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Scientific articles

Serpientes y Escaleras: propuesta innovadora para la clase de Educación Física

Snakes and Ladders: innovative proposal for the Physical Education class

Cobras e Escadas: uma proposta inovadora para a aula de Educação Física

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Resumen

El interés de los alumnos hacia la clase de Educación Física ha disminuido debido a la monotonía en las actividades y/o juegos propuestos por los docentes. El estudio exploró el impacto de la propuesta del juego tradicional *Serpientes y Escaleras físico-motrices* a través de la plataforma *Genially*. El objetivo central fue analizar las experiencias y el significado que los participantes atribuyen a dicha propuesta de juego después de su ejecución. Asimismo, se buscó fomentar la reflexión para diseñar y elaborar juegos que contribuyan a mejorar los procesos de aprendizaje del alumnado futuro. La intervención se llevó a cabo con docentes en formación de la Licenciatura en Educación Fisica de la Benemérita Escuela Normal "Manuel Ávila Camacho", ubicada en la capital zacatecana. En la fase diagnóstica se optó por utilizar un enfoque cualitativo, empleando el diseño fenomenológico, un enfoque que busca explorar y comprender las experiencias vividas por los participantes desde su perspectiva. Por otro lado, el universo de participantes estuvo compuesto por 61 docentes en formación, de los cuales 31 fueron seleccionados por conveniencia del investigador como muestra para participar en las entrevistas. Los datos recolectados se analizaron en el software MAXQDA, arrojando palabras distintivas como: motivador, satisfactorio, resistencia, innovador y divertido. Como resultado, se determinó que el juego fomenta la participación activa, favorece el interés, la motivación y el disfrute, contribuyendo al desarrollo de las

capacidades físico-motrices. Concluyendo en que esta propuesta presentada es un juego innovador y efectivo para la clase de Educación Física, capaz de integrar la tecnología con actividades físicas.

Palabras clave: Educación Física; juego Serpientes y Escaleras; Genially; tecnología educacional; innovación educativa.

Abstract

Students' interest in Physical Education classes has declined due to the monotony of activities and/or games proposed by teachers. This study explored the impact of the traditional game Snakes and Ladders with a physical-motor adaptation, implemented through the *Genially* platform. The central objective was to analyze the experiences and meanings participants attributed to this game proposal after its execution. Additionally, it aimed to encourage reflection for designing and developing games that enhance future students' learning processes. The intervention was conducted with pre-service teachers in the Bachelor's Degree program in Physical Education at the Benemérita Escuela Normal "Manuel Ávila Camacho", located in the capital city of Zacatecas. During the diagnostic phase, a qualitative approach was adopted, employing a phenomenological design to explore and understand the lived experiences of participants from their perspective. The participant pool consisted of 61 pre-service teachers, of whom 31 were conveniently selected by the researcher as the sample for interviews. The collected data were analyzed using MAXQDA software, revealing distinctive terms such as: motivational, satisfying, resistance, innovative, and enjoyable. The results determined that the game fosters active participation, enhances interest, motivation, and enjoyment, and contributes to the development of physical-motor skills. It was concluded that this proposal represents an innovative and effective game for Physical Education classes, capable of integrating technology with physical activities.

Key words: Physical Education; Snakes and Ladders game; Genially; educational technology; educational innovation.

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Resumo

O interesse dos alunos pelas aulas de Educação Física diminuiu devido à monotonia nas atividades e/ou jogos propostos pelos professores. Este estudo explorou o impacto do jogo tradicional Cobras e Escadas adaptado para uma versão físico-motora, implementado por meio da plataforma *Genially*. O objetivo central foi analisar as experiências e os significados que os participantes atribuíram a essa proposta de jogo após sua execução. Além disso, buscou-se promover a reflexão para projetar e elaborar jogos que contribuam para melhorar os processos de aprendizagem dos futuros alunos. A intervenção foi realizada com professores em formação do curso de Licenciatura em Educação Física da Benemérita Escola Normal "Manuel Ávila Camacho", localizada na capital do estado de Zacatecas. Na fase de diagnóstico, optou-se por uma abordagem qualitativa, utilizando o desenho fenomenológico, com o objetivo de explorar e compreender as experiências vividas pelos participantes a partir de sua perspectiva. O universo de participantes foi composto por 61 professores em formação, dos quais 31 foram selecionados por conveniência do pesquisador como amostra para participar das entrevistas. Os dados coletados foram analisados com o software MAXQDA, revelando termos distintivos como: motivador, satisfatório, resistência, inovador e divertido. Os resultados determinaram que o jogo promove a participação ativa, aumenta o interesse, a motivação e o prazer, contribuindo para o desenvolvimento das capacidades físico-motoras. Concluiu-se que essa proposta representa um jogo inovador e eficaz para as aulas de Educação Física, capaz de integrar tecnologia com atividades físicas.

