



Research Article

Multiple intelligences and its pedagogical impact on the teaching-learning process

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ABSTRACT

Currently, society is in constant change, education must move to this innovative model and the educational community must be part of it, taking into account the diversity of learning that they can exist within a classroom. This research seeks to analyze the pedagogical impact of Gardner's theory of multiple intelligences, in the teaching and learning process of students of the upper elementary school sublevel. The exploratory and bibliographic method was used, which allowed to obtain results from its application, managing to enhance the abilities and skills of the students, in order to be able to carry out an analysis and associate previous knowledge, for the construction of meaningful learning.

Keywords: *Comprehensive Learning, Learning Plurality, Multiple Reasoning, Teaching Tactics*

1. INTRODUCTION

The term intelligence in psychology is defined as the ability of the human being to acquire knowledge and apply it in everyday situations (Ponce & San Martín, 2010). Most of the people in the world are capable of capturing and reasoning information in a specific way, they have characteristics that make it different from the other; It is considered essential to transform the school, through personalized teaching, which allows to enhance the most predominant intelligence in the student and thus achieve meaningful learning, therefore, it is necessary to cultivate them in the human being.

Intelligence seeks to obtain effective results to provide solutions to everyday problems of culture or society (Gardner, 2005), it can be said that each person has a particular ability to reason in situations that arise, hence, in our In the country, as well as in others, education, as such, is considered the basis of society, in turn, guarantees that all its inhabitants, both boys, girls, youth and adults have access to education regardless of race, language and traditions.

In the Constitution of Ecuador of 2008, in its article 27, it establishes "Education will focus on the human being and will guarantee its holistic development, within the framework of respect for human rights, a sustainable environment and democracy" (Constituent Assembly, 2008, p. 33), this seeks to generate skills to create and innovate.

Within the educational system, a constructivist pedagogy is proposed, where students achieve autonomy being responsible for their training, and teachers, guides, facilitators of the teaching-learning process, both build knowledge; in other words, the system promotes attention to diversity, which is necessary today.

To achieve comprehensive learning, attention to individualities is essential and it is important to analyze how the implementation of the theory of multiple intelligences contributes to the acquisition of significant notions in students, improving the teaching-learning process (Garcia, 2018), allowing the development of students and their contribution to society.

The different types of intelligences are essential and combined they form the intellectual profile of the person, which makes us different when learning, to attend to this cultural diversity it is necessary to create a new school focused on the student, taking into account their particular strengths, provide an open and flexible education that allows adaptations, this theory has been applied in many educational centers around the world and has achieved effective results (Vivas, 2015).

The exploratory and bibliographic methodology was used to collect the information and establish the results. The research aims to analyze the pedagogical impact of the theory of multiple intelligences, in the teaching-learning process of students of the sublevel of upper basic, with the application of this theory seeks to forge an impact in the social field where it is generate a comprehensive and scientific educational culture, which provides the student with the ability to create, imagine and develop skills, it is necessary to find an alternative to address diversity in the classroom and meet the needs of all students, since in many cases it is not these differences are taken into account.

The research begins with the theory of multiple intelligences, the diversity of learning and the reality of our classrooms, the future of education with multiple intelligences, to finally conclude with the range of educational strategies that can be applied based on each one of the eight intelligences.

2. MATERIALS AND METHODS

An exploratory investigation was developed where it was sought to analyze the research topic establishing factors that are related to the phenomenon under study, for this; define concepts, prioritize points of view and obtain unique and innovative significant criteria (Abreu, 2012); and bibliographic, which in fact, guaranteed the validity of the theoretical foundations applied in the research, a documentary analysis was applied in educational journals, theses, published books, opinions and arguments of authors related to the subject.

The qualitative approach was used to reflect on the opinions of experts to know the impact of the application of the theories of multiple intelligences as part of the strategies applied in the classroom, which allowed the collection, analysis and presentation of coherent results when using logical and mental processes.

3. ANALYSIS AND RESULTS

3.1. THE THEORY OF MULTIPLE INTELLIGENCES

Dr. Howard Gardner, psychologist, researcher and professor at Harvard University, defines intelligence as the ability to process information and the ability to solve problems and depend on the environment, education and culture, hence the relevance of school, family and society. He showed that there are eight different and independent intelligences among themselves (Nadal, 2015). Figure 1 shows the different intelligences and the location in the different areas of the brain.

