

Recreational Play as a Pedagogical Resource in Early Childhood Education

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Abstract

A documentary review was carried out on the production and publication of research papers related to the study of the variables Play and Early Childhood Education. The purpose of the bibliometric analysis proposed in this document was to know the main characteristics of the volume of publications registered in the Scopus database during the period 2017-2022 by Latin American institutions, achieving the identification of 66 publications. The information provided by this platform was organized through graphs and figures, categorizing the information by Year of Publication, Country of Origin, Area of Knowledge and Type of Publication. Once these characteristics have been described, the position of different authors on the proposed topic is referenced through a qualitative analysis. Among the main findings made through this research, it is found that Brazil, with 32 publications, was the Latin American country with the highest scientific production registered in the name of authors affiliated with institutions of that nation. The Area of Knowledge that made the greatest contribution to the construction of bibliographic material referring to the study of recreational play as a resource in the pedagogy proposed in early childhood education was with 29 published documents, and the most used Publication Type during the period indicated above were Journal Articles with 56% of the total scientific production.

Keywords: *Recreational Play, Pedagogical Resource, Early Childhood Education.*

1. Introduction

Early childhood education has very innovative and transformative learning resources that go beyond traditional learning methods, creative games. Games are often considered carefree entertainment and play a critical role in children's cognitive and overall development in early growth. This type of creative and dynamic initiative through which they manage to explore the various complexities of the world, explore their evolving identities and thereby get children to learn the essential skills for lifelong learning. This article points out the importance of recreational games as a valuable educational resource in early childhood education, explaining the innumerable multifaceted benefits, their cognitive and socio-emotional dimensions, and their role in the formation of resilient and adaptable students for future training.

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Early childhood education is based on the recognition that children are not passive recipients of information, but active, curious, and imaginative people. They have a natural inclination to explore, experiment, and interact with their environment. Various forms of casual play align perfectly with these innate tendencies and create an environment that fosters an authentic learning experience. Through play, children engage in hands-on, experiential learning that has been shown to be more effective than rote learning or passive knowledge acquisition. Play can foster a sense of agency and encourage children to take initiative in their learning journey, instilling a deep sense of belonging and curiosity.

In addition, creative play acts as a bridge between abstract textbook concepts and the tangible world around children. It allows them to apply theoretical knowledge in practical scenarios, improves comprehension and improves memory. Whether it's building with blocks to understand architectural principles, engaging in imaginative role-play to develop language and social skills, or solving puzzles to improve problem-solving skills, play is a dynamic educational tool that brings abstract ideas to life.

Cognitive development is a cornerstone of early education and is closely related to recreational play. Fun activities stimulate neural pathways and improve brain development and cognitive functions such as memory, attention, and executive functions. The process of play involves experimentation, trial and error, and problem-solving, all of which are part of cognitive growth. In addition, the joy and curiosity of play can inspire children to explore further and foster a love of learning that will last a lifetime. At the same time, play helps regulate the emotional state and gives children a safe place to express their feelings and learn how to deal with them constructively. These early social and emotional skills form the foundation of a child's emotional intelligence, which is critical to their overall well-being and future success. For this reason, this article seeks to describe the main characteristics of the compendium of publications indexed in the Scopus database related to the variables Play and Early Childhood Education, as well. Such as the description of the position of certain authors affiliated with Latin American institutions, during the period between 2017 and 2022.

2. General Objective

To analyze, from a bibliometric and bibliographic perspective, the preparation and publication of research papers in high-impact journals indexed in the Scopus database on the variables Play and Early Childhood Education during the period 2017-2022 by Latin American institutions.

3. Methodology

This article is carried out through a research with a mixed orientation that combines the quantitative and qualitative method.

On the one hand, a quantitative analysis of the information selected in Scopus is carried out under a bibliometric approach of the scientific production corresponding to the study of the variables Play and Early Childhood Education. On the other hand, examples of some research works published in the area of study mentioned above are analyzed from a qualitative perspective, based on a bibliographic approach that allows describing the position of different authors on the proposed topic. It is important to note that the entire search was carried out through Scopus, managing to establish the parameters referenced in Figure 1.

