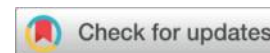


Small games as an educational introduction to developing some basic concepts in kindergarten children (4–5 years old)

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Received: 21-02-2026 Accepted: 13-05-2026 Published: 28-06-2026

Abstract:

This study aimed to reveal the effect of small games on learning some basic concepts (arithmetic, shapes, and colors) among kindergarten children aged (4–5) years. To do this, a program based on play and small games was proposed as an educational tool for reaching the study objectives. The research was carried out on a sample of 20 children from Nour El Yaqine Kindergarten in Tissemsilt Province. The experimental method was selected because it fit the nature of the topic, and the study used a two-group design, experimental and control. After collecting the data and processing it statistically using a program SPSS, the results showed statistically significant differences between the pre-test and post-test measurements of the experimental group, in favor of the post-test. This result is linked to the effectiveness of the proposed program and the clear role of small games in developing some basic academic concepts among kindergarten children.

Keywords: small games, basic concepts, kindergarten children

Introduction:

Attention to learning has become a necessary concern, mainly because it shapes daily life and influences the social standing of the individual. This matter is even more important at the start of the third millennium, a period marked by fast scientific and technological change. Since learning is a lifelong process, it becomes essential to examine the elements connected to it and to identify the difficulties that interrupt it, then trace those difficulties back to their roots. Every learner meets some obstacle, hesitation, or setback when trying to gain new information or acquire a new skill. Overcoming these difficulties is not a minor issue; it is

what allows learning objectives to be reached in a proper way.

Play is one of the most effective educational means in modern societies. It serves social, physical, health, and psychological upbringing, among other functions. Many scientific studies have dealt with this matter, even though play itself is not a new idea at all. It has existed since primitive human life, especially in children's daily activity. Play helps build the child because it gives room for expression, ability, and creativity. In fact, it is a rich field of activity that responds to the child's need for movement, reflection, thought, and invention. Through it, the child gains physical, motor, skill-based, psychological, and even cognitive experiences. Small games, in particular, give the child opportunities to feel happy and proud when tasks are completed. That feeling matters more than many people admit.

Psychologists and educational researchers therefore agree that play, in all its forms, is a starting point for development in children. They see a direct connection between play and learning, since play carries educational value and can support language growth, social growth, emotional and behavioral growth, creative growth, and motor and physical growth.

Small games are also considered part of physical education and sport. Their foundations are drawn from different sciences, and they are used through selected physical activities directed aimed at preparing children in a balance way that fits needs of society.

In this sense, small games and physical education more generally have gained wide attention across different societies because they reflect organized behavior with an educational purpose, all within an interactive social framework. They help prepare the child intellectually, emotionally, and physically across the different stages of life, and they also support social formation by encouraging moral qualities such as order, discipline, and respect (Youssef, 2007). Games have a strong role in building these qualities, and they also help shape a child's interest in sport from an early age, which is important in itself.

Positive attitudes toward it, along with the acquisition of a suitable level of motor skills, help a child take part in useful and enjoyable sports or recreational activities throughout life. In this way, it contributes to the broader goal of general education, which seeks to prepare the citizen that Muslim societies aspire to form. Those who study childhood and children's

literature generally agree that kindergarten is an educational stage that comes before primary school. Rawda is an educational institution devoted to raising young children between the ages of three and six. It is marked by a variety of activities that aim to build educational and social values in children and give them room to express themselves. It also offers educational programs designed to prepare them and provide them with certain cognitive and skill abilities (El Wahed, 2015).

1.1 Research problem:

The kindergarten stage is the cornerstone of the educational structure on which countries depend. It is one of the most suitable age periods for developing the child's educational, moral, and motor abilities, and these abilities later support the stages that follow. Many scholars see this period as the best stage for education, largely because the child at this age shows a specific set of biological, psychological, and motor characteristics that make learning especially meaningful. Caring for childhood is one of the clearest measures of a society's progress. In fact, it reflects concern for the future of the nation. Preparing children and attending to their needs in every aspect is a direct response to the civilizational challenges created by the fast pace of development and change that shape our present time. Nahid Mahmoud also argues that a child's exposure to different kinds of interaction, whether during play or outside it, raises both cognitive efficiency and motor skills at the same time (Saad, 2004). The importance of the present research lies in identifying the extent to which an educational program based on small games affects the acquisition of some concepts, namely arithmetic, shapes, and colors, among kindergarten children.

