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The Contribution Of Implementing Play-Based Learning Strategies In Physical Education Classes To Achieving Operational Objectives -A Field Study In Selected Middle Schools Of The Southeastern District Of Médéa Province-

Dr. Abderrazak Hassini Lecturer "A", Mohamed Boudiaf University of M'sila, Algeria, abderrazak.hassini@univ-msila

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Abstract:

This study aims to know the extent to which The Contribution of Implementing Play-Based Learning Strategies in Physical Education Classes to Achieving Operational Objectives .In our current study, and according to the problem presented, we relied on using the descriptive approach, as it is more appropriate to the nature of our research. The sample included 72 teachers in the intermediate stage. The questionnaire was distributed to the teachers randomly. This was done by designing a questionnaire that included a list of simple questions, most of which are asked in the form of an interrogative written in a formula expressing a specific behavioral goal. At the end of this study, we concluded that there is an effective and positive contribution to the application of Implementing Play-Based Learning Strategies in Physical Education Classes to Achieving Operational Objectives. Learning strategies through play in the activities of the physical education classes have a major role in achieving Operational Objectives that are intended to be achieved in the curriculum and achieving the targeted competencies. They contribute to developing the physical, cognitive, skill, emotional and social aspects of the student.

Keywords: Implementing Play-Based Learning Strategies, Physical Education Classes, Operational Objectives.

Research Problem:

Physical education has always been of great importance in students' lives, prompting educators and researchers to pay significant attention to it. This is not only because it contributes to physical development but also because its role extends to other domains, including cognitive, affective, social, and psychomotor aspects.

Charles Butcher defines physical education as "an integral part of general education that aims to prepare a well-rounded citizen in terms of physical, mental, emotional, and social development through selected sports activities designed to achieve these outcomes" (**Mohamed Al-Hamahami, 1990, p. 18**).

Moreover, physical and sports activities are fundamental to education and personal development, playing a crucial role in promoting overall health and physical fitness. They also enhance social interaction and experiential learning. Numerous educational resources cover various aspects of physical and sports activities, including books, scientific articles, websites, and other instructional materials.

Since teaching is an educational practice that helps students achieve the desired learning objectives, it is a multifaceted activity that operates on two dimensions: learning and instruction. Its primary purpose is to bring about changes in students' behavior through guidance, experiences, and a suitable learning environment. Teaching is defined as "a continuous series of relationships that emerge between the teacher and the student, which aid the student's development—whether as an individual, a participant in an activity, or someone acquiring a certain level of skill in physical activities. This implies that the effectiveness of teaching depends on the alignment between its objectives and the actual learning experience in the classroom. It enables students to acquire knowledge that can shape their personalities and fulfill intended educational benefits" (**Ali & Jalal, 2008, p.).**

A **strategy** refers to the steps taken by the teacher to connect educational concepts, serving as a tool, medium, or means through which learners acquire knowledge and skills to achieve specific objectives. Modern teaching strategies place significant emphasis on developing thinking skills, as they are the most effective means of reinforcing and retaining information for learners through feedback mechanisms. Therefore, it is essential to adopt a teaching strategy that facilitates this goal and enables students to apply what they have learned. The instructional process should be built on a solid foundation of active interaction between the teacher, the learner, and the subject matter to effectively achieve educational and pedagogical objectives.

In advanced societies that adopt modern educational theories, the educational needs of the subject have been well identified. This has led educational policymakers to ensure that physical and sports education is taught at all levels, just like other subjects. Experts in the field of education have worked on developing an instructional strategy that supports the objectives of this subject, focusing primarily on play-based learning to achieve both operational and philosophical goals. Recognizing the importance of sports in the holistic development of individuals, this approach aims to prepare students to acquire qualities that enable them to navigate real-life challenges and engage in competitive environments.

All of this is a result of the ongoing reforms in education, which involve the general development of teaching techniques and the increased interest in physical education, specifically. This aligns with the massive knowledge explosion and the phenomenon of globalization. As a result, education is now required to maximize human resource potential by developing human skills and enhancing their positive role in ensuring the quality of education. Many researchers have emphasized thatinstructional strategies play a crucial role in teaching students, and this can only be achieved by adopting effective teaching and learning strategies.

Based on this, the teacher must strive to help students transition from passivity to activity and from stagnation to effectiveness during various teaching situations by optimally utilizing appropriate teaching tools, including the use of different teaching strategies (**Ali Omar, 2008, p. 114**).

From this theoretical background and the ongoing reforms and developments in education, particularly in the teaching field, the research problem can be framed in the following question:

What are the contributions of implementing play-based learning strategies in physical education classes to achieving operational objectives?

1. General Question:

- What are the contributions of implementing play-based learning strategies in physical education classes to achieving operational objectives?

2. Specific Questions:

- Does the implementation of play-based learning strategies in physical education classes contribute to achieving psychomotor objectives?

- Does the implementation of play-based learning strategies in physical education classes contribute to achieving cognitive objectives?

- Does the implementation of play-based learning strategies in physical education classes contribute to achieving affective objectives?

3. Study Hypotheses:

- General Hypothesis:

The implementation of play-based learning strategies in physical education classes contributes to achieving operational objectives.

- Specific Hypotheses:

- The implementation of play-based learning strategies in physical education classes contributes to achieving motor objectives.

- The implementation of play-based learning strategies in physical education classes contributes to achieving cognitive objectives.

- The implementation of play-based learning strategies in physical education classes contributes to achieving social objectives.

4. Importance of the Study:

- This study addresses an educational topic focusing on the use and application of the modern play-based learning strategy and its role in achieving behavioral operational objectives among students. It can also provide valuable insights for physical education teachers specifically and educators interested in teaching curricula through educational games in general.

- The study tackles a vital and significant topic for those involved in field-based educational work, including teachers, subject inspectors, and educational specialists, aiming to enhance the overall educational level.

