

**Games in the educational process: results of a research on pedagogical intervention****Jogos no processo educativo: resultados de uma pesquisa sobre intervenção pedagógica**

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**ABSTRACT**

This work aims to present results of an experience from a pedagogical intervention carried out in a state public school in the southeast of Brazil. In order to contribute to the educational institution, we elaborate different types of pedagogical games, from low cost materials. With the games already made, we organized different teaching actions in the school to inaugurate and make effective the materials. We realized that the games provided a playful environment in which it collaborated with the process of student training and was also an incentive for other teachers to engage in such actions.

**Key words:** Pedagogical intervention. Playfulness in education. Learning by games.

**RESUMO**

Este trabalho tem como objetivo apresentar um relato de experiência de uma intervenção pedagógica realizada em uma escola pública estadual do sudeste Brasileiro. Na pesquisa elaboramos diferentes tipos de jogos pedagógicos e atividades lúdicas com materiais de baixo custo. Organizamos diferentes ações de ensino na escola para inaugurar e tornar efetivos os materiais didáticos. Percebemos que as atividades proporcionam um ambiente lúdico no qual contribui substancialmente com o processo de desenvolvimento dos

estudantes, além de ser um importante incentivo para outros docentes se envolverem em tais ações.

**Palavras-chave:** Intervenção pedagógica. Brincadeira na educação. Aprendendo por jogos.

## 1 INTRODUCTION

Reflections on teaching methodologies that prioritize student learning are being considered more and more urgent in an educational scenario that, moreover, the center of attention in the classroom is in the teacher. These methodologies, when coupled with theoretical assumptions and reflections on the educational process, can result in pleasant environments assisting in the formation of more human and critical citizens. The fact is that there are many teaching methods that would coincide with an active learning pedagogy. But, innovative educational actions are generally poorly publicized.

The student can have an active learning experience, from the moment he is introduced to the proposals that go beyond simply listening or attending a class (passively). In active learning, students must manipulate, construct hypotheses, solve problems, including discovering, processing, and applying new information (ROTTER, 2004).

In the scenario where the teacher is the main agent of learning, many of them present difficulties in teaching their subjects, especially those more abstract, such as those in the area of Sciences. However, through educational games, the learning environment can become motivating and enjoyable, as long as the teacher is the mediator and evaluator of that learning.

This theme has overcome school barriers and has been discussed and dealt with by researchers throughout the country (KISHIMOTO, 1996; HUIZINGA, 2001; SCHRAND, 2008; SOARES, 2013). Among the possible methodological strategies we chose games as the theme of this article, because it is a resource that can be used in basic education schools, easily accessible and often overlooked by education professionals. In addition, it is necessary to point out that the games value the student mainly with the development of affective, cognitive and motor aspects (RODRIGUES, 2003; FRANKLIN, PEAT and LEWIS, 2003; MOURA, 2007).

Therefore, this work aims to present the school reality of a State Public institution in the state of Minas Gerais, in Brazil, from the immersion of the researchers in this school, in a critical and reflexive way, seeking the collection of data on the games as a strategy education. Also, we seek in this work to discuss if the games can, and in what form, collaborate in the students' learning. It is important to emphasize that, before beginning the research, the physical space of the school was evaluated, observing if this would have an environment for the development and socialization of the child, that is, a place with the conditions to offer sufficient subsidies for the development of the students.

After the observations, the hypotheses of learning that enabled the educators to work with the games were raised. Then, from these observations, a project, called Pedagogical Games, was elaborated that could help the teacher in this initial intervention. The project of pedagogical games had the intention to try to insert the games in the school routine. In addition, teachers were encouraged in the appropriation of this resource, since the games need to have their space, as a learning tool, within an educational institution.

## **2 METHODOLOGY**

Initially, immersion work was carried out at the school where the research was carried out. The immersion activities took place in the morning shift with elementary students I, who were enrolled in the first and second year.

Then, it was observed in the daily life of the institution three times a week for a month. During the research there was a wide discretion to avoid that the students noticed the presence of the researchers. Another research instrument used was the field book, in which we made notes, as a description of situations and important observations related to aspects of school reality.