Partial questions:

- Are there statistically significant differences between the control and experimental groups in pre-measurement?
- Are there statistically significant differences within the experimental group between pre- and post-measurement?
- Are there statistically significant differences within the control group between pre- and post-measurement?

- Are there statistically significant differences between the control and experimental groups in the dimensional measurement?

Research hypotheses:

Based on the problem under study, and in order to ground the research on a scientific basis, the following hypotheses were adopted:

- There are no statistically significant differences between the control and experimental groups in pre-measurement.
- There are statistically significant differences within the experimental group between pre- and post-measurement.
- There are no statistically significant differences within the control group between pre- and post-measurement.
- There are statistically significant differences between the control and experimental groups in dimensional measurement.

1.2 Study objectives:

- To examine about the effect of a program using small games in developing some concepts such as (arithmetic, Color, shape, ...etc.) In kindergarten children.
- To design an educational program based on "small games" as an engaging physical and educational activity that supports learning.
- To identify the differences between the pre- and post-measurements of the experimental group in order to determine the extent of conceptual development in children after playing the games.

1.3 Defining study concepts and terms:

- **Small games:** They are organized activities that are simple and easy to carry out. They do not require advanced motor skills to implement them, and they usually have no fixed rules. In practice, both children and adults can take part in them with little difficulty (Alin, 1996).
- **Procedural definition:** These activities include games, and movements performed by one person or by several people. Their main feature is ease of performance. They do not require high motor ability, and they are suitable for both sexes.

Basic concepts here refer to a group of ideas linked to growth during the age range of 4 to 5 years. The educational program in this study is built on these concepts, especially calculation, colors, and shapes. These are the areas measured by the program used in the study.

Kindergarten child: is usually described as a child between 3 and 4 years old who shows a particular set of characteristics and behaviors. At this stage, the child absorbs impressions from the surrounding environment and gains cognitive and perceptual experiences. Moral standards also begin to form (Hajira, 2016).

1.4 Previous studies:

-A study by Rabha Muhammad Lutfi (2021): The effect of the mini-games program on aggressive behavior among middle school students in the United Arab Emirates.

The study aimed to identify the effect of the mini-games program on aggressive behavior among middle school students.

Curriculum and research community: The researcher used and experimental curriculum with a single-group and applied pre- and post-measurement. The setting was Al Bayda Preparatory School for Girls in the Emirates, with a sample of 250 female students aged 12 to 13.

Conclusion: The findings showed that behavior modification needs continuous training and long-term guidance. Even so, the change rate was enough to control aggression and improve compatibility, leading to a more normal personality among the students.

- Haitham Mohsen Al-Kalabi's study (2022): The effect of small games on developing sensory-motor perception in 5-year-old kindergartens children.

Objectives of the study: the study aimed to prepare small games for children of that age in Riyadh, in the center of Babil Governorate.

Study sample: it included 190 children drawn from an original population of 865 from Riyadh in the center of Babil Governorate

Methodology: The researcher used both the descriptive approach, through equivalent groups.

The most prominent result was clear: small games had a positive effect sensory-motor perception in kindergarten children aged 5 years.

- Loring, Youssef study 2022 entitled: The impact of semi-sporting games on the physical and skill aspects of young football players (9-12) years old.

The study aimed to determine the extent of the influence of semi-sporting games on the physical and skill aspects of young people.

Method: The researcher relied on the descriptive survey method, using closed and open questionnaire, with a sample of 10 trainers was represented.

Study results: Semi-sports games play a major role in developing physical qualities and teaching motor skills to young handball players. They also require few means, which makes them practical for skill and physical development.