Palavras-chave: Educação Física; juego de Cobras e Escadas; Genially; tecnologia educativa; innovación educativa.

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Introduction

One of the main challenges that can be found in physical educators graduated in Mexico is the growing lack of interest of students in this class (Physical Education) despite its multiple benefits and advantages that this physical-motor practice provides. According to Hernandez et al. (2020), the demotivation of students for the Physical Education class has become an everyday problem that has caused a significant decrease in their participation and performance.

The problem of student demotivation during Physical Education is attributed to various factors, among which the lack of innovation and dynamism in the games and/or activities proposed by teachers stands out. Radeljić et al. (2020), confirm that monotony and lack of creativity in teaching proposals can cause demotivation and boredom in students, this being one of the main obstacles to the success of education, which in turn leads to poor performance and a negative attitude.

In this order of ideas, Navarro et al. (2019) point out that students also perceive Physical Education classes as routine due to the lack of innovative and attractive pedagogical strategies that awaken their interest and active participation in acquiring the benefits that physical-motor activities bring with them. Pointing out that this class should always be characterized by being dynamic, innovative, inclusive and holistic, promoting comprehensive development, as well as the contribution of forming autonomous, critical, responsible, committed and capable students to effectively face the challenges of the 21st century.

It is evident that the Physical Education class in recent years has been gradually evolving, therefore and according to Singh and Awasthi (2024), the integration of technology attracts the interest of students due to the novelty that this represents and the daily life with which it is used in their daily lives, being necessary for the current physical educator to create dynamic and interactive learning environments that not only improve the physical health, physical-motor and socio-motor skills of students but also contribute to their autonomy and participation in the class.

In this sense, Bennasar-García (2020), highlights that physical educators must be constantly training and updating themselves in order to offer fun and stimulating proposals that respond to the interests and needs of students, proposing dynamic and motivating training processes that promote renewal and creativity. In the same way, Almonacid Fierro (2012), emphasizes that today's physical educator must be multifaceted, capable of responding to the complexities and demands of contemporary society. To do this, academic-professional training is required that allows them to design and carry out motor activities and/or games that are attractive and motivating to their students in order to comprehensively address the needs, interests and characteristics of the students in their care. Likewise, it requires having pedagogical, technological and didactic skills that favor the creation and implementation of innovative strategies, aimed at achieving human development and contributing to a better society.

Within this order of ideas, Jian (2024), also point out that it is essential for the contemporary physical educator to be up to date in the use and application of technological resources for his class, allowing him to intuitively show the essence of the actions, helping students to understand the content more clearly, to enrich active participation, collaborative work and the interest of the students. According to González García et al. (2024), the use of mobile devices during Physical Education class has the potential to motivate, interest, collaborate and interact in a meaningful way with students, providing them with meaningful experiences, by transforming educational practice into something more dynamic and attractive.

Regarding the proposal presented in this research, the traditional board game Snakes and Ladders is taken as the main basis, which according to Duchi Armijos and González Arévalo (2022), is currently presented and known in multiple versions, since it can be adapted in various ways according to the need that it has, without losing its originality, said game presents a touch of chance , and its dynamics consist of rolling dice and advancing squares on the board or going back, depending on the square where the piece remains, today this game can be developed on digital platforms, such is the case of this work or remain in its traditional format.

The authors cited above also point out that the evolution and popularity of this game, when it arrived in the United States, the game was adapted to include images and everyday situations that reflected positive and negative actions, to maintain its original purpose of teaching moral action and promoting reflection on actions and their consequences. Over time, the game has become popular throughout the world, being adapted and modified in different cultures and contexts without losing the essence of being an educational game, which also offers among its multiple benefits the development of logical thinking, decision making and problem solving, in addition to promoting social interaction, cooperation, communication and empathy, in addition to what has already been mentioned, which is the promotion of moral and ethical skills.

