

TEACHING PRESCHOOL CHILDREN TO INCREASE LEARNING BY USING GAMES

ENSINAR CRIANÇAS EM IDADE PRÉ-ESCOLAR A AUMENTAR A APRENDIZAGEM POR MEIO DE JOGOS

Dinh Thanh Tuyen*

ORCID 0000-0001-5087-3684

Hanoi National University of Education

tuyendt@hnue.edu.vn

Dinh Doan Huong

ORCID 0000-0001-6321-8582

Dong-A University

Xo Viet Nghe Tinh- Hoa Cuong Nam Ward, Hai Chau

District- Danang City

huongdtd@donga.edu.vn

Abstract. Children up to the age of 5 are considered to be in preschool. At this age, children can be taught by playing. The methods used for children at this age; Game methods are central to making the child excited to learn, and without feeling that the child is being taught, he is taught things that can help him with life skills, logical intelligence, manipulation, and even problem analysis and division and prepare him to go to school and enter the society. In order to achieve this growth and ability, children need correct education with a plan and logic, but it is game-oriented. It does not tire the child in this matter and increases the spirit of play, happiness and learning in the child, and the child can follow the educational programs that the teachers have along with the game. In this study, the game as a valuable investment in the transfer of concepts and skills and one of the main elements in advancing the goals of education for children in preschool age, has been drawn and using the library method, the impact of the game on children's learning has been drawn from different angles.

Keywords: learning, pre-school, game, education.

Resumo. Consideram-se crianças em idade pré-escolar aquelas até os 5 anos. Nesta idade, as crianças podem ser ensinadas brincando. Os métodos utilizados para crianças desta faixa etária são fundamentais para que a criança se entusiasme com o aprendizado. Sem perceber que estão sendo ensinadas, as crianças aprendem habilidades para a vida, inteligência lógica, manipulação e até mesmo análise e resolução de problemas, preparando-as para a escola e para a vida em sociedade. Para alcançar esse crescimento e capacidade, as crianças precisam de uma educação correta, planejada e lógica, mas orientada ao jogo. Esse método não cansa a criança e aumenta o espírito de jogo, felicidade e aprendizagem, permitindo que ela siga os programas educativos dos professores junto com a brincadeira. Neste estudo, o jogo foi considerado uma valiosa ferramenta na transferência de conceitos e habilidades, sendo um dos principais elementos para avançar nos objetivos da educação infantil. Utilizando o método bibliográfico, o impacto do jogo no aprendizado das crianças foi analisado sob diferentes ângulos.

Palavras-chave: aprendizado, pré-escolar, jogo, educação.

1. INTRODUCTION

Creating interactive learning situations is considered a desirable method of education. Researchers and scientists in the field of education have continuously raised and emphasized the high values of "interactivity of educational environments" (Bang et al., 2023; Jamalpour & Yaghoobi-Derab, 2022). These environments include situations in which students directly participate in the learning process instead of being passive recipients of information from educational resources. One of the interactive situations between the student and the teacher is "educational games" which have an educational purpose in their essence; it means conveying a specific point, highlighting special capabilities by deepening skills. In this article, while providing the definition of educational game, the effect of these games on students' learning has been investigated.



One of the enjoyable and productive activities for everyone, especially for children and teenagers, is play. Children practice life in the future world through games that are accompanied by excitement. The characteristics of each game and its benefits in the all-round development of a child's mental, physical, personality and social abilities have caused the attention of a large number of education professionals to focus on how it plays a role in the education of children. Children find their way and know it better and realize their problems.

The game is education and the child acquires various skills through games. The game is the best means through which many concepts can be taught (Jamalpour & Derabi, 2023; Jamalpour & Verma, 2022). Educational games are among the strategies that use them to activate teachers and create creativity in them, which is one of the main and specialized topics in the field of education. The educational game is one of the teaching-learning situations and is an organized activity with specific rules in which two or more students communicate with each other to achieve predetermined educational goals. The game is not imposed and must have criteria; First, it should be in accordance with the characteristics, needs and abilities of children; Second, pay attention to strengthening and precision and concentration and timely reaction and fostering creativity; Third, the activities and behaviors in the game have a logical interpretation (meaning and concept); Fourth, there should be a logical relationship between different parts of the game; Fifth, it should be designed in such a way that there is not too much emphasis on the announcement of winners and losers (Behnamnia et al., 2023).

