



Impact of Teaching-Learning Process for Brain



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This research has based on a theoretical review of the knowledge about the topics, the importance of the brain and its learning styles, which some theorists propose, whose interests and publications focus on the importance of the brain for learning. The purpose was to demonstrate, the impact of these topics on the teaching-learning process and the problems. That arise around them, as well as topics on the need to incorporate flexible models that take into account the diversity of human thought. Develop capacities taking into account the particularities of the student, attention should be paid, manipulate methodological strategies and resources that respond to the different learning styles and systems proposed in this article, so that the teaching of all students benefits, according to their progressive period, level of development and educational needs, without separating them from their environment or context in which they operate. It shows how the brain influences learning, so that knowledge has strengthened in a humanistic way. The objective is to potentiate teaching and learning, to achieve a better academic performance, which seeks to offer significant experiences to adapt to the new demands of the society of the 21st century.

Keywords

brain;
knowledge;
learning;
neuroscience;
strategies;

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1. Introduction

Education has a number of areas that can have discussed, a large number of topics that are associated are extraordinary with the education system and they are of great importance because education demands a truth that leads to humanization, innovation and the growth of society.

Education is a factor that has always been a fundamental and indispensable part in the integral development of the human being, in the same way at all times of humanity learning problems have linked to pedagogical teaching, which in some way or another way has reflected in the behavior, achievement and in the process of training of the students.

The dynamics in the current society is in constant transformation, however, the educational paradigm has not changed with the same haste that has been reforming the community. However, what is going on with education today? There is more talk about the difficulties and happen in the educational environment. About issues of aggressiveness, peer violence, and bullying, it is common to hear increased school failure and the problems that affect teachers.

Education will face new challenges to solve what a humanistic, constructivist education demands, that individualizes according to learning styles and rhythms which is being ignored by an aging model, where the teacher is the mere producer of a traditional class ; and where is the imagination that seeks prepared citizens, committed to conform to flexible models, which demand a diverse way of acting in the face of a traditionalist education, which does not facilitate self-confidence, the deployment of creativity, which demands the education of the 21st century.

2. Materials and Methods

The objective is to know how the functioning of the brain influences to improve learning in students of the 21st century. An extensive literature review was carried out in order to obtain information on learning in the current era, in addition to making use of documentary research, which is critical, with a considerable theoretical basis; at the theoretical level, notions and concepts of authors such as David Ausubel, Paulo Freire, Richard Bandler and John Grinder, Francisco Mora were incorporated.

The methodology used sought to approve the explanations of the phenomena and interactions that occur in education focused specifically on the brain - learning and student experience, we proceeded to examine each of the theoretical contributions made by the cited authors and highlighting the most relevant about learning and brain, role of the teacher in the teaching-learning process.

3. Results and Discussions

Current education has the responsibility of correcting setbacks that have maintained for decades, which are the results of the dominant memory thinking in the teaching system; which must has forgotten and focus the new knowledge on the learning of the 21st century, with a scientific, humanistic vision and that see the subject as the fundamental pillar in the teaching-learning process.

Rodríguez (2011), stated that according to the theorist Ausubel, and his theory of discovery. These some authors aiming to change the memory learning that prevailed at that time, for meaningful learning that would serve to solve problems of daily life, this learning significant as they expose it is an enduring knowledge that proposes the subject as a builder of their own knowledge through active discovery.

What this theory of learning needs is to guarantee an imperishable acquisition of the contents; so that it causes a change in the advancement, improvement of the students. The proposal aims for individuals to prepare for life around the knowledge acquired during its development, the one that must have the character of significant learning; providing development according to the age of the learning subject.

It is also worth mentioning that for this acquisition of knowledge to be satisfactory The way in which individuals learn through the study and functioning of the brain according to the age of the subject, which currently proposes neuroscience together with neuroeducation, these sciences express that Its postulates aim

to end some learning problems and find the most appropriate way to individualize the process of acquiring knowledge.

Neurosciences raise central issues about human beings that have related to development, learning training skills; complex cultural skills, reading, behavior, and other content that concern emotions and their correlation with the subject (Bacigalupe, 2018).

It is worth saying that these sciences have within their reach the premises that in another way help education and interdisciplinary form that necessary source to take a turn that implies improvements in the teaching-learning process from an organized and functional approach of the brain, in favor of pedagogy. Neuroscientific exploration could guide pedagogy to create a potential for understanding learning, from other aspects, which must have retaken by pedagogues.