It is important to highlight that one of the main problems that physical educators currently experience in their classes, according to Aniszewski and Henrique (2023), is the lack of interest of students in carrying out physical-motor activities, one of the main causes being the lack of variability, motivation, creativity and innovation in the proposed activities and/or games, which can be monotonous and unattractive, reducing students' interest, motivation and commitment to active participation and the acquisition of their learning.

Regarding innovation in Physical Education, Bennasar-García (2020) indicates that this consists of producing significant changes in academic training and learning. These changes create more dynamic didactic possibilities to address educational development processes. Likewise, Ambretti (2024), state that innovation in Physical Education is all those changes that are made in the teacher's methodologies as well as in the materials they use, in order to improve learning development processes, understanding innovation as all those controlled and planned improvements. In this sense, the game presented below promises to be an innovative proposal that aligns with the conceptions of the cited authors, by increasing the motivation for the development of physical-motor skills, offering an attractive and effective didactic intervention alternative for the physical educator.

The objective of this work is to analyze the experiences lived and the meaning that future physical educators attribute to the innovative proposal of the game called *Physical-motor Snakes and Ladders*, implemented through the *Genially* platform. This analysis seeks to encourage critical and creative reflection in participants, guiding them towards the design and development of games and/or activities that contribute to improving learning development processes, facing current educational trends that, according to Morales (2013), use innovative games and/or activities adapted to these trends, needs and interests of students. This will not only enhance their participation, but also promote meaningful and autonomous learning, facilitating their development of motor skills and abilities in a positive environment during classes.

Genially software offers a wide range of functionalities and features that facilitate the creation of interactive, attractive and dynamic content, promoting innovation, creativity, interactivity, collaboration and active, meaningful and autonomous learning in different educational and training contexts. In this same sense, *Genially* helps to motivate students in the teaching and learning processes, facilitating the understanding, retention and acquisition of concepts, skills and knowledge in an effective and creative way in the current contexts of digital education and 21st century society.

According to Ain et al. (2019), integrating the various tools, platforms and digital devices in the Physical Education class will improve students' skills and knowledge, on the other hand, experimentation, exploration and implementation of new strategies, games and teaching activities will be promoted to promote in an attractive way the contents to be addressed with the students.

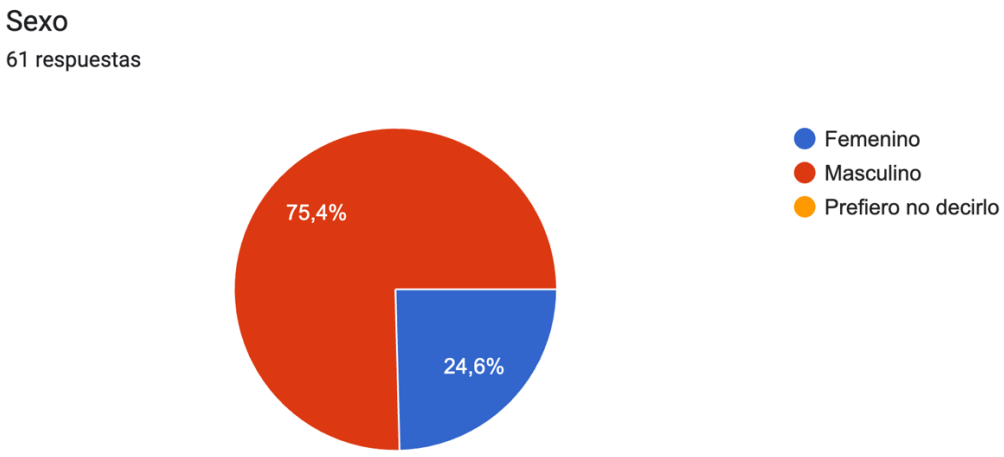
Emphasizing that digitalization in Physical Education is not a replacement for traditional practices, but rather an expansion of pedagogical possibilities. By combining digital strategies with physical-motor activities, comprehensive learning can be cultivated that motivates students to actively participate.

Material and Methods

According to Hernández-Sampieri and Mendoza (2020), this work is a qualitative research with a phenomenological-empirical design and descriptive scope. According to Karatsareas (2022), the semi-structured ad hoc interview was used as a technique for data collection. This methodology allows us to explore the phenomenon studied, in this case, the use of the Snakes and Ladders game as an innovative proposal for the Physical Education class. The objective is to describe and understand its impact through the experiences of the participating future physical educators.