Considering that the level of academic progress and academic failure is one of the efficiency criteria of the educational system, the discovery and investigation of variables affecting academic performance leads to a better understanding and prediction of 5 effective variables in the educational system; Therefore, examining the variables that are related to academic progress is one of the basic topics of research in educational systems. Academic success and progress depends on a set of factors, and the separation and examination of each of these factors requires a lot of research and investigation (Abdurahimovna & Bakhodirovna, 2023) although intelligence can predict students' academic progress, the role of effective factors it should no longer be ignored in predicting the academic progress of students.

One of the methods of active learning is the use of games. The game is one of the facilities that can be used to educate and motivate children, the game is known as one of the main factors of academic progress and learning in students that social roles and norms as well as problem solving skills, language skills and adaptability It teaches them about society (Inomjonovna & Erkinovna, 2023; Shariati et al., 2013), while the game is a means of entertainment, it also has an educational and constructive aspect, and in some cases, the child's involvement in the game is more than the value of reading a book, children during the games, especially the educational games, They gain access to new mental concepts and acquire more and better skills. The game makes the child express his feelings and external communications and also develops the child's inclinations, communication skills, and increases the child's adaptation to the surrounding environment (Inomjonovna & Erkinovna, 2023). For this reason, some educators believe that any subject matter should be taught to the child only with games, and basically it is better to turn the formal hours of preschool lessons into hours of creative and informative games.

Educational games

Educational games can be used by teachers as a useful and efficient medium at formal and informal levels. The ultimate goal of these games is not just to entertain or fill free time, but such games, while creating enjoyable and joyful moments for the audience, by providing experiences close to first-hand experiences, cause faster and more stable learning (Abduraxmonova, 2023). The active presence of teachers in the learning process requires the provision of suitable conditions and context in the educational environment.

According to experts in the fields of education and pedagogy (Zhang, 2023), the use of educational games in the teaching process is one of the solutions that provide the necessary ground for increasing the learning activities of teachers. From the point of view of these experts, educational games are not limited to children and their world, contrary to popular opinion, but by changing the elements or the way of playing, they can be used for education in all age conditions. Besides, the use of games is not exclusive to teachers and the learning process, but the possibility and, more precisely, the necessity of designing and using them is felt in the teaching process as well.

Good educational games emphasize thinking and planning rather than memorization. Students who have difficulty learning concepts in written and printed texts understand games and often develop their confidence through role-playing. Today, the importance and value of play in childhood has been taken into consideration by extensive researches. Playing affects physical, emotional, mental, educational, moral, personality and social development and has diagnostic and therapeutic value as well (Tang, 2023). Saidova et al. (2023) concluded from a research that the educational game increases students' spelling scores. Su et al., (2023) from a research entitled the effect of using educational games on the motivation of 9 to 11-year-old students concluded that educational games have an effect on four motivational components: attention, communication, trust and satisfaction. Calero-Morales et al., (2003) mention playing a game as a factor for improving attention and visual activities. A good educational game encourages thinking and planning in students (Wang et al., 2011). According to the theories of Piaget and Vygotsky, play is the main factor in the cognitive development of children and one of the accessible thinking methods for minors. In the form of games, children achieve balance by understanding realities and controlling personal skills (Behnamnia et al., 2023).

The importance of educational games

Educational games are a meaningful and effective strategy for teaching and learning, games have a positive effect on preschool children in the following areas:

1. Improving children's learning with a special educational approach: Wang et al., (2023) found that games are a direct educational tool and emphasized their use for children.
2. Encouraging children: There are many texts that consider educational games as a key element of motivating students.
3. Suited to different individual learning styles of children: educational games by fitting to individual learning styles of children lead to more learning. Certain aspects of the game become a personal learning situation where the child makes decisions and then responds to them during the game.
4. Children's socialization: play plays a major role in people's socialization, it generally provides a non-aggressive and playful environment where children can learn group skills.
5. Promoting active learning: educational games are an innovative and new approach to promote interest and learning in educational environments, children as active participants decide to solve problems and react to problems.
6. Identifying cultural differences: educational games have the ability to overcome cultural differences that are often seen in traditional classes. If these games are used as an educational strategy, they can be used for diverse cultural groups

The effect of educational games on the brain

Research about the brain have focused on how learning affects the brain and more importantly, which type of learning changes the brain. New experiences affect the growth of dendrites. In response to the tendencies that the learner faces, the roots of the lessons change their growth and shape. Interaction with the environment may cause new dendritic branches to



sprout throughout the brain. Postnatal brain development has been attributed to the branching and sprouting of the cortex that occurs in response to experience (Saidova et al., 2023). Educational games can be an active and stimulating way for students to review what they have learned. Educational games can be the main factor for increasing the size of the base cell (neuron) and synaptic connections in the brain. This development is especially influenced by motor stimulation, critical thinking and problem solving.

