutes an important axis for improving education, since it lays the foundations for students. In this context, pedagogy plays a crucial role as it is applied in the teaching-learning process, guiding teachers and students towards meaningful and transformative educational experiences. In this analysis, we will explore how pedagogy is manifested and applied in EBR, considering the diversity of approaches, methodologies and strategies that seek to enhance education; in the same way the system of understanding how the student can obtain knowledge of reality implies a whole mechanism of teachers to manage such learning (Yépez et al.,2022).

(Yépez et al.,2022), mentioned about learning management towards students showing several learning styles like: Bandler and Grinder's neurolinguistics programming (1979), Gardner's multiple intelligences (1994), cerebral hemispheres (1981), Hermann's models (1998), Ferder and Silverman's model (1988), Kolb's model (1984), Honey and Munford's model (1986), Alonso, Gallego and Honey's model (2007); we can observe that all these types of styles have developed over time, having nowadays other learning styles (Godoy, 2021; Brahim et al., 2024; Tuomainen, 2019), applied to education such as the style of selecting information that seeks to differentiate from the visual, auditory, and kinesthetic, as well as the style of information processing that includes the active, reflective, theoretical and pragmatic form.

The objectives established in this research are: 1) designing and implementing pedagogical strategies that focus on the individual needs of students, promoting an inclusive environment adapted to diverse learning styles 2) applying technology in classrooms effectively, using digital resources and educational platforms to enrich learning experiences 3) developing assessments that go beyond traditional tests, incorporating formative and authentic evaluations 4) improving teacher's classroom management skills, creating appropriate environments to active learning and student participation.

(Sepulveda et al.,2022), stated that the teaching-learning process begins with planning. Teachers, as builders of structured knowledge, design strategies to transmit information effectively applied to students within academic training (Yépez et al.,2022), it involves the identification of learning objectives, the selection of relevant content and the choice of pedagogical methods that are adapted to the needs of the students. Planning also includes the creation of an environment conducive to learning, considering factors such as classroom layout, the use of educational resources and the integration of technologies that enrich the learning experiences justified by an improvement in learning.

(Hernández-Flórez,2019) and (Chávez et al.,2021), show that once the teaching has been planned, the contents are presented. This step involves the exposure and explanation by the teacher, using strategies in order to get the attention of students causing an improvement in learning. The variety in the presentation found on the internet is very beneficial for the educational field, as the use of multimedia, practical examples and demonstrations, contributes to maintain interest and enable the understanding of abstract concepts. Effective communication is essential at this stage, as it establishes the initial connection between the educator and the students.

(Novoa Seminario,2021), learning is not a passive act, but an active one that promotes innovation and strategies in the use of ICT tools; which requires the participation of students. Interaction, dialogue and participation in practical activities are essential elements in this process. Classroom discussions, debates and group activities foster critical thinking and collaboration among students. Participation also allows learners to apply theoretical concepts in practical situations, promoting a deeper and more lasting understanding.

(Manuel Benites,2020), effective feedback is a key component of the teaching-learning process. Teachers provide feedback on student performance, highlighting strengths and pointing out areas for improvement. This bidirectional process allows students to understand their progress and adjust their approach to learning. Feedback is not only limited to the evaluation of results, but is also integrated into daily teaching to correct misunderstandings and strengthen understanding.

Evaluation is an integral part of the teaching-learning process. It includes both formative evaluation, which is carried out during the process to guide teaching, and summative evaluation, which measures the achievement of objectives at the end of a given period. Assessments can range from written exams to projects, presentations and practical evaluations. The diversification of assessment methods ensures a more complete and fairer measurement of student learning (Espoz-Lazo et al.,2023) and (Gavilanes et al.,2020).

(Gordón et al.,2021), the teaching-learning process is not static, it is dynamic and adaptive. Teachers must be responsive to the changing needs of students and adjust their teaching approach according to them. This involves constantly reviewing pedagogical methods, incorporating student feedback, and adopting new instructional strategies. Continuous adaptation ensures that the teaching-learning process evolves with advances in education and the demands of an ever-changing society.

Students should be able to transfer what they have learned to practical situations, solve real-world problems, and contribute significantly to their society. The application of knowledge demonstrates the effectiveness of the teaching-learning process by preparing students to face challenges and make informed decisions.