The population of interest was made up of a universe of 61 future physical educators who are studying the II and IV semesters at the Benemérita Escuela Normal "Manuel Ávila Camacho" located in the capital of the state of Zacatecas in Mexico. Of these, 18 are female and 43 are male. (see figure 1), taking as a convenience sample of 31 of them (16 from the second semester and 15 from the fourth semester) with ages between 20 and 22 years.

Figure 1. Sex distribution among participants



Source: Own elaboration

Data collection was carried out using the response repository of the *Google Forms software*, which is a free *Google tool* for creating online interviews. and that was composed

of a total of 5 open questions that were intended to understand and analyze the experiences of the interviewed participants.

Said interview was shared through a link sent via WhatsApp to each of the participating teachers. This link was provided at the end of the execution of the game proposal, instructing the participants to carefully read and thoughtfully answer each of the interview questions.

The interview technique according to Kenzie et al. (2024), allowed participants to speak freely, while generating knowledge through the relationship and interaction established between the interviewer and the interviewee. The interview script was organized based on what was proposed by Cortabitarte et al. (2020), proposing the following dimensions with their respective questions:

1. *Pedagogical-didactic component of Physical Education:* How would you describe your experience participating in the adapted *physical-motor of Snakes and Ladders* game with physical-motor activities compared to traditional Physical Education games and/or activities ?
2. *Evaluation of the effectiveness and satisfaction of the educational proposal:* What degree of satisfaction have you experienced when participating in this game proposal?
3. *Development of physical-motor skills and abilities through playful approaches:* Could you mention which physical-motor skill or ability helped you improve this playful and educational approach?
4. *Integration of playful approaches and board games in Physical Education:* From your perspective as a student, how do you value the incorporation of board games into Physical Education classes?
5. *Critical reflection on the methodology and innovation of the proposal presented:* Next, make a reflection regarding the proposal of the *physical-motor Snakes and Ladders* game

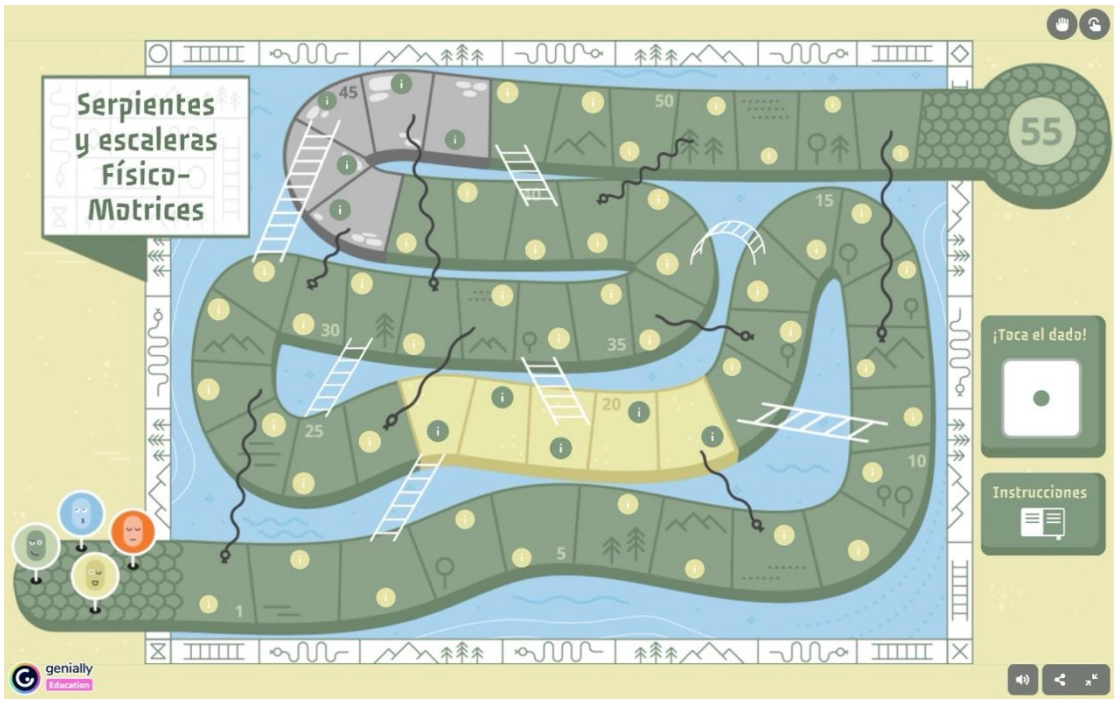
For the development and design of this instrument, theoretical reviews were carried out based on the object of study, as well as other similar research that was situated for Physical Education (for example: Colberg and Scheiner, 2022; Yuliana, and Palumian, 2023; Arufe, 2019; Navarro-Mateos and Pérez-López, 2022).

