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Desafios da complexidade para a educação no pós-pandemia: uma reflexão a partir dos sete saberes de Edgar Morin[1]

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Resumo

O paradigma emergente ou paradigma da complexidade depara-se, no contexto pandêmico, com novos desafios. Edgar Morin, em Os sete saberes necessários para a educação do futuro elenca proposições elementares para lidar com os problemas que afetam os sistemas educacionais desde o advento do pensamento newtoniano-cartesiano. Nesse sentido, o objetivo do presente artigo foi identificar aspectos da obra nos quais é possível vislumbrar a educação no contexto pós-pandemia, considerando a emergência de uma educação ancorada na complexidade. Os apontamentos realizados mostram que os sete saberes de Edgar Morin podem suscitar reflexões sobre o destino da educação pós-pandemia, uma vez constatado que os problemas denunciados pela situação atual são, em grande parte, frutos do paradigma cartesiano e evidenciam a urgência de se adotar os presupostos do paradigma da complexidade no contexto educacional.

Palavras-chave: Complexidade. Crise de Paradigmas. Reflexão Crítica

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Challenges of complexity for education in the post-pandemic: a reflection based on the seven complex lessons of Edgar Morin

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Abstract

The emerging paradigm or complexity paradigm faces new challenges in the pandemic context. Edgar Morin, in *Seven complex lessons in Education for the Future*, lists elementary propositions to deal with the problems that have affected the educational systems since the advent of Newtonian and Cartesian thinking. In this sense, the objective of this paper was to identify aspects of the work in which it is possible to envisage education in the post-pandemic context, considering the emergence of an education anchored in complexity. The notes made show that the seven lessons of Edgar Morin can raise reflections on the destiny of post-pandemic education once it was found that the problems denounced by the current situation are mostly fruit from the Cartesian paradigm and show the urgency of adopting the assumptions of the complexity paradigm in the educational context.

Keywords: Complexity. Paradigm Crisis. Critical Reflection.

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Desafíos de la complejidad para la educación em el pospandemia: uma reflexión desde los siete saberes de Edgar Morin

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Resumen

El paradigma emergente o paradigma de la complejidad se depara, en el contexto pandémico, con nuevos desafíos. Edgar Morin, en Los siete saberes necesarios para la educación del futuro, enumera propuestas elementales para abordar los problemas que afectan a los sistemas educativos desde el advenimiento del pensamiento newtoniano-cartesiano. En este sentido, el objetivo de este artículo fue identificar aspectos del trabajo en los que es posible vislumbrar la educación en el contexto pospandémico, considerando la emergencia de una educación anclada en la complejidad. Las notas realizadas muestran que los siete saberes de Edgar Morin pueden provocar reflexiones sobre el destino de la educación pospandémica, una vez que se constató que los problemas que reporta la situación actual son, en gran parte, frutos del paradigma cartesiano y evidencian la urgencia de adoptar los supuestos del paradigma de la complejidad en el contexto educativo.

Palabras clave: Complejidad. Crisis de Paradigmas. Reflexión Crítica.

Introduction

> We are at a critical moment in Earth's history, at a time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future holds both great dangers and great promises. To move forward, we must recognize that amidst a magnificent diversity of cultures and life forms, we are one human family and an Earth community with a common destiny. We must join forces to create a global sustainable society founded on respect for nature, universal human rights, economic justice, and a culture of peace. To achieve this goal, it is imperative that we, the peoples of Earth, declare our responsibility to one another, to the greater community of life, and to future generations (BRASIL, 2000, p. 1).

The crisis scenario generated by the COVID-19 pandemic has impacted humanity on different levels: social, cultural, individual, economic, and more. At this moment, society is confronted with an unexpected obstacle, a result of the unpredictability that is inherent to life. In this sense, the preamble of the Earth Charter, used as an epigraph in this introduction, reveals that, beyond a crisis caused by a virus, the issue at hand is paradigmatic in nature and has been developing for some time. The pandemic acts as a catalyst for actions and reactions that, in turn, demand a combative and responsible stance from the so-called peoples of the Earth. According to Morin (2015), the emergence of a new wisdom, which understands personal life as integrated into social life, blending the art of living in prose and poetry, becomes a prerequisite for combating hostile times.

