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MULTIPLE INTELLIGENCES AND HOWARD GARDNER'S "FIVE MINDS FOR THE FUTURE" AND THEIR IMPLICATIONS FOR TEACHING PRACTICE

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Abstract: This article aims to explore Howard Gardner's Theory of Multiple Intelligences (MI) and the concept of the Five Minds for the Future from a reflective perspective, analyzing their contemporary relevance and implications for human development and teaching practice. Based on the concepts addressed in the class on the "Five Minds for the Future," held at the web s part of the PEsF , we seek to contextualize these reflections in the current scenario of a globally connected world. Gardner (2007), in highlighting that current education tends to prepare students more to respond to the demands of the past than to act in the possible worlds of the future, addresses and develops the concept of the Five Minds for the Future, connecting it in some way with his Theory of Multiple Intelligences from the 1980s. As with the introduction of Multiple Intelligences, the notion of the five minds reaffirms the need to recognize different forms of cognitive functioning and human dispositions, not only to understand how subjects learn, but also to guide what types of abilities should be intentionally cultivated by an education committed to building more just, ethical, and sustainable societies (Gardner, 2007). How can understanding diverse intelligences foster more adaptable, creative, and effective individuals in a constantly changing world? The perspectives brought by the Five Minds for the Future reinforce this understanding by providing implications to be considered for educational, organizational, and self-knowledge contexts. This article reflects on the articulation of MI theory and the concept of the "Five Minds for the Future" as fundamental to this discussion. Finally, the article reaffirms that the theory of Multiple Intelligences and the Five Minds for the Future bring contributions that can bring about changes in the global educational landscape, contributing to a deeper understanding of more student-centered learning concepts, arguing that Gardner's thinking strengthens teaching practice by offering theoretical foundations that support conscious and contextualized pedagogical decisions, thus improving classroom practices.

Keywords: Multiple Intelligences. Five Minds for the Future. Continuing Education. Teaching Practice. Classroom

INTRODUCTION

More than two decades ago, during my initial training in Literature, I first came into contact with the Theory of Multiple Intelligences in an Applied Linguistics course. At the time, Howard Gardner's proposal represented a profound break with the dominant paradigm of intelligence, traditionally conceived as a single, measurable, and hierarchical ability. Although this theory had already been developed in the 1980s, it was still new to us language arts students at the university.

Gardner's theory of Multiple Intelligences (1983) presents a very simple but profoundly innovative conceptual assumption: instead of questioning the student's general level of intelligence, it proposes to investigate the individual profile and the different modalities of intelligence that he or she manifests. It starts from the understanding that not all students will develop all intelligences equally, since these abilities are expressed uniquely in each individual. In this sense, diversified pedagogical practices and strategies in learning environments that recognize and value multiple ways of learning become essential, as they create favorable conditions for different intelligen-

ces to emerge, be stimulated, and develop throughout the educational process.

Given this, schools are invited to rethink the educational paradigm that has prevailed until now, traditionally centered on homogeneous models of teaching and assessment. By proposing this change in focus, the author paved the way for the construction of a more inclusive, equitable, and sensitive education to individual differences, recognizing the diversity of learning styles present in the school environment.

This perspective presented by Gardner (1983; 1999) takes on even greater relevance in the 21st century, characterized by intense and rapid social, technological, and cultural transformations that demand the development of skills widely discussed in contemporary literature, summarized, for example, in the so-called 4 Cs of education for the 21st century (collaboration, communication, creativity, and critical thinking), in the Delors Report, "Education: a treasure to be discovered" (Learning to Know, Learning to Do, Learning to Live Together, and Learning to Be) and other educational milestones (UNESCO, 2010; Larsen-Freeman, 2011; Ellis, 2003).

