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Gardner's multiple intelligences approach in contemporary educational practice

El enfoque de las inteligencias múltiples de Gardner en la práctica educativa contemporánea

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ABSTRACT

The theory of Multiple Intelligences, proposed by Howard Gardner, has significantly influenced the understanding of learning and the organization of more inclusive educational practices. The objective of this article was to analyze the multiple intelligences approach and its application in contemporary educational practice, considering its contributions to curriculum design, pedagogical strategies, inclusive education, and teacher training. The research was developed through a systematic documentary review of academic literature published between 2000 and 2024, located in Redalyc, Dialnet, Google Scholar, ERIC, Frontiers in Psychology and ResearchGate. 35 sources were identified, of which 19 were included in the final analysis due to their thematic relevance and direct relationship with Gardner's theory. The results show that this theory favors curricular diversification, attention to different learning profiles, and the planning of pedagogical strategies focused on the student's strengths. It is concluded that, although it has empirical limitations, it maintains pedagogical value when applied critically, contextualized and articulated with other contemporary educational approaches.

Keywords: multiple intelligences, Gardner, educational practice, curriculum design, inclusive education.

RESUMEN

La teoría de las Inteligencias Múltiples, propuesta por Howard Gardner, ha influido de manera significativa en la comprensión del aprendizaje y en la organización de prácticas educativas más inclusivas. El objetivo de este artículo fue analizar el enfoque de las inteligencias múltiples y su aplicación en la práctica educativa contemporánea, considerando sus aportes al diseño curricular, las estrategias pedagógicas, la educación inclusiva y la formación docente. La investigación se desarrolló mediante una revisión documental sistemática de literatura académica publicada entre 2000 y 2024, localizada en Redalyc, Dialnet, Google Scholar, ERIC, Frontiers in Psychology y ResearchGate. Se identificaron 35 fuentes, de las cuales 19 fueron incluidas en el análisis final por su pertinencia temática y relación directa con la teoría de Gardner. Los resultados muestran que esta teoría favorece la diversificación curricular, la atención a distintos perfiles de aprendizaje y la planificación de estrategias pedagógicas centradas en las fortalezas del estudiante. Se concluye que, aunque presenta limitaciones empíricas, mantiene valor pedagógico cuando se aplica de forma crítica, contextualizada y articulada con otros enfoques educativos contemporáneos.

Palabras clave: inteligencias múltiples, Gardner, práctica educativa, diseño curricular, educación inclusiva.

1. INTRODUCTION

The traditional conception of intelligence, based on intelligence quotient (IQ) as a universal measure of human cognitive abilities, has been widely questioned since the last decades of the twentieth century. In this context, Howard Gardner, psychologist and researcher at Harvard University, proposed in 1983 the Theory of Multiple Intelligences (TIM) in his foundational work *Frames of Mind: The Theory of Multiple Intelligences*, arguing that intelligence is not a single and homogeneous capacity, but a set of relatively independent abilities that human beings possess to varying degrees (Meza et al., 2024a).

This theoretical proposal not only generated a deep debate in the field of cognitive psychology, but also transformed the predominant pedagogical conceptions, opening the way to more inclusive, personalized educational approaches oriented to the integral development of the student. The theory postulates the existence of eight intelligences: linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic, to which Gardner later suggested adding existential intelligence (Angulo Quiñónez et al., 2024).

In the field of contemporary education, marked by student diversity, the emergence of digital technologies and the demand for meaningful learning, TIM is gaining renewed relevance. Numerous studies have explored its implementation in curriculum design, teaching methodologies, and evaluation systems, with results that show both its potentialities and its limitations (Meza, 2025).

The objective of this article is to analyze, from a documentary perspective, Gardner's approach to multiple intelligences and its implications in contemporary educational practice. To this end, a bibliographic review of specialized academic sources, empirical studies and recent research is carried out, with the purpose of identifying their main contributions, criticisms and perspectives of application in current educational contexts.

2. THEORETICAL FRAMEWORK

2.1. Foundations of the Theory of Multiple Intelligences

The Theory of Multiple Intelligences arises as a critical response to the psychometric conception of intelligence, represented mainly by IQ tests developed since the work of Binet and Terman at the beginning of the twentieth century. Gardner (1983) argued that these tests

only measured linguistic and logical-mathematical abilities, ignoring a wide spectrum of equally valid and relevant human abilities.