Education, in particular, has faced continuous challenges arising from this new reality that has been imposed upon it. These challenges vary across different regions of the planet, as some countries are better equipped – in socio-economic terms – to face the crisis in the educational context. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2020), the closure of educational institutions worldwide due to the COVID-19 pandemic affected more than 60% of the global student population. This impact, as seen by Estellés and Fischman (2020, p.2), "reveals a collective failure of civic education systems to promote empathy and encourage creative and democratic forms of engagement and collaboration between citizens and governments in other regions of the world."

Thus, it falls upon education professionals, both individually and institutionally, to initiate a process of re-signifying their pedagogical practice in response to problems that had been gradually escalating and were laid bare by the pandemic. Morin (2011, p. 15), in his work The Seven Complex Lessons in Education for the Future, highlights the “[...] central or fundamental problems that remain completely ignored, or forgotten, and which are necessary to teach in the next century.” The "next century" Morin refers to is the 21st century, as the book was written at the beginning of the 2000s. In

order to integrate these lessons into the need for change made evident by both the pandemic crisis and the crisis in scientific paradigms, the following question was posed: what reflections on the challenges of education in light of complexity in the post-pandemic context can be drawn from Edgar Morin's seven lessons?

To this end, the objective of this research was to identify aspects of the work The Seven Complex Lessons in Education for the Future in which it is possible to envision education in the post-pandemic context, considering the emergence of the complexity paradigm. Thus, the themes to be addressed in this article are: conservative paradigms (Newtonian-Cartesian); the paradigm shift; Edgar Morin's seven lessons; the assumptions of the complexity paradigm; and finally, a comparison between the challenges posed by the pandemic and Edgar Morin's seven lessons.

Conservative Paradigms: Reproduction Above All

In education, conservative paradigms are those that prioritize the reproduction of knowledge and have dominated institutions since the advent of Modern Science (BEHRENS, 2013). Their pedagogical approaches focus on the act of mechanically reproducing and repeating content. These paradigms manifest in educational practice through the following denominations: traditional approach, humanist approach (progressive education), and behaviorist approach (technocratic) (MIZUKAMI, 1986). According to Libâneo (1986), all school practices carry sociopolitical determinants that directly influence conceptions of the role of the school, learning, the teacher-student relationship, methodologies, and more. In this sense, it becomes important to characterize them.

In conservative approaches, associated with what Morin (2011) classifies as the paradigm of simplification, the teacher is generally at the center of the process and controls the student's learning process, with the student becoming a passive recipient of information. Even in the progressive education trend, where some level of student protagonism emerges, the lack of resources for effective didactic action reinforces the assumptions of the conservative paradigm. Methodologically, these approaches favor lectures and individualized instruction. Assessment is based on tests, oral questioning, exercises, and similar activities, aimed at verifying how accurately the student reproduces the content that was transmitted to them. In this view, the school is the controlling agency where the transmission of knowledge occurs and, therefore, must be an austere and controlled environment (MIZUKAMI, 1986).

Thus, conservative approaches in the educational context reinforce the compartmentalization of knowledge, a mechanistic view, and the suppression of emotions and subjectivities. The

Newtonian-Cartesian mindset continues to influence today's schools, whether through curriculum organization, the arrangement of spaces, or the methodologies adopted by teachers. In this sense, it is essential to understand that these rigid and decontextualized models no longer meet current demands and that it is necessary to move beyond them, particularly in education (MORAES, 2009).

The Paradigmatic Crisis: Demands of Fragmented Thinking

As humanity becomes increasingly aware of the key problems that affect it, there is a growing recognition of the need to situate these issues within the broader planetary context, which is impacted by the dominant blind intelligence in today's world (MORIN; CIURANA; MOTTA, 2003). Morin (2011) refers to this unsettling of thought as a paradigmatic reform.

Once this misalignment of the world with traditional models is identified, there is consequently an equal need to shift the perspectives through which we view the events that constitute the human act of knowing. This shift is part of an assimilation process that initially causes discomfort, particularly because it alters crystallized thought structures. However, in the long term, this change leads to a paradigmatic revolution (KHUN, 1998).