Pedagogy in EBR is understood as the science and art of educating, oriented to facilitate learning in an effective and stimulating way, adapted to the individual and contextual characteristics of the learners, as is the case of the implementation of social networks for better communication and active knowledge transfer of students at all times when it is necessary to get their information highlighting the participation of groups of students. A central element in the application of pedagogy in EBR is the understanding that each student is unique, with their own capabilities, learning styles and needs. Consequently, the pedagogy applied in this context seeks to personalize teaching, adapting it to the diversities presented in classrooms and promoting an inclusive environment (Salazar-Vallejo & Rivera-Rogel,2022) and (Hernández-Flórez; Garzón et al.,2019).

(Novoa Seminario,2021), a prominent pedagogical approach in EBR is constructivism, which is the participation in meaningful experiences. Teachers, in this approach, act as facilitators of learning, creating environments that stimulate curiosity, exploration and critical thinking. The application of constructivism in EBR involves the integration of hands-on activities, collaborative projects and formative assessments that allow students to build their understanding of concepts applied to reality.

Likewise, pedagogy in EBR is supported by the significant learning theory of Ausubel, while Vygotsky agrees with the liberating pedagogy, which emphasizes the importance of connecting new knowledge with the existing cognitive structure in the student's mind. In this sense, planning students' lessons and designing activities facilitate the integration of new learning in a relevant and meaningful way. The application of this theory implies the use of didactic strategies that link abstract concepts with concrete examples and everyday experiences, thus promoting a deeper and more lasting understanding (Ramírez et al.,2017) and (Hernández et al.,2021).

Technology also plays a crucial role in applied-pedagogy in EBR. The digital era has brought with it a number of tools and resources that can enhance teaching, learning and innovations (Suárez,2022). Digital pedagogy seeks to effectively integrate technology in the classroom, taking advantage of educational platforms, multimedia resources and interactive tools to diversify and enrich learning experiences. Teachers, as facilitators, must develop skills to select and use concepts, foster collaboration and prepare students for the digital society (Novoa; Caro et al; Hernández et al; Gómez-Vallecillo et al; Rodríguez et al; Pastora et al.,2021), (Gavilanes et al.,2020) and (Urresta et al.,2018).

(Bueno et al.,2021), formative assessment is a fundamental strategy in pedagogy applied in EBR. It is more than a tool to measure performance and understood as a continuous process that provides timely feedback to students and teachers. This feedback allows them to adjust and adapt teaching strategies and changes in emotions that enable them to improve their education (Espoz-Lazo et al; George-Reyes et al.,2023), identify

areas for improvement and strengthen student engagement in learning. Pedagogy in EBR promotes authentic assessment, which focuses on skills in real contexts, preparing students to face challenges in the contemporary world.

(Chávez et al.,2021), classroom management is another vital aspect of pedagogy applied in EBR. Teachers must create environments appropriate to learn by fostering participation, mutual respect, and the development of social skills. (Molinero et al; Varela et al.,2019), the implementation of effective classroom management strategies involves setting clear rules, establishing consistent routines, and positive relationships between teachers and students. A well-managed classroom provides the ideal setting for the successful implementation of diverse pedagogical approaches and for the growing of a positive learning environment.

(Vallejo-Ruiz & Torres-Soto,2020), within the framework of applied pedagogy in EBR, teacher training takes on particular relevance. (Manuel Benites,2020), educators must be equipped with updated knowledge on pedagogical theories, innovative teaching strategies and inclusive approaches. (Barcia-Briones et al.,2022), continuous training allows teachers to adapt to changing educational needs and face emerging challenges in the educational field. In addition, it fosters the construction of learning communities among educators, promoting the exchange of experiences and successful practices.

METHOD AND MATERIALS

PRISMA provides a set of guidelines for the transparent preparation and presentation of systematic reviews and meta-analysis. Some of the key elements addresses by PRISMA include identification and selection of studies, data extraction, assessment of risk of bias, and presentation of results in a clear and comprehensive manner. Using PRISMA helps researchers to follow a systematic and standardized process in conducting systematic reviews, which improves the reliability and usefulness of such studies in decision making (Urrútia & Bonfill, 2010) and (Liberati et al.,2009).

The search for information was directed to the Scopus repository with the keyword ENSEÑANZA AND APRENDIZAJE, delivering as a result 1,163 documents, being then filtered by years of location and line of research or specialty, from 2019 to 2023 a period of 5 years, in social sciences filed, type article, and language used which were English and Spanish, delivering 74 articles that were reviewed one by one, finding 2 duplicates that were not part of the research, and 3 academic papers that belong to the research, being excluded a total of 1,160 academic papers that were not part of the development of the proposed research.