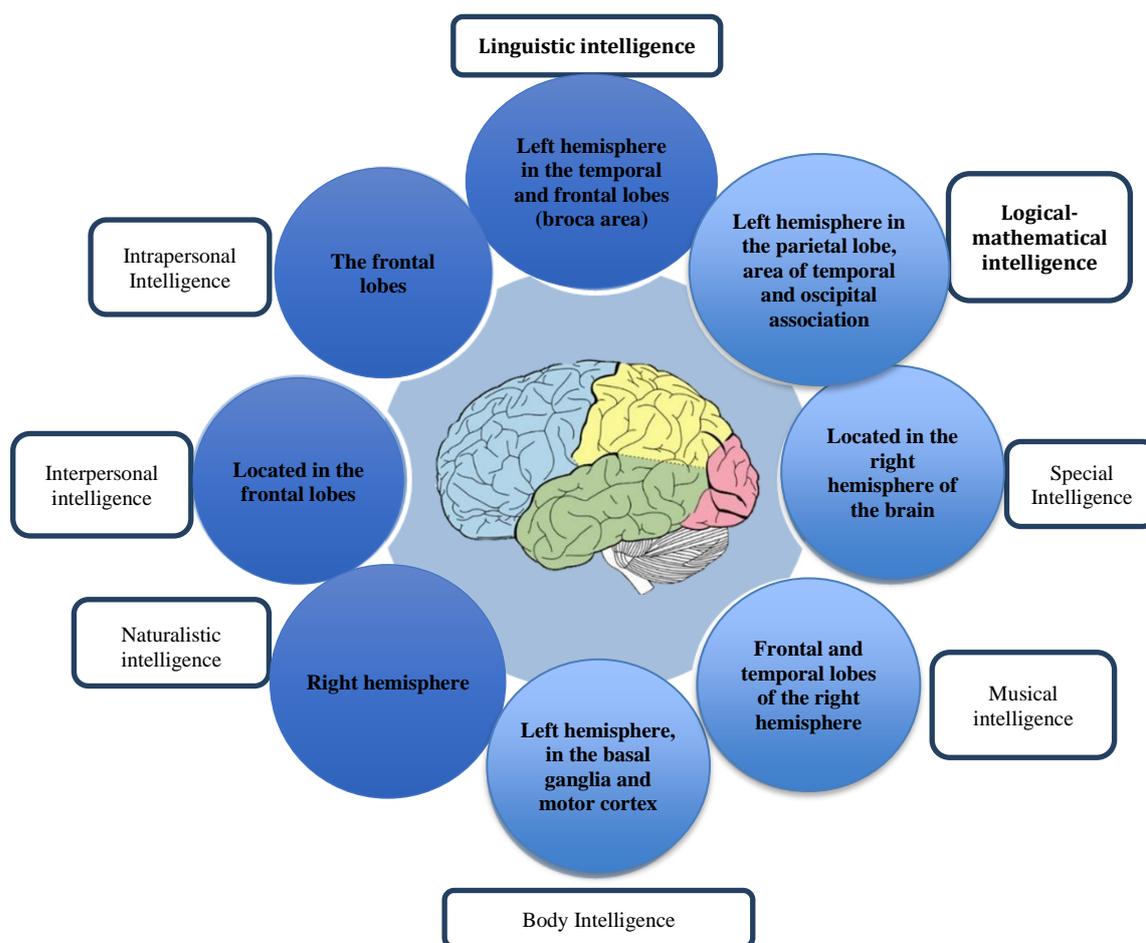


Fig. 1. Intelligences and location in the brain.

Source: (Mercadé, 2019)

Every human being has a very peculiar way of learning, which makes it different and unrepeatable in society, so that, with these theories, what is achieved is to work with each case focusing on the most marked one. For the author (Sánchez, 2015) each of the intelligences maintains elements that make them different from each other, and that allow addressing diversity and satisfying their teaching-learning trends. Figure 2 details the eight intelligences that arise as a result of Gardner's study and what is the quality of each one of them.