In education, this shift is even more urgent, as the trajectory of educational systems based on fragmented and disjointed knowledge contrasts with the realities of a global, multidimensional, and complex world (MORIN, 2011). This contrast, stemming from the legacy of the Newtonian-Cartesian paradigm, has had serious consequences in the educational context, as Moraes (2009) corroborates, limiting and continuing to limit the development of the mentalities of new generations.

The Seven Complex Lessons in Education for the Future

With the purpose of uncovering the challenges that education must face in the planetary era and proposing solutions to overcome them, Morin (2011) highlights the *seven complex lessons necessary for the education of the future*, the title of his work.

4. The Blindness of Knowledge

The first lesson addresses the blindness of knowledge, which has led and continues to lead humanity to make successive mistakes by suppressing emotions in favor of pure rationalization. The author emphasizes that education must promote "the knowledge of knowledge," meaning the in-depth

study of human mental, brain, and cultural aspects to identify the causes of error and illusion and give them new meaning. The goal is not to eliminate the possibility of error since every act of knowing carries this risk but rather to overcome it through a constructive and open rationality. This approach encourages dialogue with reality, acknowledges its intellectual limits, and does not ignore human subjectivity and affectivity.

4.2 The Principles of Pertinent Knowledge

From the overcoming of errors arises the principles of pertinent knowledge, the second lesson highlighted by Morin. Recognizing the central problems that afflict humanity and placing them within a global, multidimensional, and complex context are demands of the education of the future. The contemporary world can no longer accommodate solutions derived from closed, reductive, and disjointed knowledge. For knowledge to be pertinent, it is necessary to unite and interconnect different fields of knowledge, forming a vast web of understanding. This integrative approach ensures that education addresses the complexities of real-world issues, fostering a holistic and interconnected perspective.

4.3 Teaching the Human Condition

The third lesson highlights the importance of, rather than separating, situating the human being within the universe in order to understand them. For Morin, humans must recognize the shared humanity between themselves and others, while simultaneously embracing diversity as an integral part of their condition. Reintegration of knowledge areas is essential, as contributions from the natural and human sciences have historically developed in isolation. As long as this fragmentation persists, it will be impossible to epistemologically grasp human complexity. Therefore, the knowledge of knowledge, introduced by Morin in the first lesson, is only conceivable when the cosmic, physical, terrestrial, and human conditions are recognized simultaneously as products of the original "uniduality" a concept that reflects the interconnectedness of seemingly opposing forces or aspects of reality.

4.4 Teaching Earthly Identity

Thus, teaching earthly identity, the fourth lesson in Morin’s work, requires an understanding of both the human condition and the condition of the human world. The planetary era, which began in the 16th century, initiated Western domination of the world, triggered wars, brought economic and technological progress, and fostered migrations and generalizations. By the mid-20th century, this had culminated in the phase of globalization in which we now find ourselves. The world has increasingly become a vast whole, where each of its parts interacts with and influences the others.

This unification has created a paradox: in the name of development, the world has been compartmentalized into nations, religions, classes, and political visions. Therefore, planetary education has the mission of awakening consciousness to develop earthly citizens who are committed to the survival of humanity.

4.5 Facing Uncertainties

All of the aforementioned lessons are grounded in one certainty: uncertainty. Throughout history, knowledge has always been accompanied by the shadow of doubt and unpredictability. However, for a long time, humanity was overly certain of progress, and today it faces numerous adversities that could not have been anticipated or even imagined under the reign of certainties. According to Morin, "the emergence of the new cannot be predicted, otherwise it would not be new. The emergence of creation cannot be known in advance, otherwise there would be no creation" (MORIN, 2011, p. 71). This means that historical deviations are potential triggers for change and that evolution is not linear. In an uncertain world, there must be a dialogical relationship between order, disorder, and organization. Opportunities carry risks, which must be embraced as a tool to face the uncertainties of mental, logical, rational, and psychological orders.

4.6 Teaching Understanding

To educate for understanding, in Morin's view, means overcoming the obstacles to both objective intellectual and subjective human comprehensions. These obstacles include indifference, egocentrism, ethnocentrism, and sociocentrism, among others, which are characterized by the centralization of worldviews. This way of perceiving phenomena, confined to a single level of reality, is for the author a form of blindness that leads to unrecognized and, consequently, unresolved errors. By broadening understanding to encompass multiple perspectives, education can foster deeper comprehension and more meaningful connections among individuals and societies.

