



DEVELOPMENT OF CREATIVE THINKING IN ELEMENTARY SCHOOL STUDENTS THROUGH THE STIMULATION OF THE CEREBRAL HEMISPHERES.

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Summary

This research was carried out by undergraduate students and advised by internship professors from the Universidad Popular del Cesar. It sought to promote the stimulation of the cerebral hemispheres to develop creativity in elementary school students and thus enrich their learning. The research focuses on the collection of information on art education and its impact on the development of creative thinking under the stimulation of the cerebral hemispheres, taking into account the appreciation and social participation of elementary school students. It is proposed to establish collaborative relationships between cultural institutions, educational centers, teachers and artists to enrich education and promote creativity under the stimulation of the cerebral hemispheres in different educational environments. Quantitative research was used, which has the case study as a methodological option, and the survey as a privileged instrument for the collection of the information acquired by the different students participating in the research. The target population is the education system in general, mainly primary school students. Representative samples should be established to study the impact of brain stimulation in different contexts. The study seeks to promote art education and its positive impact on the creative development and improvement in the educational field of elementary school students through collaboration between different educational and cultural actors, as well as strengthening teacher training. The research aims to provide strong evidence supporting the importance of arts education and its effective integration into the education system.

Keywords: *creativity, creative thinking, students, stimulation.*

INTRODUCTION

For decades, the notion that our brain hemispheres play distinct roles and can be selectively stimulated has captured the popular imagination. The idea that one can enhance creativity by stimulating the right hemisphere or improve one's mathematical skills by activating the left hemisphere has led to the proliferation of programs and techniques aimed at this purpose. However, in the sea of concepts and theories, it is essential to approach brain hemisphere stimulation with a more nuanced, research-based perspective.

In this case, the search to enhance the creative development and enrich the learning of elementary school students, this article focuses on a fundamental objective: to promote the stimulation of the cerebral hemispheres through art education. This research aims to shed light on the impact that brain



stimulation has on the development of creative thinking, with special emphasis on students' appreciation and social participation.

The study aims to establish strong collaborative relationships between cultural institutions, educational centers, teachers and artists, with the purpose of enriching education and promoting creativity in different educational fields. Aware that the target population is the education system in general, with particular attention to primary school students and teachers, it is considered of utmost importance to create representative samples that allow the impact of brain stimulation to be studied in different educational contexts and scenarios.

In the development of this research, various data collection techniques have been used, including interviews, surveys and observations on arts and cultural education programs such as: you are creative whether you know it or not by Duncan Wardle, Survey on Art for Learning and Survey on Creativity by School Education Gateway, that have proven to be effective in teaching practices and their impact on elementary school students. These research methodologies allow us to obtain a comprehensive and in-depth vision of the benefits of art education in the development of creativity, cultural awareness and social skills of primary school students.

Art education emerges as a vitally important element in the process of educational development, given that it has proven to have a positive and integral impact on students. It is through collaboration between cultural and educational institutions that education is enriched and creative thinking is promoted at all levels of basic primary education. To ensure the effectiveness of this promotion, it is essential to implement policies and programs that strengthen the training of teachers in the field of arts education, while at the same time establishing evaluation standards that allow measuring the improvement of their cognitive development and the impact on the development of students' creative thinking.

The central focus of this study is to promote the stimulation of the cerebral hemispheres in education and its positive impact on creative development and the general improvement of the educational quality of elementary school students. This is achieved through active collaboration between different educational and cultural actors, in addition to strengthening teacher training. The integration of arts education not only enriches the learning experience of students, but also contributes to forming more creative and culturally sensitive individuals, preparing them to face the challenges of the future with an open and purposeful mind.

METHODOLOGY

To carry out this article, the research process presents a quantitative methodology, according to Taylor and Bogdan this methodology mainly collects descriptive data, essential within the words and behaviors of the people and/or subjects of the research; They also warn that it is phenomenological in nature; For this reason, the type of study is descriptive.