- It sheds light on a teaching strategy that takes into account careful planning and the optimal use of methods within each situation, as well as the extent to which they contribute to achieving the desired goals.

- It draws attention to the fact that modern play-based learning strategies ensure the comprehensive development of various aspects of the learner's personality by leveraging the unique features of physical education.

- This study is expected to contribute, within an applied and educational context, to the development of play-based learning strategies as an effective and desirable teaching approach, fostering operational objectives among students at various educational stages.

5. Objectives of the Study:

The general objectives we aim to achieve through this study are as follows:

- To understand the contributions of play-based learning strategies in physical education classes to achieving behavioral objectives.

- To understand the contributions of play-based learning strategies in physical education classes to achieving psychomotor objectives.

- To understand the contributions of play-based learning strategies in physical education classes to achieving cognitive objectives.

- To understand the contributions of play-based learning strategies in physical education classes to achieving affective objectives.

- To propose some practical outcomes based on understanding the contributions of implementing play-based learning strategies in physical education classes.

-6- Definition of Concepts and Terms in the Study:

Definition of Strategy:

-Linguistic Definition:

The term "**strategy**" originally refers to "the science of war plans or the art of military operations and movements."

(Fouad Afram Al-Bustani, Munjed Al-Tullab, 2007, p. 8).

Terminological Definition:

The term is derived from the Greek word **"strategies",** meaning "the art of leadership." Initially, its use was limited to military fields and was closely linked to the evolution of warfare. Strategy is the art of utilizing available resources to achieve specific objectives and is considered a systematic body of scientific information about the optimal principles of warfare. However, its application is no longer confined to military domains; it has become a shared concept across various fields, including education. In general, the term "strategy" refers to a set of procedures employed to accomplish one or more tasks in pursuit of a defined goal. (Kubaisi Abdel Wahid, 2014, p. 57).

Definition of Learning:

- Linguistic Definition:

The word "learning" in Arabic derives from the verb **ʿalima** (to know), meaning "to acquire knowledge or information." It also signifies mastering a subject or becoming proficient in it. The term encompasses the processes of seeking, receiving, and internalizing knowledge. **(Ibn Manzur**, pp. 3083–3084).

- Terminological Definition:

Learning is a communicative activity aimed at stimulating learners' motivation and facilitating education. It involves a set of actions and decisions made by either the teacher or the learner within an educational context. Additionally, learning is a field that studies teaching methods and techniques while also focusing on how to structure educational experiences that engage students in order to achieve desired learning outcomes. Teaching, therefore, is a deliberate design or structured approach to an educational setting in a way that fosters learning, with the teacher overseeing and managing the process.

(Sabihi Abdel-Hay, Al-Kessaymia, 2010, p. 32).

Definition of Learning Through Play:

- Linguistic Definition:

According to"**Al-Munjid in Language and Media",** play **(*laʿib*)** means engaging in activities for pleasure and recreation, as opposed to seriousness. (**Al-Munjid fi al-Lugha wa al-Iʿlam,** Vol. 31, p. 723).

The French **HACHETTE** dictionary defines play as a physical or mental activity aimed at entertaining the individual engaged in it. (**HACHETTE French Dictionary,** 1992, p. 885).

- Terminological Definition:

Khalida Fazzar describes play as "a psychological and social necessity required by the physical, mental, and emotional development of a student." (**Fazzar Khalida,** 1984, p. 43).

Learning through play refers to structured activities governed by specific rules, usually involving two or more participants, with predetermined objectives. This method incorporates elements of competition, cooperation, and chance.

"Learning through play is an important means for students to release various emotions during this stage, allowing them to express their hobbies, interests, and sense of self-worth." (**Balkis Ahmad,** 1987, p. 34).

Additionally, play-based learning serves as an effective tool for individualized education, addressing differences in students' abilities and learning styles. Every child can select games that match their skills or participate in group games suited to their potential, fostering personal growth while remaining actively engaged in the learning process. (**Murai Tawfiq**, 1998, p. 17).

Definition of the Learning Through Play Strategy:

Dr. Naji defines it as "a teaching and learning strategy that harnesses the immense cognitive potential of the human mind, allowing students to engage in educational activities and use play to discover knowledge, scientific principles, and logical thinking in educational settings—while also providing enjoyment, flexibility, and entertainment." (**Naji**, 2022, p. 39).

Al-Rashidi describes it as "a set of procedures and steps used to teach a specific subject while enhancing skills and academic achievement." (**Al-Rashidi Abu Lom**, 2019, p. 56).

It is also seen as a systematic approach to problem solving, where students engage in various educational activities to seek solutions through scientific methods. (**Othman Mustafa Afaf**, 2014, p. 251).

Definition of Physical Education:

Physical education is an integral part of general education, evolving throughout history under the same influences that shaped education in general. Its development has varied according to different civilizations and cultures, as well as the political and economic systems of societies. Many people misunderstand the concept of physical education, making it necessary to clarify its meaning for students. Some believe it solely refers to various sports, while others associate it with muscular strength and physical appearance.

(Al**-Badri Qasim Hassan**, 1979, pp. 77-78).

Sharman defines physical education as "a simple part of education that is delivered through activities relying on the human body's motor system, which in turn grants the individual specific psychological characteristics." (Sarls Pioker, 1964, p. 23).

Definition of Behavioral (Operational) Objectives:

- Linguistic Definition:

Behavioral objectives refer to "a type of linguistic formulation that describes a specific behavior that can be observed and measured, and that the learner is expected to perform at the end of an activity." (**Wissam Hassan Dawood**, 2011, p. 9).

Al-Qatami defines them as "a part of linguistic formulation that clarifies a behavior, making it measurable and observable, with the expectation that the learner will be capable of performing it in an educational setting." (**Yusuf Al-Qatami**, 2011, p. 19).