The materials used for the research is a PC connected to the internet with the following characteristics. Intel processor(R) Core (TM) i7-8700 CPU @ 3.20GHz 3.19 GHz. Installed RAM 16.0 GB (15.8 GB utilizable). Device ID 358A57685-6A79-4689-B1A1-65408517B068. Product ID 00221-11000-01001-AA156. System type: 64 bits operating system, x64 processor. Windows 10 Pro. Edition. Version 20H2

With these specifications we were able to develop the research work. It is an equipment that has a good functionality, it is a modern equipment.

Continuing with the search for information in Scopus, it was used the keyword PROCESO AND ENSEÑANZA AND APRENDIZAJE, delivering 262 academic papers that were filtered by years and types of works in education, obtaining a result of 24 academic articles that were studied one by one, from which 3 academic papers were selected, being excluded 21 of them.

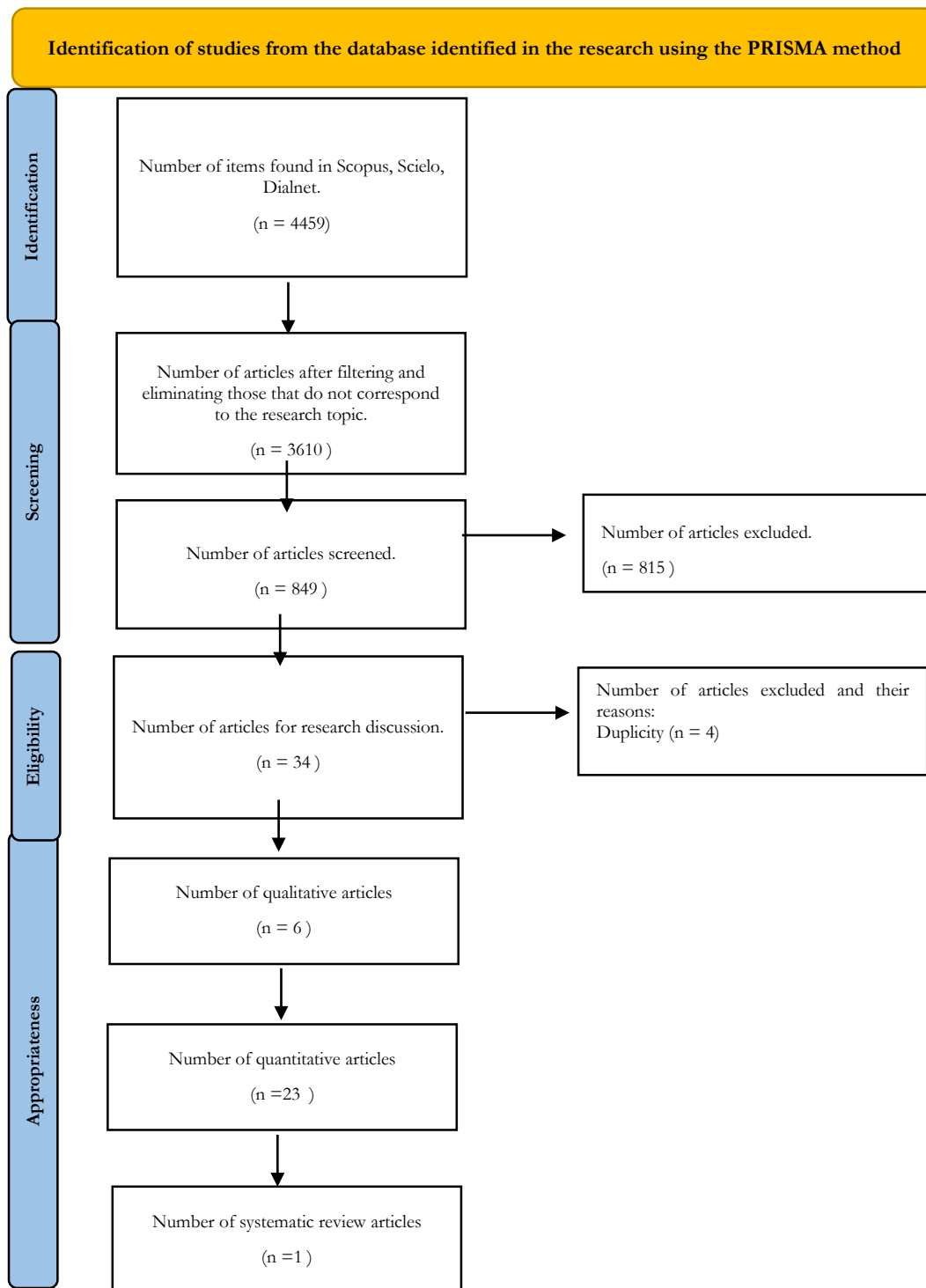
In the same way, we continued with the research in the Scopus repository with the keyword PEDAGOGÍA AND EN AND EL AND APRENDIZAJE, delivering 40 papers that were filtered by years from 2019 to 2023, and reviewed one by one, in the Spanish and English language, obtaining in the first filter 39 academic works, where the materials found were studied one by one, finding at the end 1 article corresponding to the research and 38 were excluded.