3.1. Methodological design



Figure 1. Methodological design

Source: Authors' own creation

3.1.1 Phase 1: Data collection

Data collection was carried out from the Search tool on the Scopus website, where publications were obtained by choosing the following filters:

TITLE-ABS-KEY (game, AND initial AND education) AND PUBYEAR > 2016 AND PUBYEAR < 2023 AND (LIMIT-TO (AFFILCOUNTRY , "Brazil") OR LIMIT-TO (AFFILCOUNTRY , "Ecuador") OR LIMIT-TO (AFFILCOUNTRY , "Colombia") OR LIMIT-TO (AFFILCOUNTRY , "Chile") OR LIMIT-TO (AFFILCOUNTRY , "Peru") OR LIMIT-TO (AFFILCOUNTRY , "Mexico") OR LIMIT-TO (AFFILCOUNTRY , "Argentina") OR LIMIT-TO (AFFILCOUNTRY , "Venezuela") OR LIMIT-TO (AFFILCOUNTRY , "Cuba") OR LIMIT-TO (AFFILCOUNTRY , "Costa Rica")

- Published documents whose study variables are related to the study of the variables Play and Early Childhood Education.
- Limited to the period 2017-2022.
- Limited to Latin American countries.
- Without distinction of area of knowledge.
- No distinction of type of publication.

3.1.2 Phase 2: Construction of analytical material

The information collected in Scopus during the previous phase is organized and then classified by graphs, figures and tables as follows:

- Co-occurrence of words.
- Year of publication
- Country of origin of the publication.
- Area of knowledge.
- Type of publication.

3.1.3 Phase 3: Drafting of conclusions and outcome document

In this phase, the results of the previous results are analysed, resulting in the determination of conclusions and, consequently, the obtaining of the final document.

4. Results

4.1 Co-occurrence of words

Figure 2 shows the co-occurrence of keywords found in the publications identified in the Scopus database.

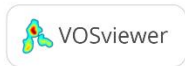
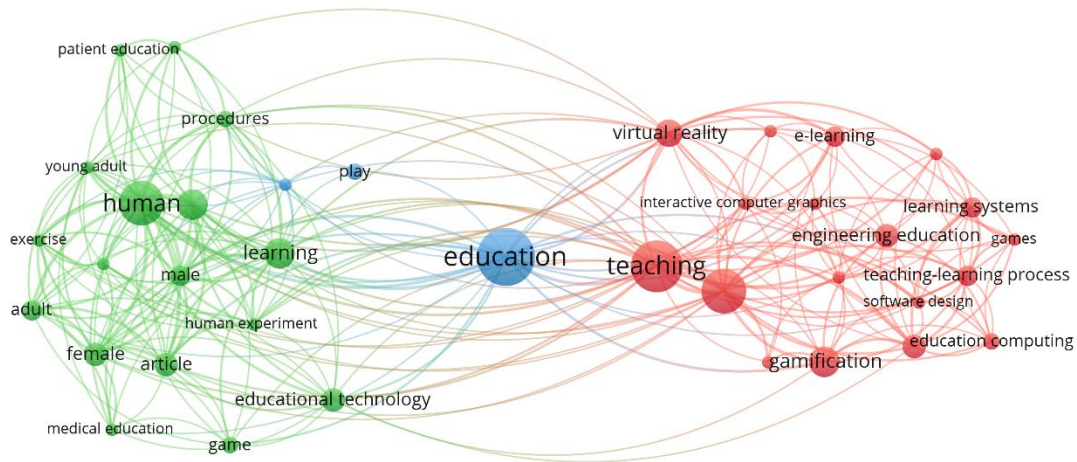


Figure 2. Co-occurrence of words

Source: Authors' own elaboration (2023); based on data exported from Scopus.