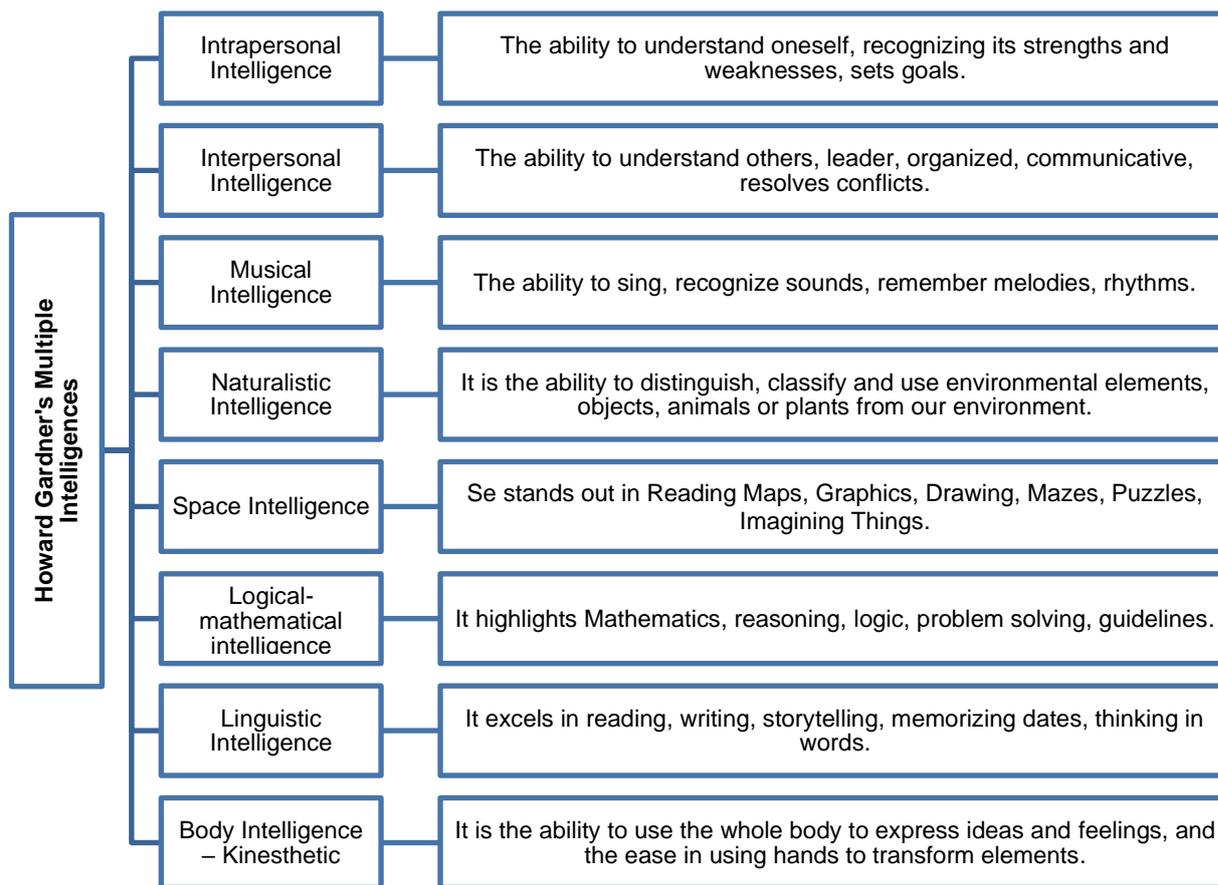


Fig. 2. Multiple Intelligences by Howard Gardner

Source: (Gardner, 1987)

3.2. DIVERSITY OF LEARNING, THE REALITY OF OUR CLASSROOMS IN THE HANDS OF MULTIPLE INTELLIGENCES

Intelligence can be higher or lower, but the application that is made of it is what will provide success in life, diversity generates learning styles that are related to multiple intelligences and the needs of students, each one has characteristics that facilitate learning based on their age (Ramírez & Ramírez, 2018), on the other hand, they do not assimilate with the same rhythm, nor with the same uptake, in effect, it is necessary to identify the abilities and skills of each one, to enhance it and according to this work with them, achieving that the information that is acquire it becomes knowledge.