Dr. Noura Saleh Al-Dhuwaikh, in her research on behavioral objectives, compiled definitions from Western scholars. Taylor defines them as "types of behavioral changes that the educational institution seeks to instill in the student." Meanwhile, **Mager** describes them as "a goal expressed through a statement that outlines a proposed change intended for the student, describing the learner's expected state upon successfully completing the educational phase. It is also a description of a pattern of behavior or performance that the learner is hoped to demonstrate." (**Al-Dhuwaikh Noura**, 2016, p. 7).

- Terminological Definition:

Experts in curriculum design, measurement, and assessment generally agree that behavioral objectives encompass all observable and measurable learning outcomes, whether cognitive, affective, or psychomotor. These objectives are typically formulated as follows:

- Infinitive verb (masdar) + Behavioral verb (present subjunctive verb) + Final observable behavior (future-oriented desired outcome).

Additionally, behavioral objectives should always describe the learner's expected behavior, not the teacher's actions.

7-Previous Studies

First Study: Ankik, Salah Eddine & Mokaddam, Nour Eddine (2020)

Title: The Degree of Contribution of the Problem-Solving Strategy in Developing Certain Motor Skills Among Secondary School Students According to the Assessments of Secondary Education Teachers in the Wilaya of Sétif.

Research Problem:

What is the degree of contribution of the problem-solving strategy in developing certain motor skills among secondary school students, according to the assessments of secondary education teachers in the Wilaya of Sétif?

Research Objectives:

- Presenting an overview of the problem-solving strategy and its teaching methodology.

- Examining the reality of teaching physical education and sports using the problem-solving strategy in developing motor skills, including balance, jumping, and rolling.

- Identifying the degree of contribution of the problem-solving strategy in developing the jumping skill in physical education.

- Determining the degree of contribution of the problem-solving strategy in developing the rolling skill in physical education.

Methodology: Descriptive method.

Research Population and Sample:

22 secondary school teachers. Sample: 22 teachers. Research tool: Questionnaire.

Key Findings:

- The problem-solving strategy contributes to the development of the balance skill in physical education to a moderate degree, according to teachers' assessments.

- The problem-solving strategy contributes to the development of the jumping skill in physical education to a moderate degree, according to teachers' assessments.

- The problem-solving strategy contributes to the development of the rolling skill in physical education to a moderate degree, according to teachers' assessments.

-Second Study:

Dr. Boudjerada Abdallah (2017)

Title: The Role of Cooperative Learning Strategies in Developing Motor Skills Among Middle School Students – A Field Study in the City of Metlili, Wilaya of Ghardaïa.

Study Objectives:

The study aims to highlight the effective role played by the cooperative learning strategy in fostering various aspects of student development, particularly cognitive and motor growth, in addition to the following objectives:

- Investigating the role of the cooperative learning strategy in developing motor skills.

- Examining the impact of the cooperative learning strategy on physical improvement.

- Exploring the role of the cooperative learning strategy in enhancing intelligence.

Methodology: Descriptive method.

Research Population and Sample:

The research sample was randomly selected and included physical education teachers in the city of Metlili.

Key Findings:

- Cooperative learning strategies play a role in developing motor skills among middle school students.

- Cooperative learning strategies contribute to enhancing intelligence among first-year middle school students.

-Third Study:

Professor Amezian Bahia & Professor Khattab Hussein (2015)

The Impact of Using Cooperative Learning on Increasing Learning Motivation Among Second-Year Middle School Students – A Field Study at Lakhdar Filali Middle School in Blida.

Study Objectives:

- This research aims to assess the effectiveness of the cooperative learning strategy in increasing learning motivation among second-year middle school students.

Methodology: - A quasi-experimental design with pre- and post-testing applied to the same individuals.

Research Population and Sample:

- The population includes second-year middle school students enrolled in institutions under the Directorate of Education of Blida during the 2011/2012 academic year, totaling (21,216) students across 129 middle schools.

- The research sample consisted of 88 male and female students.

Key Findings:

- A positive effect on students' motivation and willingness to learn when using the cooperative learning strategy.

- Encouraging students to learn independently through proper guidance toward discovering practical applications of the subject matter.

- Increased student interaction and collaboration.

- A more active and engaged role for students, as they learn alongside their peers.

-Fourth Study:

M. Zyadah Salem Abd (2013). **Title**: The Impact of Using the Brainstorming Strategy within the Framework of Cooperative Learning on the Cognitive Achievement of the History of Physical Education and Sports Course Among Students of the Faculty of Physical Education

Research Problem:

Does the use of the brainstorming strategy within the framework of cooperative learning affect the cognitive achievement of the History of Physical Education and Sports course among students of the Faculty of Physical Education?

Research Objectives:

- To examine the impact of using the brainstorming strategy within cooperative learning on the cognitive achievement of the History of Physical Education and Sports course among students of the Faculty of Physical Education.

Methodology: Experimental approach.

Study Population: Students of the Faculty of Physical Education and Sports.

Sample: 40 first-year students from the Faculty of Physical Education, University of Tikrit.

Key Findings:

- The brainstorming strategy had a significant impact on the cognitive achievement test results for first-year students in the History of Physical Education course.

- The brainstorming strategy within cooperative learning was more effective than the traditional teaching method in enhancing cognitive achievement.

- This strategy helps break barriers between teachers and students, encouraging students to participate more actively.

- The approach is engaging and enjoyable, revealing students' interests and significantly contributing to lesson development.

-Fifth Study:

Student: Nassima Mahboubi (2013). Master's Thesis in the Theory and Methodology of Physical Education and Sports, Specialization in Sports and Educational Activities.

Title: The Relationship Between the Problem-Solving Strategy and the Development of Creative Thinking During Physical Education Sessions – A Field Study on Secondary School Students (19 years old) in Batna Province.