Early Childhood Education was the most frequently used keyword within the studies identified through the execution of Phase 1 of the Methodological Design proposed for the development of this article. Teachers are among the most frequently used variables, associated with variables such as Games, Technology and Education, Learning, Virtual Reality, Gamification, Teaching and Learning Process. From the above, it is striking, the importance of adaptability and resilience in the world cannot be underestimated when talking about pedagogical resources. Everyday games allow children to learn these basic life skills. It encourages them to take risks, learn from failure, and persevere in the face of challenges while remaining happy and curious. In this sense, play is a powerful antidote to the fear of failure that inhibits learning and personal growth. All in all, entertainment games are not only entertainment for children, but also an educational resource with far-reaching implications. It provides a comprehensive approach to early childhood education that includes cognitive, social-emotional, and developmental dimensions. By fostering a love of learning, cognitive development, and improved social and emotional skills, play not only helps young people succeed academically, but also prepares them for life with resilience, adaptability, and creativity.

4.2 Distribution of scientific production by year of publication

Figure 3 shows how scientific production is distributed according to the year of publication.

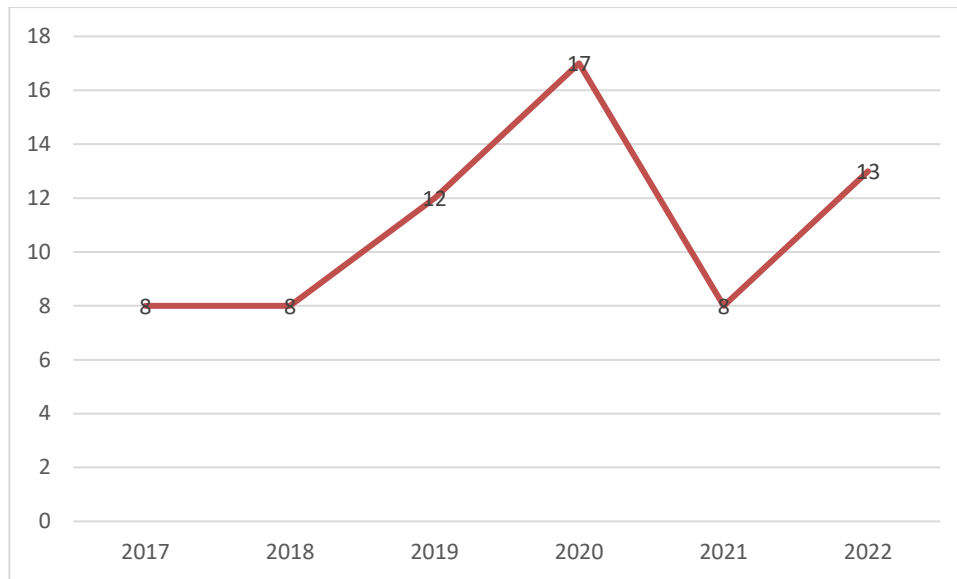


Figure 3. Distribution of scientific production by year of publication.

Source: Authors' own elaboration (2023); based on data exported from Scopus

Among the main characteristics evidenced through the distribution of scientific production by year of publication, the number of publications registered in Scopus was in 2020, reaching a total of 17 documents published in journals indexed on this platform. This can be explained thanks to articles such as the one entitled "Gamification suffers from the novelty effect but benefits from the familiarization effect: findings from a longitudinal study" The main objective of this work is to better understand how the impact of a gamification design, which features fictitious and competitive-collaborative elements, changes over a period of 14 weeks. when applied to CS1 courses taken by STEM students (N = 756). In an ecological environment, we followed a 2x7 quasi-experimental design, where Brazilian STEM students completed tasks in a gamified or non-gamified version of the same system, which provided the measures (number of attempts, time of use, and access to the system). to evaluate user behavior at seven points in time. The results indicate changes in the impact of gamification that appear to follow a U-shaped pattern. Supporting the novelty effect, the effect of gamification began to wane after four weeks, a decline that lasted between two and six weeks. Interestingly, the impact of gamification went uptrend between six and 10 weeks after the start of the intervention, partially recovering its contribution naturally. Therefore, we find empirical evidence to support that gamification likely suffers from the novelty effect, but also benefits from the familiarization effect, contributing to an overall positive impact on learners.(Rodrigues, 2022)

4.3 Distribution of scientific production by country of origin.

Figure 4 shows how the scientific production is distributed according to the nationality of the authors.