In order for a capacity to be recognized as an intelligence, Gardner established eight criteria for neurobiological and evolutionary validation: (1) possibility of isolation due to brain damage; (2) existence of prodigy individuals or savants; (3) identifiable operations or arrangements; (4) evolutionary history; (5) support of psychometric studies; (6) support of experimental psychological studies; (7) sensitivity to symbolic coding; and (8) possibility of expression in symbol systems.

This conceptual rigor differentiates TIM from other popular proposals such as "learning styles", with which it is frequently confused in school contexts, as Attwood (2022) points out in his analysis published in *Frontiers in Psychology*.

2.2. The Eight Intelligences and their Description

Linguistic-verbal intelligence: Ability to use language effectively, both orally and in writing. Present in writers, poets, orators, and communicators (Meza Argüello & Meza Argüello, 2025).

Logical-mathematical intelligence: Ability for abstract reasoning, logical thinking and solving numerical problems. Characteristic of mathematicians, scientists and engineers.

Spatial intelligence: Ability to perceive, transform and recreate different aspects of the visual-spatial world. Present in artists, architects, sailors and designers.

Musical intelligence: Sensitivity to rhythm, melody, pitch, and musical structure. Manifested in musicians, singers and composers.

Bodily-kinesthetic intelligence: The ability to use one's own body with dexterity and coordinate movements. Predominant in dancers, athletes and surgeons.

Interpersonal intelligence: Ability to understand, relate and communicate with other people. Characteristic of leaders, teachers, therapists and negotiators.

Intrapersonal intelligence: The ability to know oneself, identify one's own emotional states and regulate behavior. Manifested in philosophers, psychologists and people with high self-awareness.

Naturalistic intelligence: Ability to recognize, classify and relate to the natural environment. Present in biologists, ecologists and farmers. This intelligence was incorporated by Gardner in 1995.

2.3. Existential Intelligence as a Possible Ninth Dimension

Gardner (1999) raised the possibility of a ninth intelligence: the existential intelligence, linked to reflection on fundamental questions of human existence (life, death, the meaning of the universe). However, this proposal did not reach the same level of formalization as the previous eight, and Gardner himself recognized the need for more empirical research for its validation.

3. METHODOLOGY

This work corresponded to a documentary research with a qualitative approach, based on the review, analysis and critical interpretation of scientific literature related to Gardner's theory of multiple intelligences and its application in contemporary educational contexts. The search was carried out in databases and academic repositories such as Redalyc, Dialnet, Google Scholar, ERIC, Frontiers in Psychology and ResearchGate.

The inclusion criteria were: scientific articles, academic books, book chapters, and documentary reviews published between 2000 and 2024; documents explicitly related to the theory of multiple intelligences and its educational application; publications in Spanish, English or Portuguese; and works with full access to the text. Duplicate documents, publications not directly related to the topic, informative texts without academic support, and studies that did not address Gardner's theory in the educational field were excluded.

The document selection process followed a screening logic similar to the PRISMA model. In the initial phase, 35 potentially relevant documents were identified. Subsequently, 6 duplicate records and 5 documents were eliminated because they did not directly fit the object of study. Then, 24 full-text texts were reviewed, of which 5 were excluded because they presented low theoretical contribution or little relationship with the educational application of multiple intelligences. Finally, 19 sources were included in the documentary analysis and in the final list of references.

The information obtained was organized through analytical categories derived from the objective of the study: curriculum design, pedagogical strategies, inclusive education, teacher training, and criticisms and limitations of the theory. This procedure made it possible to compare the contributions of the reviewed sources, identify theoretical coincidences and recognize the main limitations of the educational application of Gardner's approach.

4. RESULTS AND DISCUSSION

The documentary review allowed us to identify relevant contributions on the educational application of Gardner's theory of multiple intelligences. To order the findings, the sources included were systematized according to their type of study, objective, main contribution and relationship with the theory. This organization allowed the results to be grouped into five analytical categories: curriculum design, pedagogical strategies, inclusive education, teacher training, and criticisms and limitations.