4.7 The Ethics of the Human Species

There is an inseparable circuit between the individual, society, and species, which is fundamental to understanding human complexity. It is understood that individuals possess more dimensions than just the biological and social; however, it is these individuals who perpetuate the species and who produce society. In this sense, anthropoethics presents itself as the uniquely human ethic, inseparably sustained by the triad of individual, society, and species. Any assumption that accompanies anthropoethics is based on this axis. Furthermore, it encompasses aspirations and desires grounded in the ideal of planetary citizenship, while also acknowledging uncertainty.

Thus, it is possible to consider crisis as the emergence of a new world, a new alliance. The loss of a sense of the whole, instituted by the Newtonian-Cartesian model of fragmented knowledge, along with the overvaluation of rationality at the expense of subjectivity, isolates emotions and reinforces the logic of capitalist competition. The innovative theories of the 19th and 20th centuries, such as Darwin's Theory of Evolution, Einstein's Theory of Relativity, and Planck's quantum physics, which challenged positivist science, are signs that something new needs to emerge (BEHRENS, 2013). The seven lessons Edgar Morin proposes for the education of the future indeed, the education of the present if taken seriously by educators and educational institutions, can serve as a shield for facing current crises, guiding humanity toward paradigmatic renewal.

The Complexity Paradigm: An Alliance of Approaches for the Production of Knowledge

The complexity paradigm, innovative and emerging, arises, as discussed in the previous section, from the advent of the paradigmatic crisis in science, which led to the need for new approaches in education. Morin (2011) asserts that only a complex paradigm of implication/distinction/conjunction is capable of conceiving the "uniduality" natural and cultural, cerebral and psychic of humanity. For Capra (1996), this new paradigm envisions the world as an integrated whole, which he calls the ecological view, using the term "ecological" in a broader and deeper sense than usual, where the interconnection of all beings and phenomena in nature is recognized. This paradigm shift fosters a more holistic understanding of knowledge production, embracing complexity and interconnectedness as essential for addressing contemporary challenges.

The need for an ecologized, ecosystemic, complex, and transdisciplinary way of thinking, one that fosters the reconnection of different areas of knowledge and the relationships between individual, society, and nature, highlights the importance of considering the complexity paradigm in pedagogical practice. To achieve this objective, it is also necessary to adopt an attitude of openness to the new, the different, and the subjective an openness that breaks free from our epistemological cages, allowing the integration of innovative approaches into the educational contex (MORAES, 2012).

5.1 Educational Approaches of the Complexity Paradigm

The complexity paradigm, according to Behrens (2013), requires the incorporation of multiple perspectives and different approaches, namely: the systemic or holistic approach, the approach of teaching through research, and the progressive approach. These educational approaches within the

complexity paradigm help to reform the reductionist and mechanical thinking imposed by the conservative vision, making room, as Morin (2015) emphasizes, for pertinent knowledge that teaches how to live in a world full of uncertainties, errors, and misunderstandings. The focus of this innovative paradigm is the shift from the mere reproduction of knowledge to its production. Given the holistic vision proposed by these approaches, it is essential that they form an alliance to support a pedagogical practice consistent with the ongoing paradigm shifts (BEHRENS, 2013).

5.1.1 Holistic or Systemic Approach

The holistic or systemic approach implies the understanding that there is an interdependence between the parts and between the parts and the whole. This approach abandons the notion of shallow, anthropocentric ecology, centered on the human being, and embraces the idea of deep ecology one of integration, of the uniduality of the self with the cosmos (CAPRA, 1996). For Morin (2011), this uniduality expresses the human condition, which consists of being simultaneously an individual, a society, and a species. In this sense, the student is seen as part of a complex web of interdependence, through the concept of transpersonal education, as described by Ferguson (1992). Therefore, the educator must value learning in a broader sense, integrating into analytical thinking controlled by the left side of the brain strategies that involve emotion, intuition, and subjectivity controlled by the right side of the brain.

The compartmentalization of content into specific disciplines becomes obsolete, as the holistic approach requires seeing the whole in the parts and the parts in the whole through interdisciplinarity. To promote these changes, the teacher must have a range of strategies and methodological resources connected to the students' reality, enabling them to become integrated into their own learning process. It is also essential that educators view assessment as an ethical process aimed at forming citizens prepared to live in a complex world (CAPRA, 1996; FERGUSON, 1992).