It should be noted that the instrument was validated by three fellow teachers-researchers who are experts in the field of Physical Education, who are part of the teaching

staff that houses the Benemérita Escuela Normal "Manuel Ávila Camacho". This validation of the instrument was through an evaluation format prepared based on what Hernández-Nieto (2011) indicated, to assess whether each of the five questions that make up the interview was adequate or not, based on the objective of the research. Asking them to make observations, as well as proposals for alternative questions, in case these did not meet the objective. Obtaining as a result the elaboration of the script presented here and that was the final one for the interview.

Below is the interactive game board (see figure 2), titled *Physical-Motor Snakes and Ladders*, which is visually very similar to the version of the classic game "Snakes and Ladders," only adapted to promote the physical-motor development of the participants and suitable to be played virtually through any mobile device with Internet access.

Figure 2. *Snakes and Ladders physical-motor* game board in *Genially*



Source: Own elaboration

The board consists of 55 squares. To advance, the participant must select one of the four colored figures (chips) that are displayed before square 1 and must move it to each square that corresponds to it according to the number that the "virtual dice" throws when touched, this is located on the right side of the board. Each square has a yellow or green circle represented with an information symbol. (¡), which when selected display a window that contains the information of the physical-motor challenge to be performed. It is worth

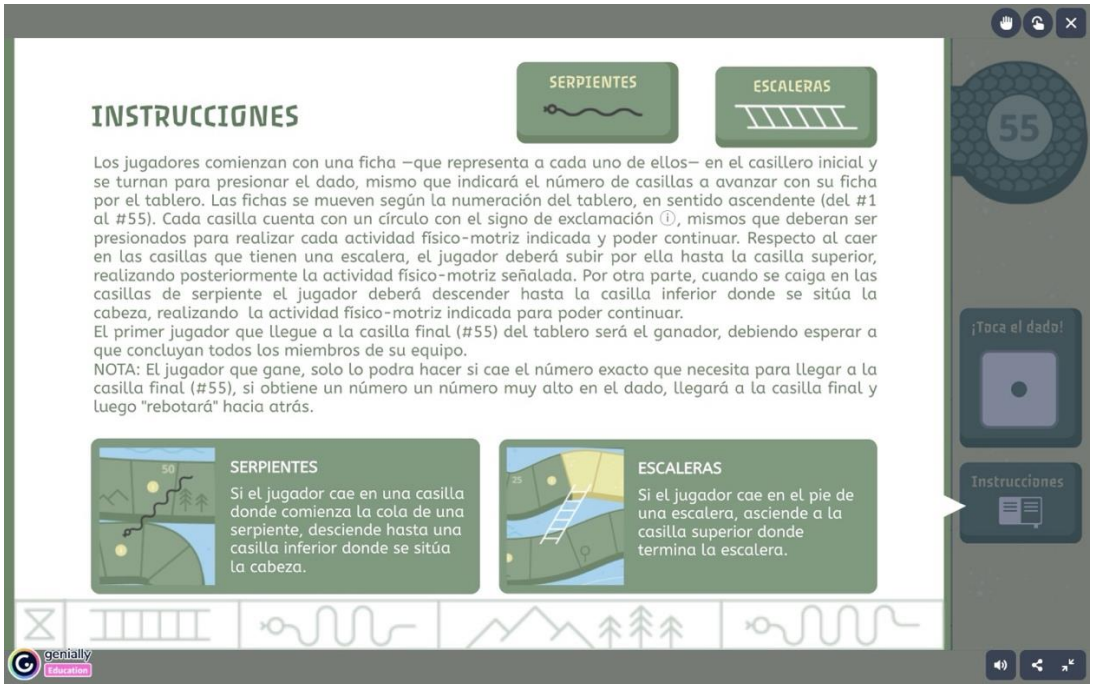
mentioning that each participant can continue in the game once they have completed the indicated challenge.