Within the framework of this methodology, the survey was the preferred tool to collect data with basic questions to the student, some time later a didactic activity called "Brain Gym" or mental gymnastics that's no more than a set of exercises that have the purpose of stimulating and developing brain capacities through the development of intellectual, emotional and creative skills, including body movement in boys and girls, all this according to the theory causes the connection of nerve networks that become an emotional impulse and assimilation of learning. The application of brain gymnastics or Brain Gym, which is nothing more than the training of the right and left hemispheres of our brain, can raise the educational and socio-emotional level in children, and create the foundations for their future.

This is a fairly broad concept that encompasses all exercises to stimulate the cerebral hemispheres, and it is useful to give examples of them in order to have a broader perspective on the subject.

In this sense, exercises arise to stimulate the cerebral hemispheres, made up of coordinated activities that allow this convergence between the body and the brain, which benefits the acceleration of learning,



memory, concentration, creativity and other skills associated with body movements and academic abilities. Examples of these exercises used are writing and drawing, riddles, self-dictation games and even learning other languages, physical synchronization was also key, in this case the well-known cross march.

Finally, the survey was repeated with basic questions to the students and the answers were more subjective this time, with a wide margin of imagination and interpretation of the world in the children, which leads us to think that this type of cognitive activities that were applied and that are evidently closer to the artistic area have a strong impact on the thinking and creativity of the young person.

RESULTS

After extensive research we can reach a consensus that the stimulation of cerebral hemispheres should not be approached as a dichotomy, but as a process that takes advantage of the brain's ability to adapt and change, known as brain plasticity. This plasticity allows us to develop new skills and strengths, regardless of "left" or "right" labels. Rather than focusing exclusively on activating a particular hemisphere, it is more beneficial to take holistic approaches that involve a variety of cognitive, emotional, and physical activities, as demonstrated with brain gymnastics. We affirm that it is possible to stimulate the cerebral hemispheres to reinforce the area of knowledge of students in a specific subject, in this case, creative thinking and art education, so that the development of creative thinking through brain stimulation is a reality.

Among the benefits found in the chosen research, the impulse to active participation is notorious in many areas in which this stimulation was developed, thanks to specialists in art education, generating debates and periodic meetings to share opinions and research. Seminars, congresses and meetings are also held, as well as the publication of books related to art education. In addition, the existence of varied and interesting projects in the field of educational research is mentioned. However, despite these advances, there is evidence of a decline in the curricular spectrum of art education at all educational levels, indicating the need for greater adaptation and integration of art education in all instances. The text emphasizes the importance of having personalities who serve as references and support to achieve the integration of the arts in education. In summary, the outstanding positive result is the promotion of participation and knowledge exchange in the field of arts education, as well as the identification of challenges to be overcome in this area.

CONCLUSION

To present the researched topic, the stimulation of the cerebral hemispheres, especially the right hemisphere, can contribute to the development of creative thinking in primary school students. The right hemisphere of the brain is considered more associative and holistic, making it easier to generate original ideas, imagine, and solve problems in novel ways. Activities such as painting, music, acting, and theater can encourage creative expression, imagination, and aesthetic perception in students.

Research has shown that the implementation of didactic strategies and interaction with psychopedagogy can be effective tools to stimulate creative thinking. In addition, the promotion of debates, regular meetings, seminars and congresses in the field of arts education has encouraged active participation and the exchange of knowledge. However, despite these advances, there has been a decrease in the curricular spectrum of arts education at all levels of education, highlighting the need for greater adaptation and integration of arts education into the curriculum.

Overall, the results obtained from the research show positive developments in terms of promoting participation, knowledge sharing and identification of challenges in the field of arts education. However, it is important to continue working on the promotion and strengthening of art education in all educational instances to enhance the development of creative thinking in elementary school students.



We end our journey with the intention of continuing to investigate the interweaving of practices and theories, new horizons that allow us to build, step by step, a school experience that can leave traces, marks, traces and that does not dissipate in the passage of time.

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