Research Objectives:

- To examine the effectiveness of two teaching methods in developing general and motor creative skills among third-year secondary school male students.

- To determine which of the two methods is more effective in enhancing general and motor creative skills in third-year secondary school male students.

- To assess the effectiveness of the proposed educational unit in handball using the problem-solving approach in developing general and motor creative skills.

Methodology: The researcher employed the experimental approach.

Study Population and Sample:

- The study population consisted of third-year secondary school male students at Martyr Al-Abed Aissi High School in Ras El Aioun, Batna Province, totaling 106 students.

- The research sample included 30 students from the same school, selected purposefully and equally distributed into two groups.

1- Key Findings:

- Considering individual differences leads to varied student responses.

- Developing different cognitive processes by providing educational situations that encourage students to take initiative and ask questions.

- The brainstorming method proved to be more effective than the lecture method in developing scientific thinking.

- **Applied Aspect:**

1- Exploratory Study:

The exploratory study represents the initial step that provides the researcher with a general overview of the various aspects of the field study. Its primary objective is to ensure the suitability of the research site, verify the reliability of the data collection tool, and determine the appropriate time frame and requirements for conducting the study.

Through this study, we aim to highlight the role of play-based learning strategies in physical education sessions in achieving behavioral objectives. This is examined through the experiences, daily observations, and perspectives of teachers during both in-class and extracurricular sessions.

To achieve this, we engaged with several secondary education institutions and contacted physical education teachers, distributing questionnaires to them as key participants in the research.

2- Research Methodology:

The methodology refers to the approach or method adopted by a researcher in investigating a problem and reaching solutions or conclusions (Al-Assiwi, Abdel Fattah Mohammed, 1996, p. 13).

Since selecting the appropriate methodology is the first step toward conducting reliable scientific research and obtaining accurate results, we have chosen the descriptive method for this study. Given the nature of our research problem, this approach is the most suitable, as it allows us to examine the significance of applying play-based learning strategies in physical education sessions to achieve procedural objectives.

3- Research Variables:

- **Independent Variable:** Play-based learning strategies.

- **Dependent Variable**: Procedural (behavioral) objectives.

4- Research Population and Sample:

4-1-Research Population:

The research population refers to all elements of the phenomenon under study. In reality, studying an entire population requires significant time, effort, and financial resources. Instead, selecting a representative sample allows the researcher to achieve the study's objectives efficiently (Milhem, Sami, 2000, p. 220).

Since our study focuses on the role of play-based learning strategies in physical education sessions in achieving procedural (behavioral) objectives, as perceived by middle school physical education teachers, the research population includes middle school physical education teachers in Médéa province.

4-2-Research Sample:

A research sample is a subset of the study population, selected in a specific manner, on which the study is conducted. The findings are then generalized to the entire population (Hammam, Talaat, 1987, p. 18).

Our sample consists of 72 middle school physical education teachers from Sétif province, selected from the original research population, which includes secondary schools in the province. The sample was chosen purposively, representing 76% of the total 95 teachers.

4-3- Data Collection Methods (Research Instruments):

Descriptive studies employ various tools to report the characteristics of a problem, examine surrounding differences, and reveal correlations with other variables for a precise description of the phenomenon (Shafik, Mohammed, 1998, p. 111).

4-3-1- Questionnaire:

A questionnaire is a tool comprising a set of written questions designed to obtain information and opinions from respondents about a specific phenomenon (Fatima & Mirvat, 2000, p. 66).

To analyze a phenomenon statistically, it is essential to gather relevant data. In this study, a questionnaire was designed, consisting of a list of closed-ended questions, mostly simple and formulated as direct inquiries with predetermined response options (Yes, No, Sometimes), as well as semi-closed questions that allow respondents to justify their answers when selecting "No."

The questionnaire was distributed to the sample through face-to-face interviews or via email and initially included three main sections.

The first axis: Applying learning strategies through play in physical and sports education sessions contributes to achieving psychomotor objectives.

The second axis: Applying learning strategies through play in physical and sports education sessions contributes to achieving cognitive objectives.

The third axis: Applying learning strategies through play in physical and sports education sessions contributes to achieving affective objectives.

The questionnaire was reviewed by a group of specialized referees, and we requested their feedback regarding the linguistic and scientific formulation of the questions as well as the arrangement of the axes. Based on the feedback provided by the referees, some questions were removed, others were modified, and some were reordered to ultimately finalize the questionnaire in its final form.

The final version of the questionnaire consists of 27 items distributed across three axes, with responses based on a Likert scale (No, Yes, Sometimes, and if the answer is No, an explanation is provided).

4-3-2- Psychometric properties of the study tools (validity, reliability, objectivity):

- **Validity of the tool:** Validity refers to the comprehensiveness of the questionnaire in covering all the elements that need to be included in the analysis, both in terms of the clarity of its items and their terminology, ensuring that it is understandable to all who use it. The validity of the questionnaire means ensuring that it will measure what it is intended to measure.

4-3-3- Reliability:

A table illustrating the results of the reliability coefficient for the study tool, which is the questionnaire on the role of play-based learning strategies in physical education and sports classes in achieving behavioral objectives.

It is evident from the table results that the reliability coefficient for the first axis is 0.775, for the second axis it is 0.763, and for the third axis it is 0.732. The reliability coefficient for the total questionnaire is 0.796, which is greater than the minimum acceptable value of 0.60 for reliability. Therefore, we can conclude that the study tool exhibits reliability.

Variables	Number of Items	Cronbach's Alpha Reliability Coefficient
First Axis	9	0,775
Second Axis	9	0,763
Third Axis	9	0,732
Total Questionnaire	27	0,796

4-3-4- Study Design and Statistical Processing:

The statistical analysis of the current study was carried out using the Statistical Package for Social Sciences (SPSS) version 29, employing the following statistical methods:

- Chi-square (χ^2)
- Cronbach's Alpha coefficient
- Pearson correlation coefficient: to calculate internal consistency validity.