If the participant lands on the square with the head of a snake, he will go down to the square where the tail ends and will have to do the exercise indicated there. On the other hand, if he lands on a square with the base of a ladder, the participant can climb up to the upper square to which it is connected by doing the exercise indicated in that square. Square number 55, which is the last one, is only accompanied by a congratulatory text for having successfully completed the game. It should be noted that the game ends when the last member of the team manages to reach square 55.

The link to access the board designed through the *Genially* online software is attached: https://view.genial.ly/66037a066df3a300157a1a63/interactive-content-serpientes-y-escaleras-fisico-motrices.

The game instructions (see figure 3) are available by tapping the "instructions" box, located at the bottom right of the board below the "virtual die" box. This box basically explains in general terms the correct way to play the game and specifies the role of both the snake and the ladder.

Figure 3. Game instructions



Source: Own elaboration

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Next, the information contained in each of the yellow or green circles with the information symbol (¡) that each box on the board has is indicated (see figure 4), and which are the physical-motor activities to be carried out by each participant. When pressing said circle, a window will open, which indicates the box number and the textual explanation of the correct execution of the challenge, as well as an illustrative image of the same that indicates the body posture of the exercise and the number of repetitions to be performed or the time to be tolerated.

Figure 4. Representation of physical-motor challenge in a square on the board

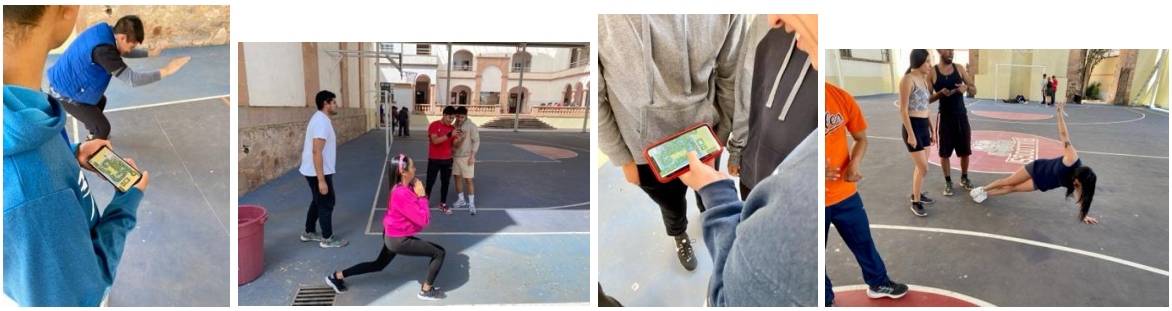
Source: Own elaboration

Subsequently (see figure 5), some evidence is shown regarding the execution of the *physical-motor Snakes and Ladders* game by the various participating groups. Throughout the visual sequence, from left to right, the use of the mobile device can be seen, which also shows the game board. In addition, it is documented how the rest of the team members play an active role in observing, supervising and validating the correct execution of the physical-motor challenges by the participant who is on duty, allowing them to ensure that the rules are followed, and that collaboration and mutual support are encouraged among the team members.

It also highlights some of the physical-motor activities that participants must perform. Remembering that each square on the board contains a specific challenge that must be completed before the player can advance. These exercises are designed to promote physical-

motor development, that is, to improve the motor skills and abilities as well as the physical capacities of the participants.

Figure 5. Execution of physical-motor activities by participant



Source: Own elaboration

Finally, in box 55, the final goal is represented, which all participants must reach, ignoring that the first player to reach this box is declared the winner of the team. When pressing the circle in this box, the message will appear: Congratulations, you've finished! (see figure 6), alluding to a recognition of the effort and dedication of the participant who managed to reach this box. Verifying that the board has been completed and each physical-motor challenge addressed has been met.

Figure 6. Final square (#55) indications on the game board

Source: Own elaboration

Google Forms was delivered via WhatsApp and in a particular way to the sample selected for the convenience of the researcher, to collect the responses and subsequently proceed to the qualitative analysis of the same through the *MAXQDA software*, which

allowed to identify and analyze each of the texts to know both the experiences and the meanings of the participants regarding the *physical-motor Snakes and Ladders* game proposal. The use of these two tools facilitated the organization and management of large amounts of qualitative data, ensuring a rigorous and detailed analysis, essential for the success of any phenomenological research.