Given this scenario, the impact of Howard Gardner's thinking, summarized in the Theory of Multiple Intelligences and further developed a decade later in the concept of Five Minds for the Future, proved to be significant not only in the academic field, but also in the way the university began to question teaching and learning processes, as well as the role of teachers in human development. By questioning traditional models centered on content transmission and standardized measurement of intelligence, Gardner contributed to broadening the debate on more reflective and inclusive pedagogical practices aligned with the contemporary demands of higher education (Bessa, 2008).

This debate on more reflective and inclusive pedagogical practices and the search for the cultivation of mindsets that contribute to the very survival of the human species, as Gardner himself states, are described in his book entitled "*Five Minds* for the Future," namely: 1) the Disciplined Mind, 2) the Synthesizing Mind, 3) the Creative Mind, 4) the Respectful Mind, and 5) the Ethical Mind.

In light of this context, marked by multiple pedagogical approaches and complex demands imposed on 21st-century teachers, it is pertinent to revisit the Theory of Multiple Intelligences and the concept of the Five Minds for the Future and ask: how can Howard Gardner's thinking contribute to the construction of a more coherent, inclusive, and theoretically grounded pedagogical practice?

This article aims to reflect on the contributions of the Theory of Multiple Intelligences and the concept of the "Five Minds for the Future" to teaching practice, arguing that Gardner's thinking strengthens teaching practice by offering theoretical foundations that support conscious and contextualized pedagogical decisions, thus improving classroom practices.

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THE THEORY OF MULTIPLE INTELLIGENCES AND THE FIVE MINDS FOR THE FUTURE

Context and foundations of Multiple Intelligences Theory

The Theory of Multiple Intelligences (MI) emerged as a direct critique of traditional models, which reduce intelligence to standardized tests of logical-mathematical and linguistic skills. Gardner (1983) argues that such models ignore socially relevant talents, skills, and ways of thinking that are present in different cultures and historical contexts.

Based on criteria such as neurological evidence, cultural value, possibility of development, and the existence of specific symbolic systems, Gardner initially identified seven types of intelligence in his theory, and later eight main intelligences, as summarized in Table 1.

Gardner's criticism of traditional models of intelligence gained greater depth when analyzed in light of the historical and scientific context in which the theory was formulated. As Bessa (2008) discusses, the hegemonic conception of intelligence throughout the 20th century was strongly anchored in psychometrics and the belief that intellectual ability could be measured objectively, stably, and universally through standardized tests, especially IQ tests. This perspective, in addition to being restrictive, reinforced selective and exclusionary educational practices by valuing only certain forms of cognitive performance, aspects strongly highlighted by Gardner in his works.

From this perspective, Gardner breaks with the idea of intelligence as a unique property of the human mind and proposes a conceptual redefinition that considers cognition as a broad and plural set of competencies. Based on this assumption, teachers can adapt their teaching strategies to meet the needs and preferences of diverse learners by recognizing and valuing the unique intelligences of these students.

Bessa (2008) reinforces this perspective by proposing that Gardner's redefinition shifts the debate from the field of measurement and standardized testing to the field of the cultural functionality of intelligence, emphasizing its relationship with problem solving and the production of socially valued knowledge.

> "Gardner criticizes the concept of intelligence as a unique property of the mind and also the so-called intelligence tests, which claim to measure intelligence definitively. According to him, to adequately encompass the field of human cognition , it is necessary to include a much broader and more universal set of skills than has commonly been considered. It is also necessary to remain open to the possibility that many—if not most—of these competencies cannot be measured by standardized verbal methods, which rely heavily on a combination of logical and linguistic skills." (p. 141)