Table 1. Document systematization matrix

Author/year	Type of study	Objective	Main contribution	Relationship with the theory of multiple intelligences
Gardner (1983)	Theoretical book	Proposing a new conception of intelligence	He proposes the existence of relatively independent intelligences	Foundational basis of the theory
Gardner (1993)	Academic book	Explain practical applications of the theory	Link theory to educational contexts	It supports the pedagogical application
Gardner (1999)	Theoretical book	Rethinking intelligence for the 21st century	Introduces the discussion on existential intelligence	Expand the conceptual framework
Ernst-Slavit (2001)	Academic article	Analyzing education from Gardner's theory	Relate theory to education for all	Contribute to the inclusive approach
Lizano Paniagua and Umaña Vega (2008)	Academic article	Reviewing theory in preschool education	Evidence of application at initial levels	Supports differentiated strategies
Attwood (2022)	Conceptual analysis	Examine the semantic use of theory	Differentiates multiple intelligences from learning styles	Provides a critical look

Safitri et al. (2023)	Literature review	Review applications of theory in science	Identify pedagogical uses in scientific learning	Evidence of didactic applications
Shuyin et al. (2023)	Applied study	Develop an instructional model based on Gardner	Reports improvements in math performance	Link theory to educational outcomes
Angulo Quiñónez et al. (2024)	Academic article	To analyze training strategies in early education	Provides on methodological diversity	Link theory with expression and creativity
Silva Herrera et al. (2025)	Academic Paper	Review educational implications of the theory	Highlights pedagogical uses and limitations	Strengthens critical application
Meza Arguello et al. (2024a)	Academic article	Analyze active educational strategies	It provides a relationship with pedagogical practices	Support the didactic component
Meza Argüello et al. (2024b)	Academic article	Compare traditional and new educational approaches	Links pedagogical innovation with learning	Support curriculum discussion
Walela (2024)	Educational Studio	Analyze the teaching application of the theory	Identify challenges in implementation	Contributes to teacher training
Angulo De León et al. (2025)	Academic article	Analyze literacy challenges	Contributes to teacher training	Relates linguistic intelligence and educational practice
Domínguez Pizarro et al. (2025)	Critical Review Article	Critically analyze theory and its contemporary applications	Examines the scope, limitations, and current uses of Gardner's approach	Reinforces critical analysis of theory
Meza Arguello (2025)	Academic article	To analyse theatre as a didactic strategy	Expressive and active learning stands out	Relates body and linguistic intelligence
Meza Arguello and Meza	Academic article	Review contributions of critical pedagogy	Connect education with social transformation	Complements the humanistic approach

Argüello (2025)				
Meza Argüello et al. (2025)	Academic article	Analyze school coexistence and mood	Contributes to the socio-emotional component	It relates interpersonal and intrapersonal intelligences
Smowltech (2025)	Academic- informative resource	Explaining Gardner's Theory	Synthesize general characteristics	Complementary contextual support

Note. Relevant studies of the review. Own elaboration.

4.1. Impact on Curriculum Design

One of the most relevant contributions of the theory of multiple intelligences to the educational field is related to the diversification of the curriculum. From this approach, the curriculum should not be limited to privileging linguistic and logical-mathematical skills, but should incorporate learning experiences that allow for the activation of different forms of understanding, expression and problem solving.

Attwood (2022) argues that Gardner's theory has influenced curriculum design and implementation by promoting educational practices that are more sensitive to the cognitive diversity of students. In this sense, the curriculum inspired by multiple intelligences favors the planning of varied activities, the use of differentiated teaching resources and the possibility for students to demonstrate their learning through different forms of academic, artistic, bodily, interpersonal or reflective production.

The studies reviewed show that this curricular orientation can strengthen student participation and expand learning opportunities. Shuyin et al. (2023), for example, developed an instructional model based on Gardner's theory to improve mathematical performance, showing that methodological diversification can contribute to learning when applied with clear planning and objectives. Therefore, the theory remains valid as a reference for designing flexible curricula, although its application requires avoiding simplified interpretations.

4.2. Pedagogical applications in the classroom

The pedagogical application of the theory of multiple intelligences is expressed in active methodologies, collaborative activities, artistic resources, use of movement, experiences of observation of the environment, personal reflection and project work. These strategies allow students to participate from different strengths and not only from traditional academic skills.

The literature reviewed shows that theory has been used as a basis for organizing activities that integrate linguistic, logical-mathematical, spatial, musical, bodily, interpersonal, intrapersonal, and naturalistic dimensions. Lizano Paniagua and Umaña Vega (2008) point out that its application in preschool education favours more dynamic practices adapted to the characteristics of the students. In a complementary way, Meza Arguello (2025) shows that expressive strategies such as theater can strengthen participation, communication, and active learning.