Subsequently, a diagnosis was made of the materials and spaces of the school that could be used. In this way, we found in the place of recreation of the students tables for snacks and meals, but that were used to store the cleaning materials. It was found during the diagnosis, that the institution has games that are not used, neither for recreation nor to assist the literacy students in the teaching-learning process. According to Kishimoto (1994), "When the object known as a toy fulfills its playful function, it ceases to be a toy to become pedagogical material" (p.14).

In view of the above, it can be seen that a toy by itself, has not been justified as pedagogical material for decades (MEDEIROS, 1960; BANDET, 1973). In order to become a teaching object, the material must contribute to the learner's learning from exploration, manipulation and discussion in a playful and natural way.

Working in this way it is believed that the students can be provided in a playful way, learning and developing them as a citizen. The educational game can help in the acquisition of skills and abilities, which contribute to the affective development; in cognitive development, providing notions of space and time, memorization and attention, in the development of language and enriching the vocabulary; and also in social development, interacting, creating competition and cooperation in the group.

In this way, by appropriating the basic resources that the school already has, such as the tables and places for socialization (schoolyard), we organize the tables in this socialization room so that students already recognize space as a possible learning environment or leisure time, either for meals or for socializing with colleagues during breaks. In addition, colored posters were developed

with little phrases that could decorate the environment, as well as being a possible means of communication with parents or other people passing through the school.

In organized space, students were analyzed how they behaved in that environment in their school routines. Subsequently, educational games were made with low-cost materials such as papers, bottles, string, colored brushes, glue and cardboard. The elaborate games were: lady, memory game, back-and-forth and paper alphabet.

The game of lady was constructed using caps of pet bottles, in the colors red and green, for the composition of the pieces. Still for the lady, the cardboard and brushes in the blue and black colors were used for the construction of the board. The memory game was built with supermarket advertising pamphlets. In this case, the researchers asked the school staff and students to bring the pamphlets that are usually delivered home. The back-and-forth was elaborated with pet bottle and string of string, also asked the students and servers. And finally, built a cardboard alphabet, for the students to recognize the vowels and consonants.

After the construction of the games, we met with the teachers and managers of the school to deliver the materials. After talking with the staff of the institution, it was shown that the intention was to make the materials for the students to enjoy these in the moments of intervals and, perhaps, in classes such as physical education, mathematics, science. For that, it was fundamental that the students have access to the games, as well as the teachers stimulate the use in their classes, when possible.

Finally, an amusement day was held at the school to accompany the students to enjoy the materials. On this day, the researchers were present, together with the teachers who could participate, developing the proposed activities. The annotations were made in the field notebook about the impacts that the activities provided.

### **3 Results and discussion**

For the development of students' learning with pedagogic games, we sought to elaborate materials that would place students as a focus on learning, enabling the execution, observation and perception of activities. In addition, we try to establish relations of similarity and difference between objects from the discrimination and generalization of the observed facts.

The expected result in the preparation of the materials for intervention was achieved throughout the research: the period of immersion of the researchers, the preparation of the posters, the choice of how best to work on the proposed problem, and the organization of intervention activities with the Pedagogical Games, had their contributions to the daily life of the school, with teachers and students.

The difficulties and obstacles in the beginning were overcome in the trajectory of the intervention. The project had significant impacts, for example, the school teachers and parents of

students reported on the motivation that the research provided. Still with the research completed the students continued to use the games during breaks and physical education classes. In addition, there were reports that the students proposed to parents to build the games at home. This shows the benefits that the activities provide the students.

The proposed intervention was reached throughout the research that initially the students and, later, the school community (parents and school employees) put into practice the final product. We realize that the activities, when implemented in an educational institution, are evidenced by the students and they are very receptive to new possibilities of intervention. It is notorious that the school staff had some resistance with our immersion, however, this resistance has been overcoming over time, perhaps by understanding our goal of collaboration.

The first opportunity we had to demonstrate our project in a practical way was in the week of the children's day. This week was held in the range of classes for purposes different from those already accustomed by the school community. The day was titled as "recreational day". The students participated, but some have difficulty in relating, since approximately 30% did not get involved in the games. It is also important to note the respect that the students have had with other colleagues. It is noticed that the practices of the games, being carried out as a team, students learn to respect their colleagues and wait their turn.