Type of MI	Characteristics
Linguistic Intelligence	Sensitivity to spoken and written language; ability to learn languages and use language to achieve goals. Common among writers, speakers, and lawyers.
Intelligence Logical-Mathematical	Ability to reason logically, solve problems, think abstractly, and perform mathematical operations. Present in scientists, mathematicians, and engineers.
Musical Intelligence	Sensitivity to sounds, rhythms, tones, and musical patterns; ability to compose, perform, and appreciate music.
Intelligence Bodily-Kinesthetic	Use of the body or parts of it to solve problems or create products; involves coordination, balance, and dexterity.
Spatial Intelligence	Ability to perceive, represent, and manipulate visual space; common to artists, architects, and designers.
Interpersonal Intelligence	Ability to understand the intentions, emotions, and motivations of others; fundamental to leadership and collaborative work.
Intrapersonal Intelligence	Ability to know oneself, regulate one's emotions, and reflect on personal values and goals.
Naturalistic Intelligence	Sensitivity to recognize and classify elements of nature; related to observation of the environment.

Table 1 – Summary table of Multiple Intelligences (MI) according to Howard Gardner, 1983.

Source: Gardner, 1983.

Based on this criticism, Gardner formulates a definition of intelligence that radically departs from traditional approaches. For the author, intelligence refers to the ability to solve problems or create products that are valued in one or more cultural contexts. This conception introduces two central elements for education: the notion of the contextuality of intelligence and the recognition that different cultures value different forms of knowledge and cognitive action.

Bessa (2008) points out that another essential foundation of Gardner's Multiple Intelligences theory lies in the idea of the relative independence of intelligences. This means that high performance in one area does not necessarily imply high performance in another, which invalidates generalizing inferences about the intellectual capacity of individuals. This understanding has direct implications for pedagogical practice, especially with regard to school assessment and curriculum organization.

> "Each intelligence is relatively independent of the others, and an individual's intellectual talents, say, in music, cannot be inferred from their abilities in mathematics, language, or interpersonal understanding, as is usually done in intelligence tests. Current methods of assessing intellect are not sufficiently capable of evaluating the potential or achievements of the individuals subjected to them." (p. 142)

Another relevant aspect discussed by Bessa refers to the open nature of the theory. Gardner does not present multiple intelli-

gences as a finished model or as a definitive scientific truth, but as a theoretical structure in permanent construction, open to revision, criticism, and further study.

Subsequently, his thinking revealed in the construction and development of the concept of the Five Minds for the Future provides further insights into the complexity of education. This epistemological stance gives the theory a more exploratory character, helping us to think more about education and stimulating interdisciplinary dialogue between psychology , education, neuroscience, and cultural studies (Gardner 1983, 2007; Bessa, 2008).

This openness in Gardner's thinking, represented in his two works referenced here, favors the creation of learning environments that are more flexible and responsive to student diversity. As Bessa (2008) points out, the theory of Multiple Intelligences should not be understood as a simple pedagogical technique or as a set of isolated activities, but as a new way of thinking about teaching, learning, and assessment, requiring teachers to take a reflective and investigative stance on their own practice.

Thus, by recognizing that individuals learn in different ways and that their skills can be developed at different levels and in different combinations, Gardner's theory provides a solid foundation for an education committed to comprehensive training. These foundations are directly connected to more recent concepts in education, such as active methodologies, multiple literacies, the 4 Cs of education for the 21st century (communication, collaboration, creativity, and critical thinking), and Delors' four pillars. These foundations can also be seen in the different competencies and skills present in the construction of the National Common Core Curriculum (BNCC), currently being implemented in Brazil through the Secretaries of Education.

Articulation between Multiple Intelligences and the Five Minds for the Future

In proposing the Theory of Multiple Intelligences, Gardner recognizes that individuals do not possess all intelligences to the same degree, but have unique cognitive profiles in which one or two intelligences tend to stand out, without this implying a total absence of the others. It is, therefore, a plural and distributed conception of human cognition, in which each subject mobilizes specific combinations of intelligences according to the cultural, social, and historical contexts in which they operate.

However, although relatively independent, intelligences do not operate in isolation or in a vacuum. They interact dynamically and complementarily in problem solving, knowledge production, and socially valued practices, reaffirming the interconnected nature of human cognitive functioning.