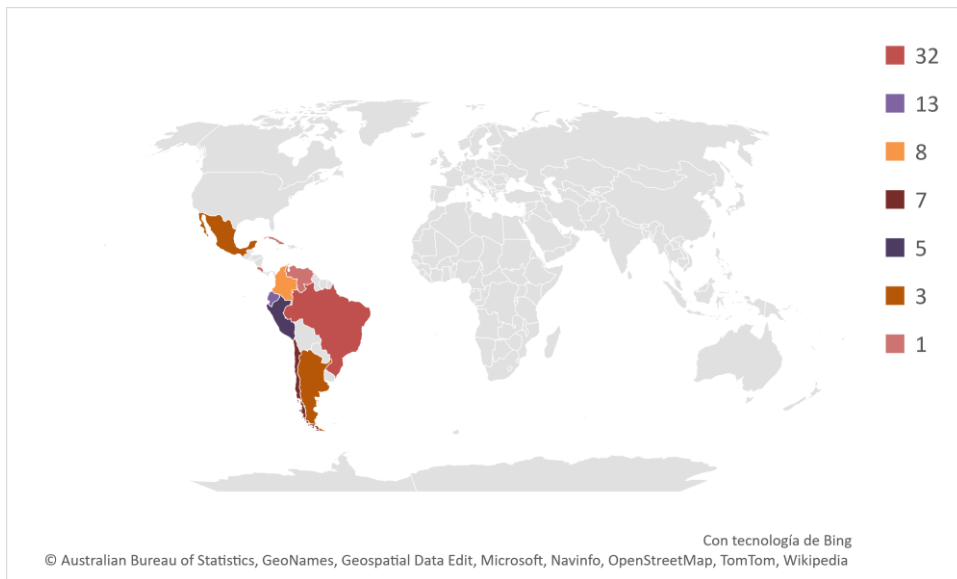


Figure 4. Distribution of scientific production by country of origin.

Source: Authors' own elaboration (2023); based on data provided by Scopus.

Within the distribution of scientific production by country of origin, registrations from Latin American institutions were taken into account, establishing Brazil as the country of this community with the highest number of publications indexed in Scopus during the period 2017-2022, with a total of 32 publications in total. In second place, Ecuador with 13 scientific documents, and Colombia occupying the third place presenting to the scientific community, with a total of 8 documents among which is the article entitled "Evaluation of Sites of Geological Interest for Geoeducation Strategies, ESPOL University Campus, Guayaquil, Ecuador" The research aims to evaluate geosites in the surroundings of the Gustavo Galindo campus, using the methodology of the Spanish Inventory of Sites of Geological Interest (IELIG) to promote geoeducation in the context of sustainability. The methodological process includes (i) the inventory and initial selection of Sites of Geological Interest (SGI) based on interviews with experts and the analysis of primary data of potential sites; (ii) characterization and semi-quantitative evaluation of geosites using the IELIG methodology; and (iii) qualitative evaluation through SWOT analysis to formulate strategies for the development of geotourism and geoeducation. This research emphasizes the importance of promoting geological heritage in an urban area. It shows the geotourism attractions represented by five IMS grouped into two types: geomorphological and petrological. In general, IMS are in the "High" category of the grade of geological interest, ranging from 170 to 236.67. In addition, the study identified the lack of a geological culture and natural values of the university campus. (Morante-Carballo, 2022)

4.4 Distribution of scientific production by area of knowledge

Figure 5 shows the distribution of the elaboration of scientific publications based on the area of knowledge through which the different research methodologies are implemented.