Results

The results obtained in this research are presented below, derived from the analysis of the 31 interviews conducted with the sample selected for the convenience of the researcher. These results are described in Table 1.

In the first dimension, entitled *Pedagogical-didactic component of Physical Education* , the most common words reflect a positive perception towards the pedagogical and didactic strategies implemented. The participants consider that the methods used promote interest and commitment, adjusting to the educational context (opportunity) and maintaining an active and changing approach (dynamic). Distinctly, the word motivating stands out as an essential factor to involve and maintain enthusiasm in the proposal presented, a key element for the Physical Education class.

Regarding the *Evaluation of the effectiveness and satisfaction of the didactic proposal* , the words indicated here denote a general favorable evaluation of the game proposal. “Satisfaction” indicates that it met expectations and generated positive results for the participants, the qualifier “active” suggests that it fostered dynamism and “good” reinforces the positive perception of the game.

In the *Development of physical-motor skills and abilities through playful approaches*, the most prominent physical capacity in the development of the proposal is endurance, highlighted by the intensity and long duration in most of the physical-motor activities indicated in the game stations. In second and third place, strength and flexibility were also identified as physical capacities that can be enhanced.

Regarding the *Integration of playful approaches and board games in Education Physics,* participants consider the game proposal as novel and interesting and generally perceive it with a positive evaluation. The most prominent word is “innovative”, which reflects the perception of originality. and the ability of the proposal to be incorporated as a new game within the Physical Education class.

Finally, regarding the *critical reflection on the methodology and innovation of the proposal*, the most common words in the responses given indicate that the proposal was perceived as pleasant and attractive, both in its approach and in its execution. In addition, it was "fun", which translates into acceptance and enjoyment by the participants.

In general, the most common words in each interview response reflect a positive and promising perception regarding the five dimensions evaluated, highlighting the motivational impact, innovation and effectiveness of the proposal presented.

Table 1. Main results

Dimension	What are common words?	What are the most distinctive words?	Grouping
Pedagogical-didactic component of Physical Education.	Motivating Timely Dynamic	Motivating	Qualities of practice
Evaluation of the effectiveness and satisfaction of the teaching proposal.	Satisfying Asset Well	Satisfying	Evaluation criteria
Development of physical-motor skills and abilities through playful approaches.	Endurance Force Flexibility	Endurance	Physical abilities
Integration of playful approaches and board games in Physical Education.	Innovative Well Good	Innovative	Approach assessment
Critical reflection on the methodology and innovation of the proposal presented.	Fun Taste Interesting	Fun	Experiences

Source: Own elaboration

Procedure

Initially, the content of the game board was explained to the classrooms of each of the participating groups, and the link to it was shared with them through a WhatsApp group (specific to each semester). Subsequently, teams were formed. Each team should be made up of four students and the person responsible for providing the mobile device to be used during the game is assigned. Once this is available, a small assembly is held to dispel doubts about the mechanics of the game.

Next, we proceed to the institution's courts, distributing the teams and authorizing the start of the game.

Discussion

Although there have been no previous reported cases of the adaptation of the Snakes and Ladders board game for Physical Education classes through the use of mobile devices, there are articles that highlight the educational benefits of using both mobile devices and digital tools in said class. According to Zhou (2023), the above resources facilitate learning due to widespread adoption, continuous improvements in Internet infrastructure, the potential they bring, and the immediate accessibility with which students and/or learners obtain learning resources.

As has been observed, the interviewed participants point out, in summary, that the innovative proposal put forward, *Physical-Motor Snakes and Ladders* game is an innovative, motivating and very satisfactory tool to include in Physical Education classes, both in compulsory education and in upper secondary education, since it has great potential, although with some limitations, one could mention the dependence on mobile devices and a stable Internet connection for its implementation. Regarding the above, it is important to highlight that " innovative approaches in teaching overcome the restrictions of traditional methods that hinder student motivation " (Troya Sánchez et al. 2024).