From this perspective, society benefits directly from this plural "architecture" of the mind, as it is precisely the diversity of intelligences that sustains the complexity of human relationships. Let's imagine this scenario: If all individuals possessed, in equal measure, all intelligences (musical, logical-mathematical, linguistic, bodily-kinesthetic, among others), the interdependence and connections that characterize social life would cease to exist. Our world functions like a living organism, in which each part performs a specific and irreplaceable function. Thus, no one has everything, because no one exists alone. It is in individual in-

completeness that the need for others emerges, and it is from this interplay of differences, talents, and complementary skills that the social fabric, collective knowledge, and the very possibility of human coexistence are built.

But this human coexistence is not so simple. It is at this point that the concept of Gardner's (2007) work "Five Minds for the Future" gains importance and offers clues for understanding the world and societies that are constantly changing and need to continue their existence. While Multiple Intelligences describe cognitive potentials and distinct ways of processing information, the five minds constitute guidelines, consisting of the very actions and thoughts that human beings need to cultivate in order to act in a world marked by globalization, technological acceleration, and social complexity.

Gardner, in developing the concept of the five minds, classifies them as follows: three minds related to intellect (Disciplined Mind, Synthetic Mind, and Creative Mind) and two minds related to character (Respectful Mind, Ethical Mind). He also argues that while he describes, he prescribes in the sense of explaining and convincing his readers that these minds need to be cultivated for the good of humanity. But this classification may also reveal clues regarding thinking about education not only as preparing students for the development of academic skills, but also preparing them for the development of attitudinal and character-related skills.

As Gardner (2007) himself clarifies, when assuming the mantle of an educator, in the phrase *"when I wear the mantle of an educator, in the broad sense just described, I call for each person to develop all five kinds of minds"* (p. 11), there will be a shift in focus from individual differences to the perception that all subjects need to develop, to some degree, the five minds, regardless of their predominant intellectual profiles (intelligences). Thus, intelligences provide the cognitive- y basis, while minds organize, direct, and qualify the use of these abilities (Gardner, 2007).

From this perspective, Gardner's proposal for the development of the Five Minds for the Future takes on a forward-looking character, guided by reflection on the types of individuals needed to face the challenges of the contemporary world and future societies. The author himself emphasizes that, although the concept is formulated as a response to the demands of the future, the cultivation of these minds could and should have been thought out and applied decades ago. They are necessary because they concern fundamental capacities for human coexistence, ethical decision-making, creativity, collaboration, and, ultimately, the very survival and continuity of humanity in increasingly complex contexts.

According to Gardner (2007), as shown in the table below, these five minds are increasingly essential and necessary in the contemporary world and for a not-so-distant but predictable future, as they encompass cognitive, human, social, and ethical dimensions. They can and should be cultivated throughout life, with formal and informal education playing a central role in this process.

Based on these considerations, Gardner (2007) addresses the need for *long-life learning* education[1] as a project to be culti-

1. Lifelong Learning is the philosophy of seeking knowledge and developing skills continuously and voluntarily at all stages of life, not limited to formal education (school/college), but encompassing training, courses, lectures, reading, and experiences, essential for adapting to rapid changes in the job market and society.

Type of Mind	Synthesis according to Howard Gardner
Disciplined Mind	Refers to the ability to master ways of thinking specific to a discipline (such as science, mathematics, arts, or humanities). It is necessary to develop intellectual rigor, depth of knowledge, and real competence, going beyond superficial memorization.
Synthesizing Mind	The ability to gather information from different sources, select what is relevant, and integrate it in a meaningful way. It is essential in a world marked by information overload, enabling understanding, decision-making, and clear communication of knowledge.
Creative Mind	Relates to the ability to innovate, propose new ideas, solutions, and perspectives. It is necessary to deal with constantly changing contexts, driven by science, technology, and globalization, in which traditional responses are no longer sufficient.
Respectful Mind	This refers to the ability to recognize, understand, and value differences between individuals and groups. It is fundamental to democratic coexistence, cultural tolerance, respect for human rights, and peaceful conflict resolution in diverse societies.
Ethical Mind	This involves reflection on individual and collective responsibilities, as well as a commitment to moral values and the common good. It is necessary to guide professional and social actions in a fair, responsible, and committed manner to human dignity.