It is agreed that within the classroom if there is a diversity of learning, it is necessary to consider differentiated attention for all students, this does not mean that it is discriminated against for having a different way of learning than the rest, on the contrary, it will be attended, applying activities that allow you to consolidate the knowledge that is the goal that is set for everyone, proposing options that are used within the process, adjusting and re-establishing the teaching methodology (Cárdenas & Macías, 2014). The main characteristics of the diversified classroom can be perceived by comparing it with the traditional classroom, below, table 1 presents the characteristics of the traditional classroom, contrasting with those of a diversified classroom.

Table 1. Comparison of the traditional classroom and the diversified classroom

Characteristics of the traditional classroom	Characteristics of the classroom Diversified
<ul style="list-style-type: none"> • The interests of the students are not usually taken into account in the teaching and learning process. • The tasks are the same for everyone. • Time is often inflexible. • The same method is often used to evaluate. • The teacher is the one who indicates the general guidelines. 	<ul style="list-style-type: none"> • Students are often encouraged to make choices based on their interests. • Homework is assigned considering the ability of each student. • The time is flexible and depending on the needs of the student. • Students are evaluated by applying different types of evaluation. • Students work with the teacher in order to set individual and class-wide goals.

Source: (Sanchez & Garrido, 1999)

This is where traditionalist education is not giving the fruits that it should, to create proactive, critical, reflective beings that are competitive in the professional field. (López, 2018) refers that within the context of the 21st century it is necessary to promote a holistic education with a liberating vision, a varied pedagogy that includes the best of education and knowledge in general. Keeping in mind that the science and heart of holistic education is liberating spirituality.

3.3. THE FUTURE OF EDUCATION WITH MULTIPLE INTELLIGENCES

It is necessary to give importance not only to the two predominant intelligences such as Linguistic and mathematical intelligence, but also to open up other possibilities of knowledge, where students who do not stand out in the domain of traditional academic intelligences may have a cavity within the teaching-learning process, focusing on the strengths and their own capacities (Suárez, Maiz, & Meza, 2010), that is, with the objective of attending to educational diversity and This way, optimal results are generated in the teaching and learning process; that they are not isolated by having a different way of learning.

Consequently, the theories of multiple intelligences not only allow students to learn by making use of the most predominant talent, rather, with the guarantee of diagnoses, application of a methodological diversity, metacognitive strategies, the involvement of students, teachers and parents Within the process, where motivation is paramount, they are able to provide solutions to problems in daily life and form critical, participatory beings (Crespo & Pizarro, 2014).

3.4. STRATEGIES TO ADDRESS EACH INTELLIGENCE

The teacher must be part of this innovation in such a way that the activities are developed and that the students do not see it imposing, on the contrary, that they have the desire to discover and learn; This is achieved by making use of games, by changing the spaces where the class is taught. For the authors (Castro & Guzmán, 2005), they refer that it is recommended that the teacher in their classes and pedagogical projects apply activities, such as telling stories, providing actions that involve mathematical calculation, crafts,

assigning roles, playing, singing, drawing, exhibitions, reflections, that is, varied activities where the student presents constant participation.