1.5 Analysis and criticism of previous studies:

Similarities: The current study aligns with similar studies, They all use the small game approach, and they share a similar target group, namely kindergarten children .

Differences: The current study differs in sample size. Its sample consists of 20 children, while similar studies used much larger samples, sometimes reaching 500 children aged 5 years. The current study also differs in the research variables, which gives it a distinct place within this line of work.

2. Research methodology and field procedures:

2.1 Research method: The methodology adopted in this study was the experimental method, chosen in line with the nature of the research problem and the direction of the investigation. The program was first presented to a panel of seven specialized professors in order to obtain their views. Their comments were taken seriously, and the researcher made the necessary revisions and adjustments where they were justified.

The program was reviewed by a panel of 7 specialized professors, to obtain their opinions. The researcher took into consideration all their purposeful observations and made some necessary modifications and changes.

After the program was reviewed, the percentages of agreement and disagreement were calculated. An approval rate of 80% was used as the criterion for keeping or removing the games. In its initial form, the program contained (75) games. Based on the judges' evaluations, several games that did not reach the required percentage were removed, and the program was reduced to (72) games distributed over three sessions per week. The remaining three games were excluded because they did not receive the approved level of agreement.

2.2 Research sample: The research community includes all the elements and vocabulary of the problem or phenomenon under study (Mustafa, 2000).

2.3 Experimental sample: this sample consists of 10 male and female children, aged from 4 to 5 years, from Nour Al-Yaqin Kindergarten in Tissemsilt.

2.4 Control sample: this group also consisted of 10 children of the same age and gender distribution, selected randomly.

3. Presentation and analysis of hypothesis results:

3.1 There are no statistically significant differences between the control and experimental groups in the pre-measurement.

The analysis showed that the control group obtained an arithmetic mean of 1.45 with a standard deviation of 1.00. The experimental group recorded an arithmetic means of 1.43 in technical performance, while the standard deviation was 0.10. The significance value reached 0.75, which is, higher than the 0.05 significance level, with 18 degrees of freedom. Accordingly, there are no statistically significant differences between the two groups in the pre-measurement.

Conclusion: this result makes it clear to us that the two samples were close in level in the physical elements tested, which points to the homogeneity of the research groups. At this stage, the child naturally tends to compete and compare his or her abilities with others, as what Abdel Rahman Issaoui notes that the child seeks competition and is inclined to measure strength and ability against peer, and this appears through small competitive games, whether between individuals or between groups. Ahmed Amin Fawzi also

supports this view, stating that the child at this stage tends to compete through one group of comrades against another group (Issaoui, 1992).

3.2 There are statistically significant differences within the experimental group between the pre- and post-measurement.

in the pre-test, the experimental sample recorded a mean of (1.43 ± 0.10) , while in the post-test the mean rose to (1.45 ± 0.08) , the sig value reached 0.000, which is below significance level of is 0.05, with a degree of freedom of 18. This directly indicates a statistically significant difference between the pre- and post-tests of the experimental sample, and the result clearly favors the post-test.

Conclusion: then, it is that the level of the experimental sample improved in these targeted concepts. This improvement seems closely related to the proposed program, especially since it depended mainly on small games. That point matters. Small games fit the characteristics of children at this stage quite well, particularly from a motivational side, as they push children to make extra effort in order to achieve goals they actually care about. In that sense, the teacher is not simply presenting activities, rather, the teacher is using a very suitable channel to direct the child's natural impulse toward learning. This interpretation is also supported by previous views in the literature as Dr. Ahmed Amin Fawzi explains, "For the child, play is the only world in which he can play and enjoy the freedom to act and express his pent-up feelings." Wadih Farag El-Yen also stresses that: "Games make the child double his effort and focus ". He further notes: "At this stage, the desire for group play and good response to games increases. These points strongly support the positive effect shown in the post-test results.