4-3-5- Steps for Conducting the Field Study:

After selecting and determining the sample, the questionnaires were distributed to the sample members. The distribution was done randomly, either by handing the questionnaires in person or sending them via email.

- **Time Frame:** From February 2024 to May 2024.

- **Geographical Scope**: Secondary schools in the southeastern district of Médéa.

5- Presentation and discussion of hypotheses in light of the results:

1. Presentation and analysis of the sample respondents' answers:

5-1-First axis – The contribution of implementing play-based learning strategies in physical education and sports classes to achieving psychomotor objectives.

Question 01: Do play-based learning strategies in physical education and sports classes play a role in enabling the student to understand the relationship between the take-off point, the approach steps, and the placement of the pivot foot on the board in the long jump?

Table No. 01: Illustrates the role of play-based learning strategies in physical education and sports classes in enabling the student to understand the relationship between the take-off point, the approach steps, and the placement of the pivot foot on the board in the long jump.

Responses	Frequency	Percentage	Chi-Square Value		Degrees of Freedom	Significance Value	Significance Level
			Calculated Value	Tabulated/Critical Value			
Yes	62	84.9	103.698	5.991	2	0.000	0.05
No	8	11.6					
Sometimes	2	3.5					
Total	72	100%					

The table results show that a very high percentage of the study sample, reaching 85%, believe that learning strategies through play play a role in understanding the relationship between the starting point, approach steps, and the placement of the pivot foot on the board during physical education sessions.

This indicates that the study participants perceive a significant value in using learning strategies through play and interactive learning processes in this context. Meanwhile, 12% of the study sample do not see these strategies as playing a role in understanding the mentioned elements. Additionally, 3% believe that these strategies sometimes have a role and sometimes

do not, which may be attributed to factors such as the duration of the physical education session, overcrowding, the teacher's approach, or the availability of resources.

Considering the Chi-square test value of 103.698, which is statistically significant with a p-value of 0.000 (since it is smaller than the 0.05 significance level), we can conclude that there are statistically significant differences in the responses of the study sample, favoring the group with the highest frequency.

Result:

From the above, we conclude that the majority (85%) of the respondents confirm that learning strategies through play play a role in helping students understand the relationship between the starting point, approach steps, and the placement of the pivot foot on the board. This is achieved by placing them in a situation that requires coordination between the starting point and the number of steps needed to reach the board with the appropriate foot. This creates a sense of uncertainty and curiosity that drives students to practice in order to find a solution. This outcome is a measurable and observable psychomotor behavioral result, which aligns with the findings of the study by(Ankik Salahuddin and Mukaddam Khalil 2020.)

Question 02: Do learning strategies through play in physical education contribute to stimulating students' creative thinking in finding solutions based on situations and problems.

Table No. 02: Demonstrates the role of learning strategies through play in physical education in stimulating students' creative thinking to find solutions based on situations and problems.

Responses	Frequency	Percentage	Chi-Square Value		Degrees of Freedom	Significance Value	Significance Level
			Calculated Value	Tabulated/Critical Value			
Yes	58	83.7	99.372	5.991	1	0.000	0.05
No	11	12.8					
Sometimes	3	3.5					
Total	72	100%					

It is evident from the table results that 83% of the sample members believe that learning strategies through play in physical education classes play a significant role in stimulating creative thinking to find solutions according to different situations and problems. In contrast, a small percentage (13%) do not believe that these strategies have a role in this regard, and 4% answered that it happens sometimes.

The interpretation of these results suggests that learning strategies through play have the ability to stimulate creative and innovative thinking among students by providing an interactive environment that encourages thinking outside the box. As an educational tool, learning through play allows students to experiment with new ideas and solutions in an enjoyable and motivating way, leading to the development of their creative and problem-

solving skills. This interactive environment can be effective in problem-solving and enhancing collaboration among students, thus improving their educational experience and developing their abilities holistically.

Considering the value of the Chi-Square test, 99.372, it is statistically significant with a significance value of 0.000, which is smaller than the significance level of 0.05. Therefore, we can conclude that there are statistically significant differences in the responses of the study sample in favor of the most frequent category.

Derivation: From the above, we derive that the majority (84%) of the respondents confirm that learning strategies through play play a role in stimulating students' creative thinking to find solutions according to different situations and problems. This occurs when students are placed in problem-solving situations, creating a state of uncertainty and curiosity that drives them to practice until they reach a solution. This represents a psychomotor behavioral outcome that can be measured and observed. This aligns with the findings of (Nassima Mahboub Ii 2013).

5-2- **Second Axis**: The Role of Applying Learning Strategies Through Play in Achieving Cognitive Goals

Question 3: Do learning strategies through play in physical education contribute to students' understanding of the importance of sports in school and general life?

Table No. 3: Illustrates the role of learning strategies through play in helping students understand the significance of sports in school and everyday life.

Responses	Frequency	Percentage	Chi-Square Value		Degrees of Freedom	Significance Value	Significance Level
			Calculated Value	Tabulated/Critical Value			
Yes	66	93.0	138.163	5.991	2	0.000	0.05
No	1	1.2					
Sometimes	5	5.8					
Total	72	100%					

The table results show that **(93%)** of the sample believe that play-based learning strategies in physical education play a major role in students' understanding of the importance of sports in school and everyday life. In contrast, **(1%)** do not see any role for these strategies, while **(6%)** responded with "sometimes."

These results suggest that play-based learning strategies can make physical education sessions more effective and engaging, enhancing students' awareness of the importance of sports in their daily lives. Play allows students to experience the benefits of physical activity directly, helping them understand its role in maintaining physical and mental health. Additionally, both individual and team games can reinforce social values such as cooperation and discipline, positively impacting their school and general life.