5.1.2. Research-Based Teaching Approach

The complexity paradigm can also encompass the research-based teaching approach, as highlighted by Behrens (2013). This approach views the student as the agent of their own learning, valuing knowledge construction through questioning, doubt, and inquiry. These elements drive the search for materials and tools to help students build their own answers. In this sense, research-based teaching becomes a catalyst for student autonomy. The student understands that knowledge is not something ready-made or transferred to them, but rather something they must actively construct, situating it within a social and historical context that is constantly evolving.

The teacher assumes the role of a mediator, a facilitator of knowledge, no longer the central figure in the teaching-learning process. In this view, the teacher does not instruct but guides students in their learning journey, continuously encouraging them to be inquisitive and critical. To achieve this, the teacher adopts methodologies that foster the re-signification of knowledge production through research. Research initiation can begin through interdisciplinary projects that, by being constructed collaboratively, reinforce the concept of "learning to learn" (DEMO, 1996). Thus, assessment occurs continuously throughout the process, in a transparent and ongoing manner, helping students become aware of their own role. The focus, therefore, shifts to the journey rather than the final destination.

5.1.3 Progressive Approach

The progressive approach, which is part of the alliance to address the complexity paradigm, views humans as products of social relationships and carries a sociopolitical character. In Brazil, Paulo Freire stands as its greatest reference. In this approach, both the student and the teacher are understood as active participants in the process, endowed with critical thinking, culture, historicity, and, above all, their own worldview. Therefore, the educator must consider these aspects in the development of their praxis (BEHRENS, 2013).

Because the student is considered creative, they are given the freedom to express their views on the subjects discussed in the classroom, thus constructing their own learning. Therefore, the relationship with the student should be built on dialogue and the sharing of perceptions, opinions, and experiences. However, this dialogue does not negate the distinction between teacher and student; on the contrary, it reinforces it as an important tool, giving the progressive teacher the authority to mediate the student's learning.

In the progressive approach, the teacher is fully aware of their social and political role, enabling students to analyze their context and produce culture by valuing their own languages. In this sense, the teacher does not impose ideas on the students but creates space for discussions and considers their worldviews in a movement of action-reflection-action. The progressive teacher is neither authoritarian nor overly permissive. They understand that the students they engage with are, like themselves, unfinished beings, and, due to this incompleteness, they do not conceive of assessment processes in a deterministic way. In the progressive perspective, both the educator and the student see themselves as constantly learning, which allows them to continually push beyond where they currently are (FREIRE, 1992).

The principles of these innovative approaches, as discussed in this section, support the integration of complexity as a paradigmatic structure within education. It becomes clear that pedagogical practice grounded in a complex, global, and transdisciplinary perspective requires the shedding of beliefs, habits, and views constructed by the conservative conception that has long dominated humanity. A society that once merely reproduced knowledge has begun to produce and appropriate it. This appropriation, above all, serves as a mechanism of resistance to the challenges of our time.

The Necessary Knowledge for Post-Pandemic Education

Based on a comprehensive reading of the book The Seven Complex Lessons in Education for the Future, reflections were made on the current pandemic context through association. Although the book was published at the beginning of this century, it outlines aspects that remain highly relevant and open to discussion, especially in the pandemic reality that humanity now faces.

According to UNESCO (2020), the decisions made during this period will have long-term consequences, and therefore, they should be grounded in a humanistic perspective of development. In this light, it is believed that Morin's seven lessons can contribute to adopting such a perspective.

When examining the theoretical framework, it becomes clear that, while conservative approaches are still present in teaching practices and institutions, they do not address the urgent needs of contemporary education. This dysfunction was already evident even before the pandemic. Reports from professionals and the directions taken by education reveal that the mere reproduction of knowledge is insufficient to foster critical and problematizing thinking in individuals, in alignment with the global, complex, and multidimensional problems affecting humanity (MORIN, 2011).

The paradigmatic crisis in thought emerges as a response to these issues. The origin of the word "crisis" comes from the Greek krísis and the Latin crĭsis, meaning a decisive moment of change. Thus, crises do not necessarily indicate that something will improve or worsen; the outcomes depend on the decisions made during the crisis. For this reason, it is crucial to critically reflect on all actions taken in the midst of disorder.