Through the guidance of neuroeducation, teacher awareness will have achieved to create a context that creates emotional environments that facilitate effective and effective learning.

The brain, learning, and teaching are linked to each other, and the strategies used by teachers are a complement to the proper functioning of the major organ of the nervous system; so fundamental and necessary for the teaching-learning process explained by (López & Santiuste, 2008).

At the present time, there is already knowledge that is involved in pedagogy, one of these is the neuroscience that brings scientific advances that bring teachers closer to understanding why, of complications in learning, how to act and what strategies you can use for each case study; What this science intends is to clarify to education scholars the needs that can be perceived in this unrecognizable and necessary field.

The strategies used by teachers today would benefit from the science that studies the functioning of the brain; since these will give the knowledge and tools that teachers need to act in a timely manner, where pedagogical practices will be more effective and humanistic.

Campos (2010), refers that it is relevant to consider what has desired to transform, demonstrating and defining the faculties associated with the brain, it is functioning. The tools offered by neuroeducation must change the course around education and its practice must begin by transforming the brain of the teacher and the subject that learns.

For there to be a real change in education, it must be the teacher, who, in the first instance of a turn in his pedagogical actions, which implies the study, knowledge, and apprehension of the form and functioning of the brain in the teaching-learning process. The commitment exerted by a teacher is necessary; therefore, the negligence of teachers in this regard can impair the effectiveness and quality of learning in students.

It is essential to make a parenthesis in the current education system, to propose a different approach unexplored for many but that promises great changes from the study of neuroscience, which exposes keys that would help identify the problem of teaching-learning that uses the rudimentary models In the current era, a challenge that students of pedagogy must face with a high intellect and demonstrate creativity, elasticity of a new perspective of education.

The pedagogical practices proposed to date go against the research carried out by Neurosciences, Child Neuropsychology, since the importance of the brain in the learning of children and adolescents has not revealed (Paterno, 2014).

Paterno's words reflect the great concern for the education that children, adolescents, and young people now receive that has been demonstrated through scientific advances the great distance they present in the teaching processes in educational centers, however, This science that promises great changes is relatively young but that step by step and with the effort of education scholars will achieve renovations in pedagogy.

Continuing with the contributions that neuroscience offers to education Aristizábal (2015), states that Neuroscience with its contributions facilitates the understanding of the learning process, which is necessary for the life of a human being, in the same way, this knowledge about the functioning The brain contributes to the teacher when transferring knowledge appropriately, assuming the differences and heterogeneity of learning that can occur within a classroom.

The advances of Neuroscience together with pedagogy and psychology have intended to reflect the role of the teacher from a different criterion from the last century, this science takes advantage of the knowledge of other sciences in order to support the new school and promote a different pedagogical practice focused to benefit the learning processes to facilitate the teaching of students.

As stated in previous lines, neuroeducation has emphasized the many components that are closely associated with the proper functioning of the brain and the importance of the relationship between the body and the mind so that adequate learning is reflected. The brain is the highest organ, which has the responsibility of emotions; the motivations that together with other external agents successfully perform their functions (Carballo, 2017).

The objective pursued by Neuroscience is to incorporate knowledge regarding the functioning of the brain in the educational field, and contribute to the improvement of teaching skills in its pedagogical management in the classroom, it should be mentioned that the deployment of knowledge in this area of the science will contribute to carrying out conscious, effective work and, above all, it will be possible to avoid wrong practices in the development of children and adolescents.

Pedagogical practices today are in need of requesting help from other sciences that guide the learning problems that are perceived daily in children and adolescents, in order to understand and solve these difficulties that are so damaging to educational development (López & Santiuste 2008).

Throughout this writing, the importance of sciences such as neuropsychology and neuroscience, which form a scaffold for the benefit of education with its progress in understanding human development and learning, have been cleared. With the application of the resources that these disciplines provide, it will be possible to intervene correctly in the different topics that emerge day by day in the classrooms, perceive what style of learning, what cognitive competence is involved in the brain organ and how each brain acts differently.

Menchén (2018), mentions that the brain has the skills to learn and adapt to many contexts, describes it as something magical capable of performing a function and affirms that the brain tends to be transformed according to the acquired experiences.

The relationship that exists between the sciences that study the brain allows us to deeply understand the brain-learning connection so that teachers will have a tool that will serve to know how the brain works, its information processing, its conservation, and transmission. Likewise, the teacher is responsible for attending their educational praxis, planning their actions according to the ages of the children they educate in order that the experience obtained becomes meaningful in each human being.