However, the findings also suggest that it is not enough to associate an activity with a specific intelligence. Pedagogical planning must respond to specific learning objectives, clear evaluation criteria and teacher support. Otherwise, the theory may become a superficial classification of activities with no real impact on educational quality.

4.3. TIM and Inclusive Education

Gardner's theory contributes to inclusive education because it questions the idea of a unique intelligence and recognizes that students have different ways of learning, expressing knowledge, and solving problems. This perspective makes it possible to assess abilities that are often invisible in school models focused only on standardized tests or linguistic-mathematical performance.

Ernst-Slavit (2001) relates the theory of multiple intelligences to education for all, stressing the importance of recognizing the diverse talents of students. This idea is articulated with contemporary approaches such as Universal Design for Learning, which proposes to offer multiple forms of representation, action, expression and participation.

The documents reviewed agree that theory can contribute to a more inclusive school when it is used to diversify strategies, make assessment more flexible, and strengthen students' academic self-esteem. However, its application must be carried out carefully, avoiding labeling the student as having a single dominant intelligence. Inclusion does not imply rigidly classifying, but rather expanding opportunities to learn from different possibilities.

4.4. Teacher Training and TIM

Teacher training is a central condition for the proper application of the theory of multiple intelligences. Although Gardner's approach is widely known in educational discourse, its implementation in the classroom often presents limitations when teachers do not have sufficient preparation to translate it into planning, activities, and evaluation.

Walela (2024) points out that the theory is recognized by teachers, but its practical application still faces challenges related to the lack of methodological training, the availability of resources, and institutional conditions. This shows that theory cannot depend solely on the individual motivation of the teacher, but on systematic processes of training and pedagogical accompaniment.

The review also identifies that teacher training must address both the theoretical foundations and the limitations of the approach. That is, teachers not only need to know the eight intelligences, but also understand how to design relevant activities, how to evaluate diverse learning, and how to avoid confusing multiple intelligences with learning styles.

4.5. Criticisms and Limitations of the Theory

Despite its influence on contemporary education, the theory of multiple intelligences has received significant criticism from cognitive psychology, neuroscience, and educational research. The main observations are related to the lack of sufficient empirical evidence to validate each intelligence as an independent ability, the difficulty in measuring them with reliable instruments and the tendency to apply the theory in a simplified way.

Attwood (2022) warns that one of the most frequent confusions is to equate multiple intelligences with learning styles, which can lead to less rigorous pedagogical practices. In the same vein, Domínguez Pizarro et al. (2025) highlight that theory retains pedagogical value, but needs to be interpreted critically and not as a definitive explanation of human learning.

From this perspective, Gardner's theory should be assumed as a guiding framework for diversifying teaching, not as a closed classification of students. Its main contribution is to promote a broader view of human potential, but its educational use must be complemented with approaches of greater empirical support, formative assessment, Universal Design for Learning and contextual evidence on the real needs of the classroom.

5. CONCLUSIONS

The documentary review allowed us to assert that Howard Gardner's theory of multiple intelligences is still relevant to current educational practice, since it questions the weak idea of the theory of single intelligence and opens a broader perspective on the cognitive potential of students. The main contribution of the theory lies in the possibility of building learning

experiences that are more heterogeneous, more flexible and adjusted to the differences of the students.

The results show that the theory has been used in a decisive way in the curricular design and in the planning of active pedagogical strategies. Its use facilitates the diversification of activities, the use of diverse resources, the integration of artistic, bodily, linguistic, logical-mathematical and interpersonal expressions, as well as the creation of more participatory learning environments. This is so, but it must be considered that the benefits it offers will depend on an explicit teaching plan and not on the intention of adapting the theory to a mechanical planning with the intention of defining intelligences as individual categories.

Howard Gardner's Theory of Multiple Intelligences is today, forty years after its formulation, a pedagogical reference of indisputable preeminence in today's education. His main contribution focuses on having questioned the reductionist model of unique intelligence and on having opened the way to a broader, more inclusive and more humanizing vision of people's cognitive potential.

To this, the research of this work, in terms of documentary reference, leads us to conclude that: (1) TIM has colonized curriculum design, promoting more diversified and student-centered forms of teaching; (2) its application in the classroom favors active learning, activation and socio-emotional development, as well as intrinsic motivation for learning; (3) its contribution to the principles of inclusive education is remarkable, but its application requires specific and systematic teacher training; (4) its empirical limitations require a critical and reflective use of music, avoiding mechanical or decontextualized application.

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