The search for information was directed to the following Scielo repository by typing the keyword PEDAGOGÍA APLICADA EN EL PROCESO ENSEÑANZA APRENDIZAJE, resulting in 4 articles, which were analyzed one by one and resulting in 2 academic papers and 2 excluded.

Continuing with the research in Scielo, the keyword PROCESO ENSEÑANZA APRENDIZAJE was used, giving a result of 2,491 academic papers, which were filtered according to countries of publication, specialized journals, years of publication from 2019 to 2020 as shown in this Scielo repository, thematic area as Humanities, education, type of work such as scientific articles, delivering 381 academic papers, being reviewed one by one verifying works that present significant contributions, delivering in this filtration 16 works corresponding to the research.

Following the research methodology based on the PRISMA model, Dialnet was addressed with the keyword PEDAGOGÍA APLICADA EN EL PROCESO ENSEÑANZA APRENDIZAJE, having a result of 483 academic papers that were filtered by journal articles reducing to 311 works selected by years of publication from 2019 to 2023 with a period of 5 years, delivering 6 articles for research, one duplicated and 304 excluded belonging to other lines of research.

Results



Flowchart of the PRISMA method in applied pedagogy research in the teaching-learning process in EBR.

Table 1 Bibliometric table of the information search corresponding to the research.

| Nº | Authors | Magazine | Year of publication | Country | Study approach | Database | Language |
|----|---------------------------------------|---|---------------------|------------|--------------------|----------|----------|
| 1 | (Sepulveda et al.,2022) | Educatoc Editor: GTE-Grupo de Tecnología Educativa, Universidad de las Islas Baleares | 2022 | SPAIN | Quantitative | Scopus | Spanish |
| 2 | (Yépez et al.,2022) | Revista Venezolana de Gerencia | 2022 | VENEZUELA | Quantitative | Scopus | Spanish |
| 3 | (Vidal,2020) | Revista Cubana de Educación Médica Superior | 2020 | CUBA | Qualitative | Scopus | Spanish |
| 4 | (Gil-Quintana et al.,2023) | American Journal of Distance Education | 2023 | USA | Bibliometric study | Scopus | Spanish |
| 5 | (Salazar-Vallejo & Rivera-Rogel,2022) | RISTI - Revista Ibérica de Sistemas e Tecnologías de Informacao | 2022 | BRAZIL | Quantitative | Scopus | Spanish |
| 6 | (Hernández-Flórez,2019) | Aibi, Revista de Investigación Administración e Ingenierías | 2023 | COLOMBIA | Qualitative | Scopus | Spanish |
| 7 | (Garzón et al.,2019) | Espacios | 2019 | ECUADOR | Quantitative | Scopus | Spanish |
| 8 | (Novoa Seminario,2021) | Aula Abierta | 2021 | SPAIN | Quantitative | Scopus | Spanish |
| 9 | (Caro et al.,2021) | Delta | 2021 | BRAZIL | Quantitative | Scielo | Spanish |
| 10 | (Ramírez et al.,2017) | Universidad Austral de Chile. Facultad de Filosofía y Humanidades | 2017 | CHILE | Quantitative | Scielo | Spanish |
| 11 | (Jiménez et al.,2021) | RIDE. Revista Iberoamericana para la Investigación y el Desarrollo Educativo | 2022 | MEXICO | Quantitative | Scielo | Spanish |
| 12 | (Hernández et al.,2021) | Revista de Ciencias Humanísticas y Sociales (ReHuSo) | 2021 | MEXICO | Quantitative | Scielo | Spanish |
| 13 | (Bueno et al.,2021) | Varona. Revista Científico-Metodológica | 2021 | CUBA | Qualitative | Scielo | Spanish |
| 14 | (Gómez-Vallecillo et al.,2021) | Revista Innovaciones Educativas | 2021 | COSTA RICA | Quantitative | Scielo | Spanish |
| 15 | (Chávez et al.,2021) | Editorial Universo Sur | 2021 | CUBA | Quantitative | Scielo | Spanish |
| 16 | (Gordón et al.,2021) | Editorial Universo Sur | 2021 | CUBA | Quantitative | Scielo | Spanish |
| 17 | (Rodríguez et al.,2021) | Editorial Universo Sur | 2021 | CUBA | Quantitative | Scielo | Spanish |
| 18 | (Pastora et al.,2021) | Revista Científica UISRAEL | 2021 | ECUADOR | Quantitative | Scielo | Spanish |
| 19 | (Vallejo-Ruiz & Torres-Soto,2020) | Revista Electrónica Educare | 2020 | COSTA RICA | Quantitative | Scielo | Spanish |