Table 2 – Five Minds for the Future proposed by Howard Gardner, 2007.

Source: Gardner, Five Minds for the Future 2007.

vated. Thus, the disciplined mind and the creative mind, for example, can rely on different intelligences (linguistic, logical-mathematical, spatial, or bodily), depending on their field of activity. The synthesizing mind, on the other hand, can mobilize multiple intelligences simultaneously to integrate information. Respectful and ethical minds, in turn, can connect with interpersonal and intrapersonal intelligences, expanding them to a moral and social dimension.

Faced with the demands of the contemporary world, Gardner (2007) proposes the cultivation of the five minds for the future as potential principles for survival in a constantly changing world. In other words, it is not enough to recognize the five minds: they must be cultivated in an integrated, critical, and ethically oriented manner, in favor of the integral formation of the individual and collective life.

THE IMPORTANCE OF MULTIPLE INTELLIGENCES AND FIVE MINDS FOR THE FUTURE IN THE CLASSROOM

The Theory of Multiple Intelligences and the concept of the Five Minds for the Future, proposed by Gardner (1983, 2007), assume, in the educational context, the role of interpretive structures that function as lenses of analysis and references for understanding what occurs in the classroom. As already pointed out, these perspectives are not presented as prescriptive models, although Gardner states that his reflections have prescriptive intentions. However, here, we prefer to use them as paths that help teachers reflect on learning processes and the integral development of students.

In this sense, when planning and implementing pedagogical strategies that pla-

ce the student at the center of the learning process, teachers approach the concepts of *student-centered learning*[2] , which have been extensively explored by Larsen-Freeman (2011), Nunan (1999), Ellis (2003), and Conklin and Stix (2009) in applied linguistics studies. These approaches dialogue directly with the structure of Multiple Intelligences Theory, in that they recognize the diversity of ways of learning, value active student participation, and promote meaningful, contextualized, and socially situated learning experiences.

When teachers recognize and encourage the development of skills and competencies, allowing students to move from being passive recipients of content to active participants, mobilizing different cognitive potentials, the cultivation of the five minds becomes a concrete necessity in pedagogical practice (Gardner, 2007).

In the classroom context, this articulation implies understanding that the disciplined mind can manifest itself through different intelligences; that the synthesizing mind is not limited to logical-verbal operations; and that the creative mind emerges from the combination of disciplinary mastery and openness to the risk of learning, in fact, the adventure of learning. Gardner (2007, p.26) highlights this interdependence by stating:

> "The disciplined mind, the synthesizing mind, and the creating mind draw on different intelligences, depending on the area of work. Respect and ethics clearly draw on personal intelligences. Ethics, reflecting an abstract way of thinking, draws as well on logical intelligence."

A situation that could illustrate well how the cultivation of minds becomes a necessary reality would be the implementation of an interdisciplinary project at school. By investigating a problem in the local community, students exercise the disciplined mind by understanding scientific concepts, the synthesizing mind by analyzing data, texts, and experiences, and the creative mind by proposing solutions. By working in groups, students can develop a respectful mind by learning to listen to and value different points of view, and an ethical mind by reflecting on the impact of their decisions on the collective. Thus, learning becomes meaningful when it dialogues with the reality of students and the challenges of the contemporary world.

Teaching practices that value varied styles and forms of learning can reflect the foundations of Multiple Intelligences in use. By planning activities that address different intelligences, teachers expand the possibilities for engagement and reduce the barriers historically imposed on students whose learning styles do not align with the traditional model centered on linguistic and logical-mathematical intelligences.