3.3 There were no statistically significant differences in the control group between the pre- and post-measurements.

in the pre-test, the control sample recorded an arithmetic mean of (17.44 ± 1.27) . in the post-test, the mean was (17.48 ± 1.14) . The sig value reached 1.47, which is higher than the significance level of 0.05, with a degree of freedom of 18. Based on this result, is the null hypothesis accepted? In plain

terms, the difference between the control group's pre- and post-test scores was not statistically significant.

Conclusion: This result points to a fairly stable level of performance in the control sample across both measurements. The scores barely moved, and that matters. It suggests the group remained consistent in its understanding of the targeted concepts, without any meaningful development over the testing period.

The researcher linked this outcome to the fact that the control sample was not exposed to any instructional program. That absence seems important, since students were not pushed to engage with exercises or make a serious effort toward improvement. As a result, there was no real investment in developing their knowledge. This is frustrating in a way, especially since this stage is often seen as the most suitable period for building such qualities and knowledge. This interpretation is also supported by "CorthManeel" who stated that the age of (9 to 12 years) is considered the best age to invest in developing diverse cognitive abilities.

3.4 There were statistically significant differences in dimensional measurement between the control and experimental groups.

The control sample achieved an arithmetic mean of (1.44 ± 0.09), whereas the experimental sample reached (1.55 ± 0.11). The calculated t-value was 4.47, with a sig value of 0.000, clearly below the significance level of 0.05, at 18 degrees of freedom. On that basis, the null hypothesis was rejected and the alternative hypothesis was accepted. In direct terms, the difference between the two samples favored the experimental group.

Conclusion: The conclusion is fairly clear. The experimental sample showed improvement compared with the control sample across the targeted physical elements. This improvement does not seem accidental. It is closely tied to the teaching method used, especially the small games method, which appears to have produced a lively and enjoyable working atmosphere. That matters more than it sometimes gets credit for. When students feel energy and pleasure in the activity, they usually engage with greater seriousness, and that engagement often shows up in physical development.

This point is important, especially with young children. A rigid method rarely gives the same response. The small games approach seems effective because it matches how children actually behave and learn, not how adults expect them to. In that sense, the findings make practical sense, not only statistical sense.

The present results also appear consistent with the results of Muhammad Lutfi (1993), who concluded that the small games program has a positive effect on improving behavior. This is also supported by "Wadih Faraj AlYin" who stated that at this stage (04-06 years), children love to play very much, and the educator must take into consideration their extreme thirst for play and their natural inclination.

The general conclusion:

In light of the study objectives and the data collected, we reached the following conclusions were reached:

- The control and experimental groups showed convergence in the levels of all variables examined during the pre-tests
- the control group remained stable across the pre- and post-tests, with no meaningful improvement recorded during that period.
- the experimental group showed clear improvement in the post-tests compared with the pre-tests, and it also outperformed the control group in the post-test results.

These findings point to the positive role of small games from educational, cognitive, and social perspectives. In fact, small games have a strong effect on the learning process, especially in kindergarten, where children respond more naturally to active and structured play than to abstract instruction.

The conclusion of this study:

In conclusion, small games appear to play a major and beneficial role in the learning process for kindergarten children. The results obtained by the researcher support the view that play in a child's life is not just entertainment; it is a serious way of acquiring knowledge and building concepts. Teachers and parents therefore, should use small games

deliberately, if they want to enter the child's world in a meaningful way, They also need to observe children's behavior closely, since it often reflects their ambitions inner feelings. Through group play, cooperation, and shared activity, children become more connected with one another and develop a sense of affection and belonging.

Suggestions:

- Recognizing the role of small games and their influence on children's emotions and behavior.
- Involving sports specialists to introduce different activities, especially small games, while taking into account the stages of the child's mental and physical development.
- Kindergarten administrators should allocate dedicated sports classes built around varied varied activities and small games.
- Childhood must be treated as a sensitive and essential stage, since it represents a decisive turning point in the child's life. This requires providing a suitable environment for practicing sports activities.
- Supplying the kindergarten with the necessary equipment and tools for sports activities.

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