| | | | | | | | |
|----|------------------------------|---|------|---------|---------------------------|---------|---------|
| 20 | (Manuel Benites,2020) | Editorial Universo Sur | 2020 | CUBA | Quantitative | Scielo | Spanish |
| 21 | (Moliner et al.,2019) | RIDE. Revista Iberoamericana para la Investigación y el Desarrollo Educativo | 2020 | CUBA | Quantitative | Scielo | Spanish |
| 22 | (Varela et al.,2019) | Editorial Universo Sur | 2019 | CUBA | Quantitative | Scielo | Spanish |
| 23 | (Alanoca et al.,2019) | Centro Psicopedagógico y de Investigación en Educación Superior CEPIES-UMSA | 2019 | ECUADOR | Quantitative | Scielo | Spanish |
| 24 | (Cedeño et al.,2019) | Revista de Ciencias Humanísticas y Sociales (ReHuSo) | 2019 | ECUADOR | Quantitative | Scielo | Spanish |
| 25 | (George-Reyes et al.,2023) | Educar | 2022 | MEXICO | Quantitative | Dialnet | Spanish |
| 26 | (Espoz-Lazo et al.,2023) | Universidad de Murcia, Servicio de Publicaciones | 2023 | SPAIN | Systematic review article | Dialnet | Spanish |
| 27 | (Suárez,2022) | Universidad Internacional de La Rioja (UNIR) | 2022 | SPAIN | Qualitative | Dialnet | Spanish |
| 28 | (Barcia-Briones et al.,2022) | Polo del conocimiento | 2022 | ECUADOR | Qualitative | Dialnet | Spanish |
| 29 | (Gavilanes et al.,2020) | Dominio de las Ciencias | 2020 | ECUADOR | Quantitative | Dialnet | Spanish |
| 30 | (Urresta et al.,2018) | Ecos de la Academia: Revista de la Facultad de Educación Ciencia y Tecnología | 2018 | ECUADOR | Quantitative | Dialnet | Spanish |

Note: This bibliometric table was obtained after a thorough and unbiased information search, finding these researchers for their respective investigations developed.

Table 2 Period of research for information and articles related to the research.

| | | Year of publication |
|---------|---|---------------------|
| No. | Articles obtained in the search for information | 30 |
| | Lost | 0 |
| Minimum | | 2017 |
| Maximum | | 2023 |

Table 3 Frequency in quantity and percentage of publications found and years of publication.

| | | Year of publication | | | |
|-------|------|---------------------|------------|------------------|-----------------------|
| | | Frequency | Percentage | Valid percentage | Cumulative percentage |
| Valid | 2017 | 1 | 3.3 | 3.3 | 3.3 |
| | 2018 | 1 | 3.3 | 3.3 | 6.7 |
| | 2019 | 4 | 13.3 | 13.3 | 20.0 |
| | 2020 | 5 | 16.7 | 16.7 | 36.7 |
| | 2021 | 9 | 30.0 | 30.0 | 66.7 |
| | 2022 | 7 | 23.3 | 23.3 | 90.0 |
| | 2023 | 3 | 10.0 | 10.0 | 100.0 |

| | | | |
|-------|----|-------|-------|
| Total | 30 | 100.0 | 100.0 |
|-------|----|-------|-------|

Note: In the search for information, 30 academic papers were found that allowed the development of the research, as shown in the table.