The benefits of educational games

It has an inherent reward; Because the students like the game and participate in it willingly.

It shows the complex situations of life, whose elements are taken from real life, in a simple and understandable way.

It creates motivation to learn and attracts the attention and relationship of learners.

It reduces the monotony and boredom of teaching-learning environments and creates a happy and lively atmosphere. In some games, learners practice and repeat difficult concepts or skills without realizing it.

By creating social relationships through games, in addition to teaching cognitive concepts, educators also achieve some educational goals, emotional and attitudinal learning. In addition, teachers can achieve more goals by involving students in planning and preparing the necessary equipment for the game. A good educational game can teach students how to assess risks, deal with new events and issues, think logically, and make decisions while creating fun and excitement for learners. (Zhang, 2023).

2. METHOD

The research method in the present study is an experimental method. The intended statistical population is: 60 preschool children who were studying in preschool centers in the academic year of 2023. 60 children were selected as a research sample in a multi-stage cluster and the effect of teaching using games on their learning was evaluated.

The game structure

One of the ways that experts recommend to create motivation in the novice is regular games. It is possible to make the educational environment happy and enjoyable for new learners through games, because the effects of regular games that are related to 7 to 11 years old remain for the whole life. (The effect of the game). The game can be a strong support for the activity that puts the new students in different situations and gives them the opportunity to familiarize themselves with the events. The game can be a stimulus for social learning. The important issue that exists is the construction of the novice's game by the coach. That is, to what extent a normal pattern should be provided to guide children to play, which can be specifically designed to familiarize them with mental skills and methods. When the child goes from kindergarten to preparatory school, the degree and degree of formality of the scheduled program becomes more obvious and the emphasis on the game is reduced, and at this time, the conditions and conditions of learning are carried out on a wide level, while the game can be purposefully designed to increase the speed of learning.

Enjoyable education is an approach in which learners play and learn with enjoyable activities. Basically, this seed was sown centuries ago, but alas, it has not been cultivated well. Plato is of the opinion that after birth, a child's life should be accompanied by movement and the conditions of his life should be such that on the one hand he does not have pain, fear and encouragement and on the other hand he does not get pampered.

Tang (2023) considers play to be effective not only in the growth and development of children, but also in the evolution of their character; rather, he considers it as a basis for

recognizing their abilities: "Don't use force to teach children, let learning become a game for them." Through the game (the effect of the game), the novices have the opportunity to develop fine and hard motor skills and maintain physical health. The game helps the novice to increase the sense of creativity and visualization and creates a context for practicing social skills and expressing feelings and understanding value systems, providing an environment and playing field for children by creating opportunities; Resources and time appropriate to the two growth periods are guaranteed.

The steps of implementing the game-based teaching method

1. Statement of purpose: At this stage, we try to explain the purpose of the lesson clearly and simply to the students.
2. game description: In this step, we describe the desired game for teaching concepts. It is necessary to specify the required instructions and how to select people for the game and suitable tools to help enrich it in the game description.
3. Running the game: In this stage, which is the most practical part of implementing the game-based teaching method, all students have an active role in learning and the teacher acts as a game guide. Also, all kinds of teaching aids are provided to the students.
4. Conclusion and evaluation: In the game-based teaching method, the final stage which is "conclusion" is the same as the "evaluation" activity. In this stage, the effort is to direct students' attention to the evaluation of activities. Since many students participate in the game activity, they are more likely to master the intended concept for learning. Therefore, we use the game's conclusion for the purpose of evaluation.

3. RESULTS

Three characteristics of using games in teaching

Game has a special cycle for learning

In this way, when a person plays, a hormone called endorphin is released in his brain. Endorphin is one of the natural painkillers that exist in our body, it relieves pain and this hormone is secreted from the mucous glands of the hypothalamus and causes pleasure and good feeling. When this hormone is released, we have more fun and with this more fun, we can learn more and when we learn more, we want to repeat this game again so that endorphins are released again, enjoy again and learn more to take, so learning evolves with the game cycle.