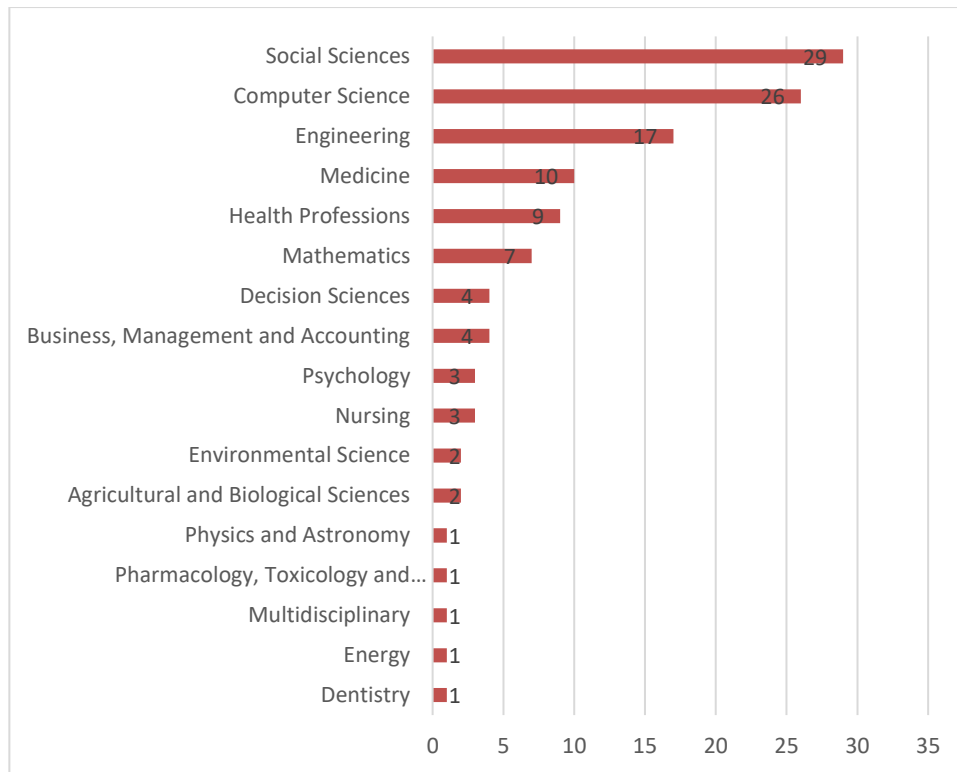


Figure 5. Distribution of scientific production by area of knowledge.

Source: Authors' own elaboration (2023); based on data provided by Scopus.

Social Sciences was the area of knowledge with the highest number of publications registered in Scopus, with a total of 29 documents based on their variable methodologies Play & Early Childhood Education. In second place, Computer Science with 26 articles and Engineering in third place with 17. The above can be explained thanks to the contribution and study of different branches, the article with the greatest impact was registered by the area of Social Sciences entitled "Role of age and experience in the tactical knowledge of attack among players of Iranian football schools" This study was carried out to evaluate and compare declarative and procedural knowledge among players of Iranian football schools with different ages and levels of experience. In total, 456 players from football schools from the U-10, U-13 and U-16 age categories and three categories of high, medium and low competition experience were included in this study and completed the Football Tactical Knowledge Test. Participants responded to a multiple-choice written test on theoretical information and rules and figures representative of a game situation to assess declarative and procedural tactical knowledge, respectively. The results showed significant differences in total, declarative and procedural tactical knowledge between different age groups and experience level. The results of Bonferroni's post-hoc test revealed significant differences only between U-16 and U-13 with U-10 groups, and between high and medium groups with low level of experience ($p=0.00$). In the declarative and procedural tactical knowledge subscales, U-16 and highly experienced players obtained better results than U-10 and inexperienced players ($p=0.00$). In addition, the significant differences observed between U-16 and U-10 players in declarative and procedural tactical knowledge ($p=0.00$) confirmed that not only the time spent exploring specific concepts of the sport, but also the psychophysical development of children/adolescents had an influence. Acquisition of tactical knowledge in invasion team sports such as soccer, possibly due to the competitive experience of footballers. Our findings suggested that improving declarative and procedural tactical knowledge in the early years influences individuals' future success in football.(Olivares, 2021)

4.5 Type of publication

In the following graph, you will see the distribution of the bibliographic finding according to the type of publication made by each of the authors found in Scopus.