Table 4 Table of frequencies, percentages and their publications in countries shown.

| | | Frequency | Percentage | Valid percentage | Cumulative percentage |
|-------|------------|-----------|------------|------------------|-----------------------|
| Valid | BRAZIL | 2 | 6.7 | 6.7 | 6.7 |
| | CHILE | 1 | 3.3 | 3.3 | 10.0 |
| | COLOMBIA | 1 | 3.3 | 3.3 | 13.3 |
| | COSTA RICA | 2 | 6.7 | 6.7 | 20.0 |
| | CUBA | 8 | 26.7 | 26.7 | 46.7 |
| | ECUADOR | 7 | 23.3 | 23.3 | 70.0 |
| | USA | 1 | 3.3 | 3.3 | 73.3 |
| | SPAIN | 4 | 13.3 | 13.3 | 86.7 |
| | MEXICO | 3 | 10.0 | 10.0 | 96.7 |
| | VENEZUELA | 1 | 3.3 | 3.3 | 100.0 |
| | Total | 30 | 100.0 | 100.0 | |

Note: Base on the information results, Ecuador during the period from 2017 to 2023 shows 23.3% of the total found and Cuba with 26.7%, being the countries with the highest frequency of published research on pedagogical applications in teaching-learning.

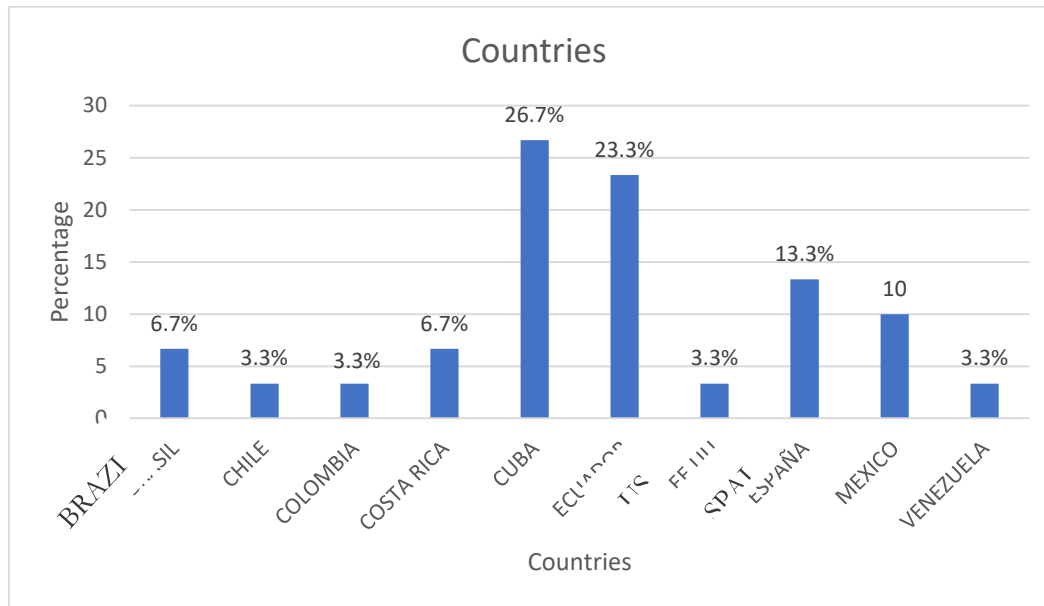


Image 3 Percentage of academic papers published by country.

Note: Percentage of publication of the countries, showing that Ecuador, Cuba, Spain and Mexico are the ones with more recurrent publications on the topic under study.

Table 5 Type of research approaches

| | | Database | | | Total |
|----------------|---------------------------|----------|--------|--------|-------|
| | | Dialnet | Scielo | Scopus | |
| Study approach | Systematic review article | 1 | 0 | 0 | 1 |
| | Qualitative | 2 | 1 | 2 | 5 |
| | Quantitative | 3 | 15 | 5 | 23 |
| | Bibliometric study | 0 | 0 | 1 | 1 |
| Total | | 6 | 16 | 8 | 30 |

Note: The table shows the number of academic papers found that comply with the research line of applied pedagogy in the teaching-learning process in EBR. It is also observed that in the search for information, 23 academic papers with a quantitative approach were found, showing the greater interest in the development of research in quantitative approaches in these countries.