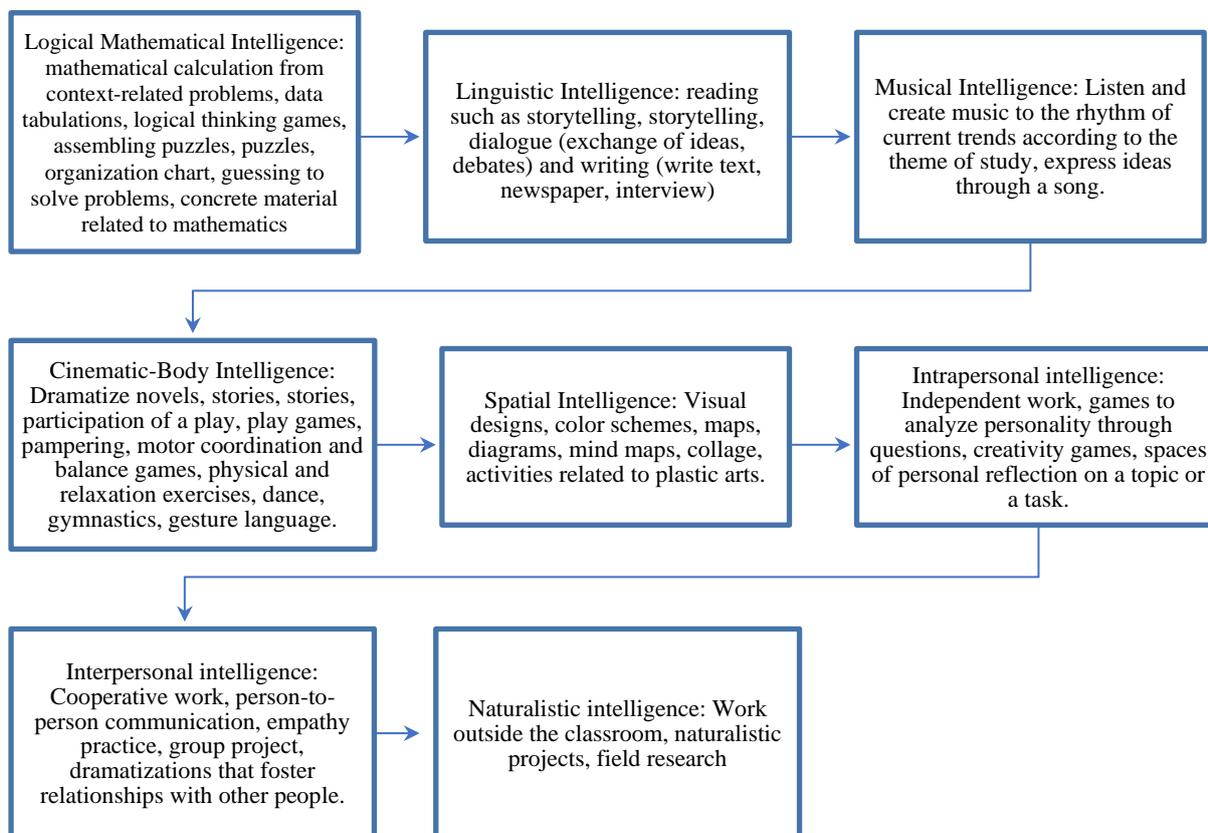


Fig. 3. Methodological strategies for each Intelligence.

Source: (Durazno & Guerrero, 2008)

It is necessary to consider that from the perspective of the theory of multiple intelligences a range of activities is shown that are proposed according to the strong intelligence of the student, which is evidenced through the application of a test and is in the power of the teacher stimulate it so that it does not weaken, then in Figure 3 examples of techniques, strategies and activities proposed by each predominant intelligence are detailed.

Based on the results obtained, through the bibliographic review, it can be answered that multiple intelligence theories are an effective alternative to address the diversity that exists in the classroom, because it allows to enhance the capacities of each student and propose innovative strategies according to the abilities that each one of them possesses.

The multiple intelligences housed in different points of the brain, are enhanced depending on the stimulus that the student receives, from their early childhood years and during their school life, when stimulating them they discover skills, in the areas: musical, interpersonal, spatial, logical-mathematical, linguistic, corporal-kinesthetic or naturalistic, which validates the theory of multiple intelligence proposed by Gardner.

The teaching process within the classroom involves addressing the diversity of capacities that students have, it is achieved by applying innovative methodology for the benefit of integral education, to establish a futuristic reality of education, which allows everyone to

find their identity and sense of its pedagogical process, which leaves behind the traditionalist way of teaching. The strategies applied by the teacher are addressed according to each type of intelligence, that is why the different tests are carried out that allow determining the predominant intelligence in each human being.

4. CONCLUSION

The theory of multiple intelligences is an effective alternative to address diversity in the classroom and achieve meaningful learning, it allows enhancing students' skills by focusing on the most predominant talent, without leaving aside all those that a human being possesses.

The pedagogical impact of Gardner's theory of multiple intelligences, in the teaching-learning process of the students of the upper basic sublevel, generated a positive change in the teacher by innovating and changing the traditional school; on the other hand, the learning received is significant for schoolchildren; In addition, it is possible to enhance abilities, skills of the learner; where he associates his previous preparations; builds new knowledge to achieve critical, participatory, creative and analytical beings.

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