The complexity paradigm is grounded in ecocentric values (CAPRA, 1996) and in an ontology based on what Moraes (2012) defines as ternary logic, in which other possibilities are explored to understand reality. Therefore, innovative approaches encourage knowledge production,

understanding that it is through chaos and errors within a preconceived system that the new emerges (MORIN, 2015).

In this sense, Edgar Morin's seven lessons contribute to disseminating the principles of complexity. When applying these lessons to pedagogical practice in a post-pandemic world, it is important to highlight several key points for reflection: How can errors and illusions be minimized? What are the central issues of the crisis? Is it possible to return to "normal"? And what exactly does this "normal" mean?

These questions are vital for charting new directions in the pursuit of renewal in post-pandemic education. When Morin addresses the blindness of knowledge, he emphasizes the importance of recognizing errors in order to overcome them. For him, "the greatest error would be to underestimate the problem of error; the greatest illusion would be to underestimate the problem of illusion" (MORIN, 2011, p. 19). The experiences within educational institutions around the world during this atypical moment have revealed many errors. Errors that were already being made beforehand and that can no longer be ignored but must now be recognized (MORIN, 2015).

In this sense, Estellés and Fischman (2020), when addressing education aimed at forming the global citizen, emphasize the need to overcome its romanticized prototype that overlooks the power of fear. For the authors, fear plays a fundamental role in the spread of nationalist and authoritarian ideas, and when its power is ignored, deeply rooted identities are also disregarded. As a result, it nullifies and excludes any thought that is not cosmopolitan. In other words, it is necessary to rethink the error embedded in this binary logic of what is or is not. It is important that this reflective exercise be carried out both individually and collectively, seeking to address the central problems that affect each particular reality and, consequently, the global whole.

Pertinent knowledge, from Morin's (2011) perspective, does not invalidate the possibility of imperfection, but it must still be pursued. Everything must be situated within a context and in the planetary complexity. In this regard, it can be stated that Morin's second lesson elucidates the need to place the crisis brought about by the pandemic within a global context that had already been facing crises prior to this one. It is becoming increasingly clear that we cannot focus solely on the biological aspect of the pandemic how the virus behaves and how to combat it without also considering the social, psychological, emotional, and rational consequences highlighted by the pandemic context.

The third lesson, *teaching the human condition*, announces that for a long time, humans saw themselves as separate from nature and everything it encompasses. Now, this same human finds themselves threatened by an invisible enemy, a microscopic organism. According to Morin (2011),

human beings possess a dual rootedness/derootedness in the physical and living nature. They are part of and situated on the same planet that harbors a virus deadly to their species, a condition that calls for a self-analysis of how humans perceive and act in the world.

From an environmental perspective, with the intention of re-signifying the meaning of existence in the face of the threat of COVID-19, Pereira (2020) warns of the importance of caring for the health of oneself and others, whether human or non-human. What, in some way, led humanity to believe in its superiority as a species? And what drives humans, as individuals, to believe they can dominate their equals at all costs through power relations? These are the questions that *teaching the human condition* seeks to answer not rigidly, as if there were only one answer, but in accordance with the vision of complexity.

Excessive Rationalization underestimates the capacity of the human brain, as it disregards the power of intuition in learning (FERGUSON, 1992). There is a complementary and antagonistic relationship between three elements: reason, emotion, and impulse. One cannot exist without the other, forming a triadic, harmonious, and non-hierarchical unity. Thus, reason does not always prevail over the others; in some moments, it may be subordinated to them. If humans are, at once, rational, emotional, and impulsive, the post-pandemic education challenge is to teach for this understanding, valuing human emotions and their subjectivity.

The integration of digital information and communication technologies (ICT) in post-pandemic education is another key aspect to highlight. Both educators and students had to suddenly adapt to digital tools to mitigate the effects of the equally sudden closure of educational institutions, whether at the basic or higher education level. Vercelli's (2020) research shows that half of the students in a Professional Master's Program in Education most of them also Basic Education teachers were not prepared to use different technological tools for remote classes. The participants also reported that it is easier to be a student than a teacher in remote learning environments.