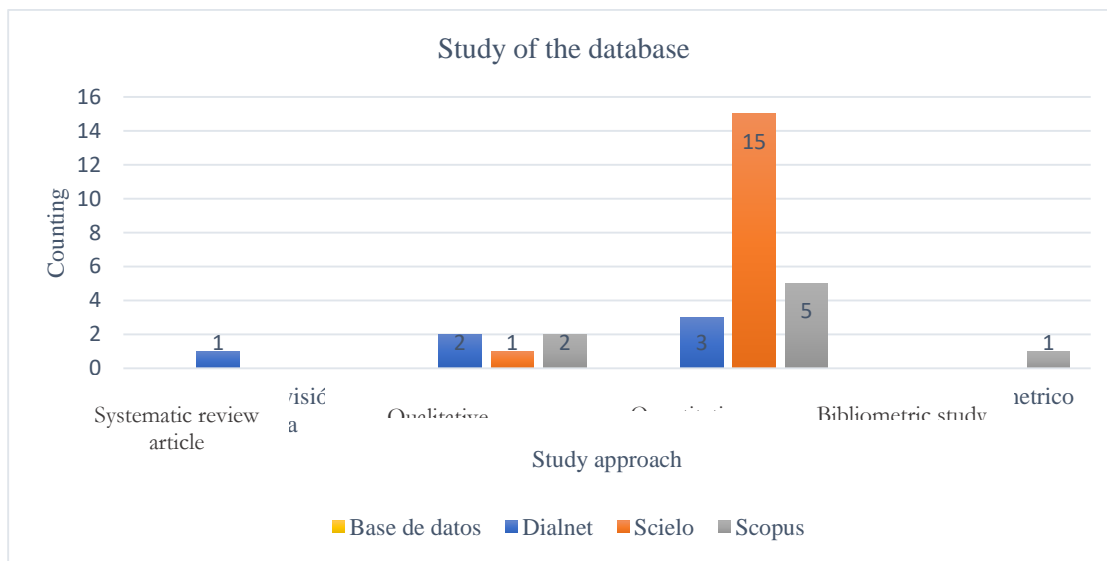


Image 4 Types of research approaches found in the search for information

Note: The statistical frequency bars show the approaches found in the research in each database.

Table 6 Crosstabulation of percentages in the databases shown in the table, from 2017 to 2023.

| | | Database | | | Total |
|------|-------------------|----------|--------|--------|-------|
| | | Dialnet | Scielo | Scopus | |
| 2017 | Counting | 0 | 1 | 0 | 1 |
| | Expected counting | 0.2 | 0.5 | 0.3 | 1.0 |
| | % within database | 0.0% | 6.3% | 0.0% | 3.3% |
| 2018 | Counting | 1 | 0 | 0 | 1 |
| | Expected counting | 0.2 | 0.5 | 0.3 | 1.0 |
| | % within database | 16.7% | 0.0% | 0.0% | 3.3% |
| 2019 | Counting | 0 | 3 | 1 | 4 |

| | | | | | | |
|---------------------|-------------------|-------------------|--------|--------|--------|-------|
| Year of publication | 2017 | Expected counting | 0.8 | 2.1 | 1.1 | 4.0 |
| | | % within database | 0.0% | 18.8% | 12.5% | 13.3% |
| | | Counting | 1 | 3 | 1 | 5 |
| | 2020 | Expected counting | 1.0 | 2.7 | 1.3 | 5.0 |
| | | % within database | 16.7% | 18.8% | 12.5% | 16.7% |
| | | Counting | 0 | 8 | 1 | 9 |
| | 2021 | Expected counting | 1.8 | 4.8 | 2.4 | 9.0 |
| | | % within database | 0.0% | 50.0% | 12.5% | 30.0% |
| | | Counting | 3 | 1 | 3 | 7 |
| | 2022 | Expected counting | 1.4 | 3.7 | 1.9 | 7.0 |
| | | % within database | 50.0% | 6.3% | 37.5% | 23.3% |
| | | Counting | 1 | 0 | 2 | 3 |
| | 2023 | Expected counting | 0.6 | 1.6 | 0.8 | 3.0 |
| | | % within database | 16.7% | 0.0% | 25.0% | 10.0% |
| | | Counting | 6 | 16 | 8 | 30 |
| Total | Expected counting | 6.0 | 16.0 | 8.0 | 30.0 | |
| | % within database | 100.0% | 100.0% | 100.0% | 100.0% | |

It is observed in the results table that in 2017 only 3.3% of academic works correspond to pedagogy applied in the teaching-learning process in EBR, in 2018 the results are similar in these three databases, being high the percentage in research in 2019 with 13.3%, in 2020 a 16.7%, and 2021 with 30% showing greater interest in pedagogical research, finally in 2022 it decreases in a 23.3% showing that in 2023 only research on the subject has been conducted with 10%.