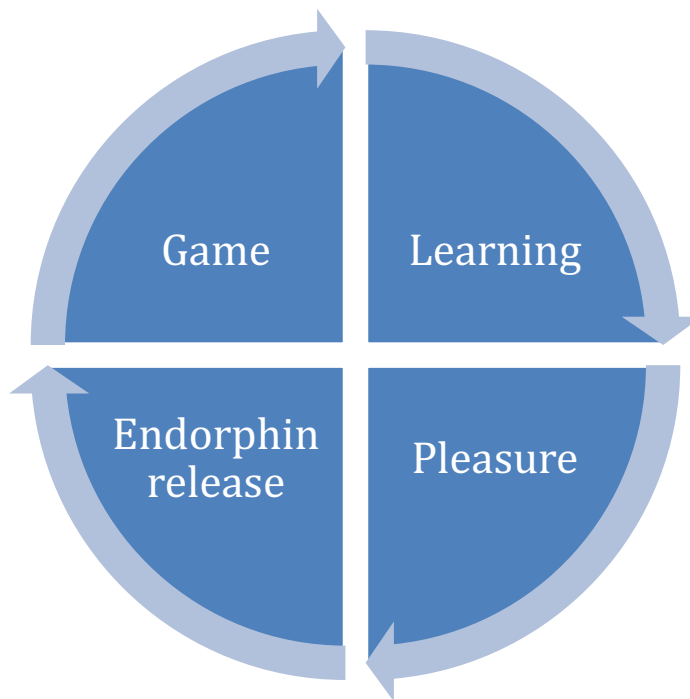


Figure 1. Game cycle for learning

The stress of learning is reduced

Audiences always have this problem that they say to themselves: "Don't let me learn this subject" and there is always such a stress in their existence, and this learning stress lowers the level of learning to a very significant level. But if the same learning is through the game, our audience will enjoy it, because it learns indirectly. It is possible to integrate the game with the training course in such a way that the learner does not realize that he is acquiring a series of new information, and in this way, with this style of game in our teaching, the learner focuses more on receiving rewards and getting pleasure, and Completely unconsciously, the information is transferred to his mind and he learns, without any stress.

It is hard to leave the game because of investment

The third characteristic of games in education is that because our audience invests, they continue to work. There is no need to listen, there is no need to push, and everything is driven by internal motivation.

The present study was conducted with the aim of investigating the effect of educational games on the learning of preschool children; And the data from pre-test and post-test were analyzed using t-test and SPSS software. In general review, the research results showed that preschool children who play educational games have more learning growth.

The results of the t-test showed that there is a significant difference between the amount of social growth of students who participated in educational games and the amount of social growth of students who did not participate in games. Also, there is no significant difference between the effects of educational games on the social development of students based on gender.

Table 1. Comparison of the average learning growth of experimental and control group students

Group	Amount	Average	SD	T-value	Reliability
Test	30	60	2.53	2.97	0.99
Control	30	59	1.87		



As can be seen in Table No. 1, the difference in the calculated learning growth average is 2.97 greater than the critical t value with a confidence coefficient of 0.99 and a degree of freedom 60 (2.53) of 09. Therefore, based on the results obtained, there is a significant difference between the average learning growth of students who participated in educational games and the growth rate of students who did not participate in games.

The role of playing and games in children's development

Playing is the most colorful daily activity of children. The game is not specific to a specific period of life and it shows itself in all periods of life in some way and we cannot ignore the impact of the game on learning. If we want to give a simple definition of playing, it can be considered the same activities that your child entertains himself with inanimate objects during the day.

Many parents believe that a child's playing is in conflict with learning. These people usually do not want the child to spend all his time playing and having fun. In this article, we want to challenge and prove this misconception, learning and playing in children are in the same direction, play has a great impact on the child's learning, and parents should use various games to teach children.

In addition to being the most enjoyable activity for children, playing is also the most natural way for them to learn. The best way you can help children develop is to invest in their play. Learning and playing for children go hand in hand and are not separate. For example, by using puzzle toys, construction, puzzles, etc., you prepare him to a great extent for reading and writing.

Playing is one of the best activities you can do to teach your child effective communication skills. A relaxing and pleasant activity that increases the interaction between parents and your child to a great extent and strengthens the child's confidence. Paying attention to the impact of play on a child's learning helps them to successfully pass through the critical and crucial years of childhood.