Much has been discussed in articles and videoconference events about methodologies associated with hybrid learning or blended learning as the new normal going forward. Initially, the term refers to a combination of in-person and remote learning experiences. However, due to the widespread use of the internet and Learning Management Systems (LMS), hybrid learning has expanded. Currently, it is understood as a compilation of strategies that involve the use of various technological resources across different times and spaces (MOREIRA; SCHLEMMER, 2020). According to these authors:

> [...] blended learning, from this perspective, is established as an educational concept characterized by the use of combined or mixed solutions. It involves the interaction between in-person and distance learning modalities, the interaction between different pedagogical approaches, and the integration of various technological resources (MOREIRA; SCHLEMMER, 2020, p. 21).

The challenges experienced in remote classes highlight substantial issues concerning the act of teaching about earthly identity: in times of globalization/planetarization, not everyone has access to ICTs, a consequence of the social disparities that still exist. On this matter, Arruda (2020) notes that education must, from now on, consider equity in access to these technologies through substitution policies, focusing on public and private schools. In this sense, earthly identity and planetary consciousness emerge as advancements that enable cooperation between countries, aiming to combat inequalities and promote mutual transformation (MORIN, 2011).

From an anthropoethical perspective, the democratization of education in digital formats should be a priority before even considering a hybrid teaching model.

For Morin, democracy is not merely a political regime; it is also a complex form of regeneration and reinforcement of the individual-society circuit, as citizens produce democracy, and democracy, in turn, produces citizens. Thus, democracy cannot be simplified or reduced; it must value diversity of opinions and antagonisms. It is a complex, dialogical political system, nurtured by the ideals of liberty, equality, and fraternity (MORIN, 2011). For this reason, post-pandemic education must revisit the essence of democracy to foster its true meaning and purpose, both within and beyond institutions.

Finally, dealing with uncertainties is identified in this essay as the main challenge for education in the post-pandemic context. It is believed that an education grounded in the unpredictability of events is essential for both educators and students to build their teaching-learning process anchored in the certainty of doubt. In doing so, they will be better prepared for new challenges that may arise.

In the first part of the chapter, Morin raises a series of questions about historical events that occurred without anyone being able to predict them. To this, we add another question: who could have imagined, in 2019, the COVID-19 pandemic in 2020?

It is precisely this certainty anchored in the simplifying paradigm, where everything is seen as predictable and measurable, that makes the current reality seem more chaotic than it truly is. History has been shaped by numerous deviations from normality, and these twists and turns provoke crises. Therefore, as stated at the beginning of this section, the positive or negative changes generated by the current crisis are conditioned by the prevailing worldviews. It is up to the triad of the individual,

society, and species to "[...] learn to face uncertainty, since we live in a time of change, where values are ambivalent, where everything is interconnected" (MORIN, 2011).

Final considerations

The reflections contained in this essay are preliminary, given the ongoing pandemic, which continues to reveal numerous challenges. The adversities manifested during this period show that, even before the pandemic, there were issues that were either hidden or deliberately ignored. However, despite being initial observations, the points raised here can serve as a starting point for future analyses of this context.

The seven lessons that Edgar Morin identifies as necessary for the education of the future are important references for the current context. Considering that Morin's work was written at the beginning of this century and that many changes have occurred since then, both locally within the Brazilian context and globally, it is relevant to revisit it as a strategy for self-assessment: What progress has been made so far? Have there been setbacks? If so, how can we overcome these obstacles?

The purpose of this essay was precisely to revisit Morin's ideas and identify the possible gaps that persist in contemporary education. The extraordinary situation created by the pandemic has sparked questions and subsequent reflections on the direction of public policies, curriculum design, teacher training, pedagogical practices, and even individual perceptions. It is hoped that the propositions outlined have guided the reader toward this critical exercise.

Furthermore, it is important to reiterate that the unprecedented crisis in terms of the impact caused by its vector - COVID-19 - is nonetheless preceded by a paradigmatic crisis. This realization highlights that even after the current phase ends, the battle will continue against other ailments that have been affecting and obstructing education globally: the fragmentation of knowledge, reductionist views, a lack of understanding, and the denial of errors. The remedy for all of these lies in the increasingly effective implementation of the complexity paradigm.

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