On the other hand, the (1%) who do not see an impact may be influenced by external or personal factors, such as a lack of interest in sports or a preference for other learning methods.

Given the Chi-square test value of 138.16, which is statistically significant at p = 0.000 (less than 0.05), it can be concluded that there are statistically significant differences in the responses in favor of the majority.

Derivation: The majority (93%) of the respondents confirm that play-based learning strategies help students understand the importance of sports in both school and everyday life.

This is achieved by placing them in a learning environment characterized by freedom and safety, where they can express ideas, opinions, and information about the significance of sports without restrictions, evaluation, or criticism. Such an educational setting fosters the generation of a greater amount of cognitive ideas, making it a measurable and observable cognitive-behavioral goal. This aligns with the findings of Dr. Naeem Al-Sharif (2020) and M. Zyadah Salem Abd (2013).

Question 4: Do play-based learning strategies in physical education help students recognize response mechanisms to various stimuli?

Table No. 4: Illustrates the role of play-based learning strategies in physical education in enabling students to identify response mechanisms to different stimuli.

Responses	Frequency	Percentage	Chi-Square Value		Degrees of Freedom	Significance Value	Significance Level
			Calculated Value	Tabulated/Critical Value			
Yes	64	90.7	127.977	5.991	2	0.000	0.05
No	3	1.2					
Sometimes	5	8.1					
Total	72	100%					

The table results indicate that (91%) of the sample believe that play-based learning strategies contribute to students' understanding of response mechanisms to stimuli. (1%*) answered "No," while (8%)responded with "Sometimes."

This reflects a broad acceptance of the importance of these strategies in enhancing learning and interaction skills. It can be inferred that students perceive educational activities based on play-based learning and interaction as significantly improving their ability to recognize and understand different stimuli. These strategies foster active engagement and dynamic learning, leading to better cognitive and perceptual skill development. Conversely, the minority who disagreed may do so due to a lack of awareness about the role of these strategies or environmental and resource-related constraints.

Considering the Chi-square test value of 127.97 , which is statistically significant at p = 0.000 (less than 0.05), it can be concluded that there are statistically significant differences in the responses of the study sample in favor of the majority.

Derivation: Based on the above, the majority (91%) of the participants confirm that play-based learning strategies play a role in helping students understand the response mechanisms to various stimuli. This is achieved by placing them in an educational setting based on play strategies to generate a greater amount of ideas, information, and opinions, characterized by freedom and safety in expressing thoughts, opinions, and information without fear of confiscation, evaluation, or criticism, leading to knowledge acquisition. This is a behavioral cognitive goal that is measurable and observable. This is supported by the study of M. Ziadah Salem Abd (2013).

Question 5: Do play-based learning strategies in physical education and sports classes help students understand the scientific techniques for managing effort in middle-distance races?

Table No. 5: Clarifies whether play-based learning strategies in physical education and sports classes help students understand the scientific techniques for managing effort in middle-distance races.

Responses	Frequency	Percentage	Chi-Square Value		Degrees of Freedom	Significance Value	Significance Level
			Calculated Value	Tabulated/Critical Value			
Yes	46	62.8	40.558	5.991	2	0.001	0.05
No	24	30.2					
Sometimes	4	7					
Total	72	100%					

It is evident from the table that 63% of the sample participants believe that play-based learning strategies in physical education classes contribute to students' understanding of the scientific techniques for managing effort in middle-distance races. On the other hand, 30% of the sample do not believe that these strategies contribute to students' understanding of these techniques, and 7% were in favor of "sometimes."

This can be explained by the fact that physical education classes generally focus more on practical and movement aspects, which may lead to students not acquiring the scientific techniques as required. However, when interactive learning scenarios are applied using these strategies, there is a clear positive impact in introducing and helping students understand these techniques.

Regarding the statistical Chi-square value of 40.558, it is statistically significant with a p-value of 0.000, as it is smaller than the significance level of 0.05. Thus, we can conclude that there are statistically significant differences in the study sample's responses in favor of the largest group of repetitions.

Derivation: Based on the above, the majority (36%) of the participants confirm that play-based learning strategies play a role in helping students understand the scientific and technical techniques for managing effort in middle-distance races. This is achieved by placing them in an educational situation based on play strategies to generate the maximum number of ideas, information, and opinions in an environment of freedom and safety, free from confiscation, evaluation, or criticism, which leads to knowledge about the scientific and technical mechanisms of running paths in terms of coordination, stride length, group control, lane management, pacing, and breathing techniques. These are measurable and observable behavioral cognitive goals.

Question 6: Do play-based learning strategies in physical education classes help students understand the biomechanical mechanism for throwing the shot put?

Table No. 6: Clarifies whether play-based learning strategies in physical education classes help students understand the biomechanical mechanism for throwing the shot put.

Responses	Frequency	Percentage	Chi-Square Value		Degrees of Freedom	Significance Value	Significance Level
			Calculated Value	Tabulated/Critical Value			
Yes	53	70.9	56.116	5.991	2	0.000	0.05
No	15	19.8					
Sometimes	4	9.3					
Total	72	100%					

It is evident from the table that 71% of the sample participants believe that play-based learning strategies in physical education classes contribute to students' understanding of the biomechanical mechanism for throwing the shot put. Meanwhile, 20% answered "No," and 9% were in favor of "Sometimes."

The high percentage of "Yes" responses (71%) reflects a wide acceptance of the importance of these strategies in understanding and knowing the movement principles and biomechanical techniques related to shot put. Clearly, these strategies play a major role in introducing students to the scientific and technical aspects of the movement, which helps them understand how to apply this knowledge effectively and efficiently. However, 22% of the teachers do not believe these strategies contribute to students' understanding of the biomechanical mechanism for throwing the shot put. This could be due to personal interest differences or teaching methods used. The 9% that answered "Sometimes" might indicate a lack of control over these strategies. In general, this analysis shows that educational strategies play an effective role in enhancing students' understanding of biomechanical mechanisms and applying them in the practical activity of shot put.