Children do not distinguish between learning and playing. As long as they enjoy what they are doing, they will welcome all training with open arms. Some parents think that by filling their children's brains with superficial information, they can help them discover their talents and develop their skills. Instead of saying that children have no understanding of them, the role of games, especially games suitable for the ability of any age, which do not cost much, is taken seriously and should be given great importance.

These days, in the age of technology, usually the best entertainment for children is computer games with mobile phones. There is an interesting thing about these games that video games help a lot in increasing your child's concentration. But these games are not as bad and destructive as you think. In many of them, basic concepts such as teamwork are taught. In such games, the child learns the power of leading and directing others well.

Of course, it should be mentioned that the positive and constructive effects of intellectual games are much more than video games. Intellectual toys become the basis for the growth and development of children's personal and social skills, and in the form of games, they indirectly affect children's education and learning.

Academic progress is always one of the concerns of parents. The role of games in academic progress can be seen well, and one can witness children's successes along with their enjoyment. Meanwhile, many parents underestimate games and look for extreme reinforcement classes. Choosing smart games not only helps to learn, but also reduces stress and improves performance in school. The first seven years of life are the most important period of life. Pre-school age is exactly in this period. An era that has a lasting impact on the formation of children's character and destiny. During this period, children's most active activity is playing; so aware parents do not neglect the role of play in preschool children's learning. The main need

of a child in the first seven years of life is to play. Choosing the right game teaches him self-confidence, creativity, social interaction, effective communication, intelligence, etc. While playing, he gets to know objects and their properties, his natural talents flourish and he learns order.

The main factors concluded from children playing games in learning can be classified as:

Social growth

It makes the child connect with the outside environment and expands his social world.

It causes the flourishing of hidden talents and the emergence of creativity. Cooperation and participation of the child is developed.

He gets acquainted with the observance of principles and regulations.

They learn to compete.

He experiences failure realistically.

He finds the power to express himself and is freed from fear, modesty and embarrassment.

They learn to support weaker children.

Emotional growth

It satisfies the need for excellence.

It causes the expression of feelings, emotions, fears, love, anger, hatred and worries.

It reduces the tendency to fight and fight.

It increases the "extroversion" of the child.

- **Physical growth**

It causes the coordinated growth of different body organs and systems.

It strengthens the five senses. It causes coordination and companionship of several senses.

It consumes the strength and energy of the body in the best way.

The child becomes aware of his mental and physical capabilities.

- **Mental growth**

It plays an important role in language learning.

It is very effective in the development of the child's intelligence.

Get acquainted with the concepts of construction, space and shape.

The situation of using imagination arises in the child.

It provides a better basis for thinking.

- **Moral development**

The child realizes that if he wants to be accepted in the game, he must be honest, truth-seeking, in control of himself, just, honest, loyal, and responsible and have an acceptable behavior.

Observes moral principles while playing in the environment of home and kindergarten.

By respecting the teammates, he experiences the rules.

4. CONCLUSION

The game is the most important form of activity of the child and the most suitable for the development of his talent and creativity. Play plays a big role in a child's life and development. During the game, many positive qualities are cultivated in him. The beginning of the development of creation and creativity in children is at the preparatory and pre-primary school ages. At this age, the child's activity changes compared to childhood, and new relationships emerge between his thinking and action, and the feeling of vitality and vitality after playing can be the solution to many problems.

By opening a new path in learning, the game can play a significant role in improving life and in helping teachers to manage the classroom better, it can also increase educational efficiency. The game plays an active role in the development of creativity and causes movement

and application of the mind in gaining experience and solving problems. Arousing the student's interest and relationship through games causes convergent thinking in the mind.

In choosing the game, the teacher must be careful to choose it according to the level of knowledge and skill of the student and in accordance with the subject of the lesson, because the student has the necessary self-confidence when he has acquired sufficient skill. Knowing the types of games and creating suitable situations for learning through games is useful in the education of children. Therefore, it is necessary for educational coaches to take steps to enrich the intellectual dimensions and flourishing of students' talents by providing appropriate facilities and educational tools. Obtaining the desired educational results from the game depends to a large extent on the cooperation of the coach and the teacher, his familiarity with the age characteristics and characteristics of minors, correct leadership and in accordance with the style of various games.

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