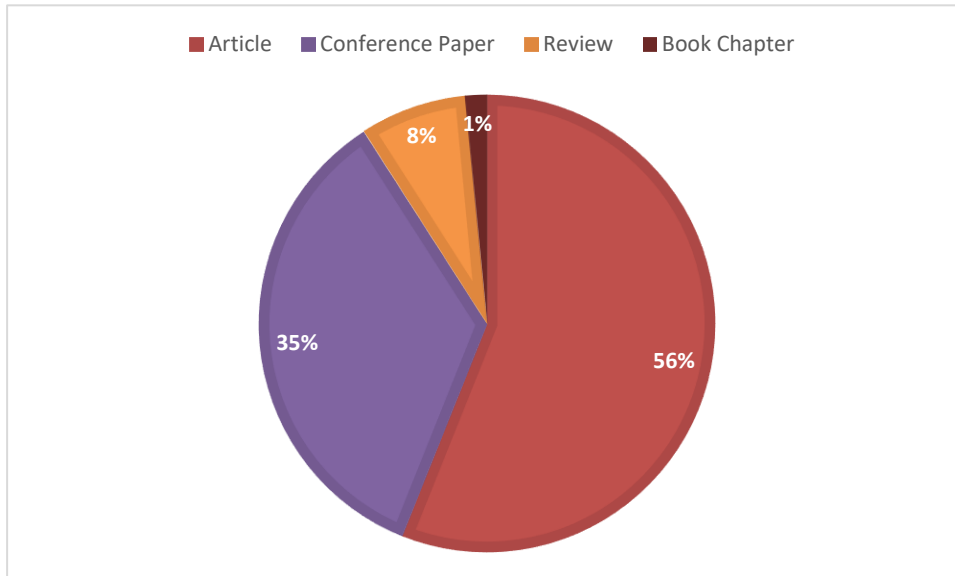


Figure 6. Type of publication.

Fountain: Authors' own elaboration (2023); based on data provided by Scopus.

The type of publication most frequently used by the researchers referenced in the body of this document was the one entitled Journal Articles with 56% of the total production identified for analysis, followed by Session Papers with 35%. Journals are part of this classification, representing 8% of the research papers published during the period 2017-2022, in journals indexed in Scopus. In this last category, the one entitled "Redirecting the design of an educational electrical engineering game to other disciplines" stands out. This document describes the process of developing a game that simulates the fundamental aspects of a commercial establishment in charge of marketing and performing maintenance on electric motors, aimed mainly at students of Electrical Engineering. The process begins with the coding of software capable of simulating daily events of buying and selling machinery, then its design was refined, including other elements that enrich the user experience. With these elements, you can create plugins that allow you to simulate and document events in such a way that they can be used outside of your initial target audience. (Ramirez, 2021)

5. Conclusions

Through the bibliometric analysis carried out in this research work, it was possible to establish that Brazil was the country with the highest number of records published in the variables Play and Early Childhood Education. with a total of 32 publications in the Scopus database. In the same way, it was possible to establish that the application of theories framed in the area of Social Sciences, were used more frequently in the implementation of recreational games as a resource for pedagogical development in early education, it is important to highlight that games are a fundamental learning resource and of an indispensable nature for early childhood education. Its importance cannot be underestimated, as it is a dynamic tool for the overall development of children in the first stage of learning. Through play, children can enjoy a multivariate learning experience that spans the cognitive, social, emotional, and physical domains. This holistic approach to education not only provides them with important life skills, but also instills in them a love of learning that will last a lifetime. The importance of recreational play in early education

is its ability to stimulate critical thinking, problem-solving, and creativity in a pleasant, unstructured environment that promotes cognitive development. In addition, it promotes social and emotional development, fostering cooperation, empathy, and self-confidence, all of which are essential for building healthy relationships and emotional intelligence. Daily play in early education can also help reduce stress and make the learning environment more relaxing, promoting effective learning. It acts as a motivational catalyst that increases children's participation in educational activities and their ability to retain knowledge. In addition, fun games act as a bridge between abstract textbook concepts and the tangible world around children. It allows them to apply theoretical knowledge in practical scenarios, improves comprehension and improves memory. Whether it's building with blocks to understand architectural principles, engaging in imaginative role-play to develop language and social skills, or solving puzzles to improve problem-solving skills, play is a dynamic educational tool that brings abstract ideas to life and makes learning engaging and highly important.

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