Regarding the Chi-square statistical value of 56.116, it is statistically significant with a p-value of 0.000, which is smaller than the significance level of 0.05. Therefore, we can conclude that

there are statistically significant differences in the study sample's responses in favor of the largest group of repetitions.

Derivation : Based on the above, the majority (71%) of the participants confirm that play-based learning strategies help students understand the biomechanical mechanism for throwing the shot put, including how to stand, grip the shot put, and the muscles involved in generating maximum force for the throw, as well as the angle of release. This is achieved by placing them in an educational scenario designed to generate the greatest amount of ideas, information, and opinions, in an environment of freedom and safety, free from confiscation, evaluation, or criticism, leading to knowledge. These are measurable and observable behavioral cognitive goals.

-5-3- Third Axis : The contribution of applying play-based learning strategies in physical education classes to achieving emotional goals.

Question 7: Do play-based learning strategies in physical education classes contribute to developing students' sense of teamwork and cooperation among students?

Table No. 7: Shows the role of play-based learning strategies in physical education classes in developing students' sense of teamwork and cooperation.

Responses	Frequency	Percentage	Chi-Square Value		Degrees of Freedom	Significance Value	Significance Level
			Calculated Value	Tabulated/Critical Value			
Yes	70	97.7	78.186	3.841	1	0.000	0.05
Sometimes	2	2.3					
Total	72	100%					

It is clear from the table results that 98% of the sample believe that play-based learning strategies in physical education classes contribute to developing a sense of teamwork and cooperation among students, while 2% answered "sometimes."

This indicates the significant importance of these strategies in enhancing communication and cooperation among students in an active environment. Thanks to these strategies, students are able to develop teamwork and social interaction skills, fostering a collective spirit both inside and outside the classroom. This enhances social integration and contributes to creating a positive and supportive learning environment. Given the 90% response rate affirming the role of play-based learning strategies in promoting teamwork and cooperation, and the 2% responding with "sometimes," it can be said that interaction and learning through these strategies in physical education classes is one of the key factors that strengthen this role.

Furthermore, considering the statistical value of the chi-square test (78.186), which is statistically significant with a p-value of 0.000 (smaller than the significance level of 0.05), we can conclude that there are statistically significant differences in the responses of the study sample, favoring the most frequent category.

Derivation: From the above, we conclude that the majority (98%) of the participants confirm that play-based learning strategies help develop a sense of teamwork and cooperation among students. Through educational situations created by these strategies, students work in groups, teaching each other and engaging in dialogue, where each individual feels responsible. These situations nurture a team spirit among students of varying abilities and develop social and communicative cognitive skills. These are behavioral and emotional goals that can be observed and measured, as confirmed by the study of (Dr. Bougrada Abdullah (2017).

Question 8: Do play-based learning strategies in physical education classes contribute to providing feedback among students and using body language?

Table No. 8: Shows the role of play-based learning strategies in physical education classes in providing feedback among students and using body language.

Responses	Frequency	Percentage	Chi-Square Value		Degrees of Freedom	Significance Value	S
			Calculated Value	Tabulated/Critical Value			
Yes	67	90.7	127.628	5.991	1	0.000	
No	4	7					
Sometimes	1	2.3					
Total	72	100%					

The table results show that 91% of the sample believe that play-based learning strategies in physical education classes contribute to feedback exchange among students and the use of body language, while 7% hold the opposite view, and 2% responded with "sometimes." This high percentage highlights the significant importance of these strategies in enhancing communication and improving interaction among students.

It appears that play-based learning strategies and interaction in the physical education environment play a major role in creating opportunities for students to exchange feedback, with body language reinforcing their mutual understanding and positive interaction.

Although 7% believe that these strategies do not contribute to feedback exchange and the use of body language, and 2% responded with "sometimes," the large percentage supports the importance of these strategies in fostering effective communication and improving student interaction.

Considering the chi-square test value of 127.628, which is statistically significant with a p-value of 0.000 (less than the significance level of 0.05), we can conclude that there are statistically significant differences in the study sample's responses in favor of the most frequent category.

Derivation: Based on the above, the majority (91%) of the respondents confirm that play-based learning strategies play a role in fostering feedback exchange among students and the use of body language. Through its educational context, these strategies enable students to work in groups, teach and support one another, and encourage weaker peers to improve their abilities. Each individual feels responsible, and such situations help develop team spirit among

students with different skill levels while enhancing various social and communication skills. These are measurable and observable affective behavioral objectives. This finding is supported by the study of "Dr. Boujerada Abdallah " (2017).

Question 9: Do play-based learning strategies in physical education sessions contribute to developing students' sense of responsibility and their ability to adapt to their peers?

Table No. 9: Illustrates the role of play-based learning strategies in physical education sessions in fostering students' sense of responsibility and adaptation to their peers.

Responses	Frequency	Percentage	Chi-Square Value		Degrees of Freedom	Significance Value	Significance Level
			Calculated Value	Tabulated/Critical Value			
Yes	49	68.6	57.372	5.991	1	0.000	0.05
No	21	29.1					
Sometimes	2	2.3					
Total	72	100%					

The results of the table indicate that 69% of the sample believe that play-based learning strategies in physical education sessions contribute to developing students' sense of responsibility and their ability to adapt to their peers. Meanwhile, 29% disagree, and 2% responded with "sometimes."

The 69% who answered "yes" highlight the significant role these strategies play in fostering responsibility and social adaptation among students. These strategies are highly beneficial in reinforcing responsibility through cooperation and interaction in sports activities, as well as in enhancing teamwork skills and adaptation to peers in the learning environment.