The pedagogical practice that is carried out must be assertive according to the learning styles and the needs of each subject, this would ensure success in the teaching-learning processes since the environment is not adequate, it can injure the brain and its functions from the (Barrera & Donolo, 2009).

As explained, Neuroscience offers the teacher greater understanding in relation to what happens in the brain of human beings, it also reveals what elements disrupt its functionality. It is essential that teachers take into account the difficulties perceived in the pedagogical practice in the classrooms, which not only identify the difficulty of learning, but also the procedure that will benefit the conflict.

Table 1 shows the results of the literature research that was investigated on the importance of the brain in learning.

Table 1
Analysis of authors cited

Authors	Subject	Year	Result
Aristizábal, A.	Advances in neuroeducation and contributions in the teaching-learning process in teaching.	2015	Neuroscience with its advantages brings knowledge to teachers and facilitates the teaching-learning process.
Basigalupe	Educational neuroscience as an educational space is possible.	2018	According to this author, neuroscience states that the brain has related to skills and abilities related to human emotions.

Fields	Neuroeducation: uniting neurosciences and education in the search for human development.	2010	It is important to keep in mind that the brain organ has many functions, therefore, it should be borne in mind that it is what you want to change for the transformation of education.
Carballo	Neuroeducation: from neuroscience to the classroom. Integration	2017	The brain has the responsibility to control emotions, but a motivating environment to perform its functions correctly must surround it.
De la Barrera, M. and Donolo, D	Neurosciences and their importance in learning contexts	2009	Pedagogical practices must take into account the different learning styles, the needs of each student; since an error on the part of the teacher can cause serious injuries in the brain.
López, C Santiuste, V	Contributions of neuroscience to the educational treatment of reading difficulties	2008	Now the field of education has been in need of requesting help from other sciences such as neuroscience, in order to provide solutions to problems within the pedagogical practices.
Menchén, F.	Creative Learning and the Brain	2018	The brain and its plasticity tend to adapt to different contexts according to the experiences lived.
Paterno, R.	Lights and penumbras of the neuroeducation	2014	This author reveals that the pedagogical practices at present are not consistent with the learning of the time; because they do not take into account, the functions of the brain in learning that reveal the advances of neuroscience.
Rodríguez, L.	The theory of meaningful learning: a review applicable to the current school.	2011	This theory defends pedagogical practices should be aimed at meaningful learning that contributes to the resolution of everyday life problems.

The analysis and interpretation of results have presented in an integrated way considering, that the authors mentioned in this text agree. The theme raised about the importance of the brain in learning, the degree of transcendence that implies the functions of the brain in pedagogical practices has verified, in the same way it has perceived that the strategies, motivation, context, and knowledge about the functions of the brain by teachers must be significant for obtaining lasting learning.

Teachers should reflect if the form of their pedagogical practice is attractive to their students or they are simply being depositors of content. Education has the responsibility and needs to cultivate human beings committed to their own learning, reflective, examiners; with values and qualities is the duty of each of the actors in education.

Learning is not a task that the student can acquire in complete individuality. Well, it has known that the teacher must become a mediator, providing a large part of resources. Moreover, strategies to originate those

desire for knowledge in the student. Neuroeducation It proposes, through science, to improve the teaching profession, that with its advances in the functional knowledge of the brain, innovation, and creativity, it will be possible to obtain committed, skilled citizens, with their own objectives when it comes to solving problems, involving them in the commitment to grow every day to project a life that fits the current era.

4. Conclusion

The research made it possible to determine that teachers have the responsibility to become researchers of their own practice, planning activities that reflect the success of their students with positive experiences, providing means of support with which they can reveal and understand what they learn in the process of teaching-learning.

Human beings all have a different way of learning. It is extremely important that they begin to incorporate into educational procedures, pedagogical resources according to the different styles and rhythms of learning, so that educational praxis becomes flexible, moldable to the structure of Each subject, teachers currently have the contributions of Neuroscience which offers tools that are scientifically based and that will affect the teaching-learning processes. It is time to positively intervene, get more involved and improve the level of learning and academic performance of the schools of the future. The contribution of this article will serve to study, discuss and make viable the clearest ideas on the topics discussed, learning versus Neuroeducation, and the latter with a humanistic proposal that supports a different education according to the 21st century.



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