At the end of the recreational day some children asked us if they would have again the activities with the games, because they liked the proposal. We suggest that teachers and other school officials use games at other times, such as in breaks and in possible subjects such as physical education, since it would be a possibility to develop skills that may not be possible in the classroom.

Another factor that stands out is the support given by school professionals to our project, recognizing their potential as a didactic resource in educational practice. Notable was the respect among the students, the ease of some regarding the understanding of the game and also the spirit of collaborative work during the educational practice.

It was found that many teachers work in other schools for salary complementation, which can reduce the worker's emotional bond with the institution. Perhaps if teachers had better working conditions, with better remuneration, they could dedicate themselves more to school, establishing ties that could strengthen their relationship with the institution, becoming more involved in pedagogical issues and recognizing their students, for better didactic propositions.

#### **4 CONCLUSION**

The project with pedagogical games was seen as an incentive for student learning, collaborating with a need of the institution. The students met the expectations of all the activities, developing them with spirit, showing interest and participating in a collaborative way (OKAN, 2003).

In the course of the activities, the students and teachers realized that we were constructing the didactic materials and arguing about the recreational day. We realized that the games provided an environment that prevailed in playfulness, beauty, good humor, and also provided the creation of a harmonious environment, in which confidence and attempts to succeed were intensified. The attention maintained by students outside the classroom was associated with interests, dynamic and motivating activities that facilitated the interaction between the participants and made the fun in the games had its importance in the educational process, in the affective and cognitive development.

The use of the game is a possibility to assist the literacy teacher in the teaching and learning process. In this case, the teacher should not only act as an observer but also participate in the activities, as this can be a fuel to stimulate and favor the enthusiasm of the students.

We believe that this work can contribute to other research that seeks to investigate games and recreations in teaching as a methodological strategy. In this sense, it is believed that investigations with this bias, must follow the whole process of planning, implementation and execution of the work proposal so that they can verify solid results on the subject. A necessary point, but one that we do not realize, is the observation of school daily life after the implementation of an intervention project, since the use of the produced materials can have different impacts when appropriated by literacy students with different conceptions or, at different times of those that the researchers help in the implementation of a project.

## REFERENCES

- BANDET, J.P.; SARAZANAS, R.A **criança e os brinquedos**, Lisboa, Editora Estampa, 1973.
- FRANKLIN, S., PEAT, M.; LEWIS, A. Nontraditional interventions to stimulate discussion: the use of games and puzzles. **Journal of Biological Education**, n. 37, p. 79-84, 2003.
- HUIZINGA, J. **Homo Ludens**: O jogo como elemento de cultura. São Paulo: Editora Perspectiva, 2001. 162p.
- KISHIMOTO, T. M. **O jogo e Educação Infantil**, São Paulo: Pioneira, 1994.
- KISHIMOTO, T. M. O jogo e a educação infantil. In: KISHIMOTO, T. M. (org). **Jogo, Brinquedo, Brincadeira e a Educação**. São Paulo: Cortez editora, 1996. p. 105-128.
- MEDEIROS, E. S. **Jogos para recreação infantil**. Fundo da Cultura, 1960.
- MOURA, M. O. A séria busca no jogo: do lúdico na matemática. In: KISHIMOTO, T. M. (Org). **Jogo, brinquedo, brincadeira e a educação**; 10<sup>a</sup> ed. São Paulo: Cortez, 2007.
- OKAN, Z. Edutainment: is learning at risk?. **British Journal of Educational Technology**, n. 34, p. 255-264, 2003.

RODRIGUES, M. **Manual teórico e prático de Educação Física infantil**. 8ª ed. São Paulo: Ícone, 2003.

SCHRAND, T. Tapping into Active Intelligences with Interactive Multimedia: A Lowthreshold Classroom Approach. **CollegiateTeaching**, n. 56, p. 78-84, 2008.

SOARES, M. H. F. **Jogos e atividades lúdicas para o ensino de química**. Goiânia: Kelps, 2013. 198p.

ROTTER, K. Modifying “Jeopardy!” Games to Benefit All Students, **Teaching Exceptional Children**, n. 36, p. 58-62, 2004.