Table 7 Main publication percentages by country in the following databases

| | | Cross table | | | |
|---------|-------------------|-------------|--------|--------|-------|
| | | Database | | | Total |
| | | Dialnet | Scielo | Scopus | |
| CUBA | Counting | 0 | 7 | 1 | 8 |
| | Expected counting | 1.6 | 4.3 | 2.1 | 8.0 |
| | % within database | 0.0% | 43.8% | 12.5% | 26.7% |
| ECUADOR | Counting | 3 | 3 | 1 | 7 |
| | Expected counting | 1.4 | 3.7 | 1.9 | 7.0 |
| | % within database | 50.0% | 18.8% | 12.5% | 23.3% |

| | | | | | |
|--------|-------------------|-------|-------|-------|-------|
| SPAIN | Counting | 2 | 0 | 2 | 4 |
| | Expected counting | 0.8 | 2.1 | 1.1 | 4.0 |
| | % within database | 33.3% | 0.0% | 25.0% | 13.3% |
| MEXICO | Counting | 1 | 2 | 0 | 3 |
| | Expected counting | 0.6 | 1.6 | 0.8 | 3.0 |
| | % within database | 16.7% | 12.5% | 0.0% | 10.0% |

DISCUSSION

Developing the research “pedagogy applied to the teaching-learning process in EBR” was possible to solve the problem stated with the following question: Will it be possible to apply designs that allow to improve learning-teaching with the studies found in the review of academic works? answering the question it can be mentioned that it was possible to answer because in the research there were various models from 1979 to 2023 applied in teaching-learning, showing the development of these techniques applied to education strengthening learning at every moment in which new approaches and paradigms that revolutionize education are born and that is becoming more sustainable allowing developing meaningful learning as mentioned (Yépez et al.,2022), in the same way they show their objectives raised in the management of teaching-learning that it is necessary through strategies to adjust to the styles that appear in time to make a very significant education, making interesting to know how to approach the training of teachers to students making a multiplier effect of learning-teaching.

Pedagogy applied to the teaching-learning process in Regular Basic Education (EBR) is a vital field of study involving educational theories and evidence-based pedagogical strategies. The application of scientific methods to understand how students acquire knowledge and skills has led to more effective approaches. Educational research supports the importance of adapting pedagogy to individual needs, incorporating formative assessments, educational technologies, and active methodologies. Attention to diversity and ongoing research are critical to develop pedagogy in EBR and ensure an equitable and quality educational process.

Likewise (Barcia-Briones et al.,2022), mention in their research how importance it is for EBR students do not have significant learning if their teachers do not have the strategies developed, being so that the minority of students achieve the objectives set by teachers in the development of class sections, it is due to the continuous changes in education and the discontinuity given by the Covid-19 pandemic, being one of the reasons why education has partly emerged to new paradigms, in the same way it is mentioned that teachers emphasize the performance of students according to the attitude that the student takes towards the learning needs, being a necessary agent the state of mind, concentration, and the methodologies learned by the management of the teacher.

(Garzón et al.,2019), mention that learning objects are digital materials proposed in pedagogy to manage specific activities in the development of academic content in EBR training.

Conclusion

Firstly, the research seeks to promote an inclusive environment adapted to diverse learning styles, and the creation and application of pedagogical strategies focused on the individual needs of students, these elements are fundamental for an effective and equitable education. This approach promotes an inclusive environment, that recognizes the diversity of learning styles, allowing students to develop their fullest potential. By adapting to the unique characteristics of each individual, meaningful and personalized learning is encouraged, building not only knowledge, but also essential life skills. Finally, this transformative approach contributes to the formation of autonomous individuals capable of facing the challenges of changing educational paradigms.

Secondly, the research showed that the effective integration of technology in the classroom, through the use of digital resources and educational platforms, amplifies learning experiences. This synergy occurs between

traditional teaching and technological tools. It facilitates access to diverse information and promotes essential digital skills. By adapting to contemporary needs, this methodology fosters interactive, stimulating and relevant learning. Finally, technology integration transforms the classroom into a dynamic environment that prepares students for a digitized world, cultivating skills that are crucial to their future success.

Thirdly, educational development lies in the adoption of assessments that transcend traditional tests. By incorporating formative and authentic assessments, continuous and meaningful learning is stimulated. These methods not only measure superficial knowledge in the student, but assess practical and applied skills in real-world contexts that they live daily. They encourage self-assessment and constructive feedback, based on the theory of constructivism, empowering students in their learning process. This innovative approach not only measures performance, but guides constant improvement, preparing students for the challenges of the modern world by developing critical, creative and adaptive skills.

Finally, according to the results it is shown the improvement of classroom managements skills by teachers and student participation. Effective management not only established necessary order, but also brings trust and collaboration in the classroom between teachers and students and student-student. By encouraging active student participation, exploration and critical thinking are stimulated. The ability to create an inclusive and motivating environment enhances students' holistic development. Lastly, improved classroom management skills result in enriching educational experiences.

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