Likewise, some of the opinions expressed by the participants in the reflections show that the physical-motor activities proposed in the game could be modified according to the purpose that is desired to be developed. Therefore, the proposals made by these same participants, in addition to providing new ideas and exercises that had not been previously considered by the authors, enrich the range of activities available. In this way, participants will be able to personalize the game to meet their particular needs, adapting it both to different

levels of ability and motor skills as well as to the intensities of the physical exercises, thus avoiding falling into monotony. Kaltsas and Gkaintartzi (2023), argue that generating spaces for participation and proposals for students within school activities will foster self-respect and confidence, leading them to feel more valued, listened to and taken into account, becoming active citizens. Making it clear that such active participation in the educational dynamics will also contribute to the formation of autonomous people committed to their own learning.

It should be noted that by using mobile devices to carry out the proposal presented, participation and teamwork were encouraged, promoting an autonomous learning dynamic for the participating students, thanks to the technological skills they possess regarding said devices. In the words of Sisouvong and Pasanchay (2024), the use of mobile devices enables educational access, at any time, and in any place, allowing students to direct their education, promoting personalized, adaptable and accessible learning experiences.

The creation and development of proposals such as the one presented in this research requires laborious preparation, especially in terms of the digital design of the game, which, although it was based on a template previously prepared by the *Genially* software that has extensive visual and interactive content, adapting its design to orient it towards carrying out physical-motor activities in a more fun and interesting way for students. Precisely Kaul et al. (2021), confirm that *Genially* is a well-known online tool in the educational field for allowing content to be generated easily and quickly, where students actively participate in a fun and stimulating environment. that improves learning and knowledge retention.

Conclusion

Based on the above findings, the multiple benefits offered by the innovative *physical-motor Snakes and Ladders* game for the Physical Education class become evident. By including the structure of the traditional board game and linking the various physical-motor activities in a single action, a significant and very attractive proposal is obtained to facilitate the learning development processes, the acquisition of content and the improvement of both the physical capacities and the motor skills and abilities of those who carry it out.

This phenomenon of study helps to reflect on the proposal presented to future physical educators, considering new game variables that facilitate and improve the teaching of various contents during Physical Education classes in basic education. By exploring these variables, participants identified various proposals for physical-motor activities to make the game more

dynamic, interesting and effective in the transmission of knowledge and the development of motor skills.

physical-motor Snakes and Ladders game proposal for the field of Physical Education, goes beyond physical and motor development, the integration of technology, the promotion of values and adaptation to various educational needs, which makes it a valuable tool for future physical educators, innovating this class and positively influencing the comprehensive training of pupils and students.

Regarding the answers obtained in the interview, it is noteworthy that the game proposal is considered by the participants as an innovative and motivating resource during the practice sessions, combining board games, technology and Physical Education content. In addition, they highlight that this type of game contributes to the development of skills and the elaboration of innovative proposals during teacher training. Finally, they mention that the use of mobile devices, particularly cell phones, in the educational context can complement the content of the game and increase student motivation.

Finally, the adoption of the *physical-motor Snakes and Ladders* game in Physical Education, it enhances both motor skills and physical abilities, but also promotes a dynamic and satisfying virtual learning environment. This proposal not only promises a significant advance in the methodology of Physical Education, it is also presented as an example to inspire future physical educators to revolutionize the creation of games and/or motor activities through the use of technologies.

Future lines of research

In a continuous effort to innovate and improve both the resources and teaching aids in Physical Education classes, this modified version of the classic board game “Snakes and Ladders” has been developed, adapted to virtuality and integrated with physical-motor activities. This proposal not only aims to enrich the general knowledge of future physical educators, but also to provide them with innovative motor game experiences from an interactive approach that stimulates their creativity to generate new proposals. Some of these lines could include the following:

1. Integration of Educational Software in Physical Education: Explore how the integration of *Genially* and the use of mobile devices improves the learning experience in the context of the *physical-motor Snakes and Ladders* game.

Analyze the acceptance and adaptation of these technologies by students and teachers in diverse educational contexts.

2. Inclusion and Accessibility in Physical Education: Examine how the *physical-motor Snakes and Ladders* approach can be adapted to be inclusive and accessible for students with diverse abilities and needs. Identify best practices to ensure that all students, regardless of economic, physical, or connectivity limitations, can fully participate in the activities.
3. Analysis of the Emotional Impact on Participants : It is relevant to investigate the emotional effects of motor games in Physical Education classes, focusing on how this proposal impacts self-esteem, stress reduction and the general perception of the class by each of the participants.

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