However, 29% of the sample do not see these strategies as contributing to the development of responsibility and social adaptation. This could be due to individual differences in response to activities or variations in teaching methods. The 2% who answered "sometimes" may attribute their response to factors such as time constraints, learning environment conditions, or available resources.

This analysis suggests that play-based learning strategies in physical education sessions play an important role in promoting responsibility and social adaptation among students. Nevertheless, some teachers may not perceive the same level of effectiveness in these strategies.

Considering the statistical test value (Chi-square = 57.372), which is statistically significant at a p-value of 0.000 (less than the significance level of 0.05), it can be concluded that there are statistically significant differences in the responses of the study sample in favor of the majority response.

Derivation: As a result, 70% of the respondents confirm that play-based learning strategies contribute to developing students' sense of responsibility and their ability to adapt to their peers. This is achieved through an educational setting that encourages students to work in groups, where they teach, interact, and support one another. Each student feels responsible and develops leadership skills. These situations foster teamwork among students with different abilities, while also enhancing social skills, support, and assistance. This represents an affective behavioral goal that is observable and measurable.

6- Discussion of Hypotheses Based on the Results:

6-1- Discussion of the first Hypothesis Results:

From the table above, it is evident that the items in the first axis are statistically significant in favor of the most frequent responses ("Yes") at a significance level of 0.05. Additionally, the calculated chi-square value is greater than the tabulated value. Therefore, we can confirm the validity of the first hypothesis, which states that the application of play-based learning strategies in physical education classes contributes to achieving psychomotor objectives. This is evident through the learning situations imposed by the mechanisms of these strategies, which allow students the freedom to engage in the learning process. These strategies make students the central focus of the learning process, provoking curiosity and excitement, which motivates them to utilize all their skills in finding the appropriate motor response to the situation or problem at hand. All of this occurs within an environment of self-feedback and feedback from both peers and the teacher. This confirms the significant role these strategies play in achieving psychomotor objectives, as highlighted in studies by Ankik, Salah Eddine, and Moukadem, Nour Eddine (2020), and Boudjerada, Abdallah (2017).

6 -2- Discussion of the Second Hypothesis Results:

From the table above, it is evident that the items in the second axis are statistically significant in favor of the most frequent responses ("Yes") at a significance level of 0.05. Additionally, the calculated chi-square value is greater than the tabulated value. Therefore, we can confirm the validity of the second hypothesis, which states that the application of play-based learning strategies in physical education classes contributes to achieving cognitive objectives. This is achieved through the learning situations imposed by the mechanisms of these strategies, which allow students the freedom to engage in the learning process. These strategies make students the central focus of the process, stimulating both mental and physical excitement, which prompts them to utilize all their energy to generate a set of ideas that can serve as keys, guiding them to collective thoughts free from constraints or rigidity. These ideas aim at exchanging performance and refining the ideas that suit the situation and the required knowledge, all within an environment of self-feedback and feedback from both peers and the teacher. This highlights the significant role these strategies play in achieving cognitive objectives, as indicated in the study by Nassima Mahboubi (2013).

6-3- Discussion of the Third Hypothesis Results:

From the table above, it is evident that the items in the third axis are statistically significant in favor of the most frequent responses ("Yes") at a significance level of 0.05. Additionally, the calculated chi-square value is greater than the tabulated value. Therefore, we can confirm the validity of the third hypothesis, which states that the application of play-based learning strategies in physical education classes contributes to achieving emotional objectives. This is achieved through the learning situations imposed by the mechanisms of these strategies, which allow students the freedom to engage in the learning process. These strategies make students

the central focus of the process, working within heterogeneous groups (cognitively, skillfully, socially, emotionally, etc.), making physical education classes and activities more dynamic and enriching. Each student assumes two roles: the first being responsible for their own behavior and individual performance, and the second being an active participant in a group, responsible for evaluating their performance, cooperating, and supporting one another to improve. This all takes place in an environment of self-feedback and feedback from both peers and the teacher. This highlights the significant role these strategies play in achieving emotional objectives, as supported by the study by Amezyan, Bahia & Khattab, Houssin (2015).

6-4- Discussion of the General Hypothesis:

Since the three hypotheses related to the study's axes have been proven to be valid, we conclude that the general hypothesis, which states that the application of play-based learning strategies in physical education classes contributes to achieving the intended operational goals, is correct and valid. Play-based learning strategies in physical education activities, whether in-class or extracurricular, play a significant role in achieving the desired operational objectives of the curriculum and attaining the targeted competencies. These strategies contribute to the development of the student's physical and motor skills, which are psychomotor objectives. In terms of achieving cognitive objectives, they contribute to the development of intelligence and academic achievement, increasing the student's confidence in active participation and accelerating learning. These strategies are more effective than traditional methods in cognitive achievement, as indicated by M. Zyada Salem (2013). Regarding their role in achieving emotional and creative objectives, they foster the student's ability to gradually assume different roles, enhance their interactions with respect for rules, and apply them within the group. They also contribute to improving their relationship with peers, promoting sportsmanship, empathy, and the expression of emotions in a positive way, such as joy and satisfaction. This is consistent with the findings of studies by Nassima Mahboubi (2013) and Amezyan Bahia & Khattab Hussin (2005).

7- **Conclusion**:

The goal we aimed to achieve was to determine whether play-based learning strategies in physical education and sports classes contribute positively to achieving operational goals (psychomotor objectives, cognitive objectives, and emotional objectives) and their impact on the field of education. By applying this strategy, which has become one of the established methods in education, we also sought to assess how physical education teachers respond to play-based learning strategies as one of the key pillars in achieving operational goals if integrated into the teaching methods and techniques of physical education classes. These strategies have the ability and speed to achieve the desired objectives, making them one of the most important methods that help teachers achieve a range of goals in physical education classes. This success stems from the role they play in addressing all physical, mental, and emotional aspects of the student.

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