It is important to note that Gardner (2007) makes it clear that, although individuals have different intelligence profiles, education must commit to developing the five essential minds for the 21st century in everyone. As the author himself states: "When I wear the mantle of an educator, I call for each person to develop all five kinds

2. Student-Centered Learning is a pedagogical approach that places the student as the protagonist of their own learning, focusing on their individual interests and needs, while the teacher acts as a facilitator or guide, rather than a transmitter of knowledge.

of minds" (p. 11). He presents intelligences as gateways to the development of broader capacities, such as intellectual discipline, information synthesis, creativity, respect for diversity, and ethical commitment.

When schools favor only certain languages, forms of assessment, or modes of participation, they not only render intelligences invisible, but also limit the emergence of the minds that Gardner considers essential for life in society and for the very survival of the human species.

Finally, the integration of Multiple Intelligences and the Five Minds reinforces the pedagogical responsibility to create rich, flexible, and intentionally diverse learning environments. The classroom thus becomes a space for the progressive cultivation of the five minds, in which different intelligences are mobilized not as ends in themselves, but as paths to the formation of critical, creative, ethical individuals capable of acting responsibly in an increasingly complex and interconnected world.

FINAL CONSIDERATIONS

When proposing a reflection on Gardner's thinking in the Theory of Multiple Intelligences, articulated with the concept of the Five Minds for the Future, it is clear that they remain current and necessary epistemological landmarks in a globalized world undergoing rapid change, coexisting with educational models still centered on standardization, the homogenization of learning, and the valuing of linguistic-mathematical cognitive skills to the detriment of other skills.

By understanding intelligence as a plural set of human capacities, culturally situated and capable of development, Gardner shifts the focus of education from measurement to the integral formation of the individual. This change in perspective implies recognizing that teaching is not limited to the transmission of content, but involves creating conditions for different intelligences to be mobilized, valued, and articulated in meaningful learning experiences. In this sense, the theory of Multiple Intelligences functions as an interpretive lens that guides teachers to critically reflect on their pedagogical choices, their assessment processes, and their conceptions of learning.

The introduction of the concept of the Five Minds for the Future deepens and broadens this discussion by shifting the debate from the description of cognitive differences to the formative intentionality of education (*Mantle of an Educator*). By proposing that all individuals should develop, to some degree, disciplined, synthesizing, creative, respectful, and ethical minds, Gardner reaffirms the social role of schools and teachers themselves in preparing individuals capable of acting critically, creatively, and responsibly in a world marked by complexity, diversity, and accelerating technological and social change.

In the classroom context, this articulation becomes concrete when it approaches the concepts of *student-centered learning* and active methodologies, in which the student takes on a central role in the construction of knowledge. By recognizing the different cognitive profiles of students and proposing activities that mobilize multiple intelligences, teachers expand the possibilities for engagement, participation, and learning, while creating conditions for the intentional cultivation of the five minds.

The reflections also reinforce that the conscious adoption of these theoretical references contributes to more equitable, inclusive, and contextualized pedagogical practices. By reflecting on which intelligences are privileged or neglected in the curriculum and by diversifying teaching strategies, teachers contribute to environments that are more conducive to meaningful and lasting learning, leading teachers themselves to take an investigative stance on their own practice. This movement is essential to respond to the demands of an education committed not only to academic performance but also to the formation of autonomous, critical, and socially responsible individuals.

Finally, it is concluded that investing in the continuing education of teachers and in the critical appropriation of theories that value cognitive plurality and integral human development is an indispensable condition for the transformation of educational practices.

Considering Gardner's thinking in light of teaching experiences and practices is to reaffirm a commitment to an education that places the student at the center of the learning process, recognizes diversity as a potential, and embraces ethics, respect, and creativity as the structuring principles of education. More than just ready-made answers, Multiple Intelligences and Five Minds for the Future are a permanent invitation to reflection, pedagogical innovation, and social responsibility in education.

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