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CONTEMPORARY EDUCATION IN THE COMPLEXITY OF EDGAR MORIN

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Abstract: This article aims to present a reflection on the importance of new paths for education according to the theory of complexity and the assumptions of Edgar Morin. Faced with new challenges facing education, the intention is to construct a reflection that meets an increasingly dynamic and complex social and contemporary context. Studies point to the need for a model of education and educator for the new millennium. We live in a society full of socio-cultural transformations, technological and scientific innovations that reflect directly on education, demanding solid knowledge from the educator and new pedagogical practices and behaviors from education. The article was descriptive and based on bibliographical research and the need for awareness that is consistent with our times and the new human needs based on revitalizing education that recognizes the complex reality of the world.

Keywords: Education. Contemporaneity. Educator. Complexity.

INTRODUCTION

This article presents an important reflection, as a starting point for rethinking education in the next millennium, by Edgar Morin on the need to stimulate children's curiosity and thinking, on reform in teaching and on the importance of encouraging research and the plurality of possible paths in education. The author considers knowledge to be a tool that must be used for lucidity, and teaches that care is needed in this mission to avoid error and illusion.

Education should show the correlations between knowledge, the complexity of life and the problems that exist today, otherwise it will always be inefficient and insufficient for the citizens of the future.

Education should be an awakening to philosophy, literature, music and the arts. That's what fills life. That is its true role.

Educators will train themselves when they start listening to the students, who are the spokespeople of our time. If there is a lack of interest in the class, they need to know why.

Education should foster the mind's natural ability to formulate and solve essential problems and, in a related way, stimulate the full use of general intelligence. This total use requires the free exercise of curiosity, the faculty most expanded and most alive during childhood and adolescence, which instruction often extinguishes and which, on the contrary, must be stimulated or, if dormant, awakened (Morin, 2000, p. 39).

The ideal moment for students to learn about the history of their nation, to situate themselves in the future of their continent and of humanity, but universities would be responsible for reforming thinking, to allow the full use of intelligence.

One of the main aims of education is to teach values, and these are incorporated by the child from a very early age. They need to be shown how to understand themselves so that they can understand others and humanity in general.

Education is responsible for the evolution of society, it has the mission of forming critical and reflective citizens, and when it fails to perform its function it is necessary to analyze aspects that may be interfering in this process. To look at and discuss a new way of thinking, surrounded by transformations, innovations and possibilities for a new direction for education.

EDUCATION FOR A FUTURE

Edgar Morin, in his works, sets out the cognitive challenge to all thinkers committed to rethinking the direction that educational institutions will have to take if they do not want to bend to the inertia of fragmentation and excessive disciplinization, characteristic of neoliberal globalization.

Among his main works, we highlight The seven indispensable knowledges enunciated by Morin: the first knowledge is about the blind spots of knowledge - error and illusion: error must be valued as an instrument of learning, because you can't know something without first falling prey to misunderstandings or illusions. The second knowledge relates to knowledge itself, to uniting the most diverse fields of knowledge in order to combat fragmentation; thus, education must make context, the universal, the various dimensions of the human being and society, and complex structures clear. The third piece of knowledge is teaching the human condition, conveying to students that man is a multidimensional being. Thus, the pedagogy of tomorrow needs, first and foremost, to focus on understanding the nature of the human being, who is also a fragmented individual. The fourth piece of knowledge points out that it is essential to know the place you live in, its sustainability needs, its inventive variety, the new technological implements, and the social and economic problems it harbors. Fifthly, it points to the urgency of confronting the uncertainties that stem from the certainty of the existence of doubts in the human trajectory, because, despite all of humanity's progress, it is still not possible to predict the future, a region that is not at all predictable and which constantly challenges man. The sixth knowledge argues that understanding must be taught, an indispensable factor in human interaction; it must be established in all fields of action in everyday school life. The seventh knowledge is the ethics of the human race, corresponding to anthropoetics, which argues that we should not want for others what we do not want for ourselves, as Jesus Christ already preached.

Complexity opens up the possibility of broadening your thinking about the world and life, your greatest challenge to the fragmentation of human and scientific

knowledge. However, the Theory of Complexity, or complex thinking, is closely linked to the issues developed by Edgar Morin, because it is this study that sets out to break with the simplifying and fragmented thinking that marks traditional education, especially in the school sphere, understood as that which accepts without question the isolation of content in subjects, memorization as a didactic possibility and the reproduction of knowledge without deep reflection on its problems such as: social inequality, poverty, ethical and moral dimensions, as well as the valorization of competition for the best students expressed by grades.

Edgar Morin, a contemporary epistemologist, has made a significant contribution to the fields of knowledge, based on the principle of thinking that seeks to reconnect knowledge that, for a long time, has been treated in gaps, in fragments.

The school curriculum is minimal and fragmented. Most of the time, it fails both quantitatively and qualitatively. Through its disciplines, it does not offer a vision of the whole, of the course and of knowledge as one, nor does it encourage communication and dialogue between knowledge; in other words, the disciplines with their syllabuses and contents do not integrate or complement each other, making it difficult to achieve the perspective of the whole and of globalization that favours learning (Morin, 2001, p. 69).

In this sense, we can say that what is essential in the complexity approach is the understanding that the whole needs the parts, just as the parts need the whole in order for both to be realized. This is not to devalue the advance of disciplinary thinking, but not to consider it as the only path to development. The opposite is also true, in that you can't see broad thinking if you don't consider that it is made up of various elements.

Thinking about the supremacy of fragmented knowledge, which prevents the link

between the parts and the whole from operating. It encourages the teaching of methods that make it possible to establish mutual relationships and reciprocal influences between the parts and the whole in a complex world.

Edgar Morin shows the human condition as an essential object of teaching and highlights the indissolubility between the unity and diversity of all that is human, the concern for the planetary destiny of the human race and presents it as a key reality hitherto ignored by education.

The teacher says that he has to face uncertainty, and that it is necessary to teach understanding, because it is both a means and an end, and it is absent in the field of education.

There is talk of interdisciplinarity, but everywhere the principle of disjunction continues to separate blindly. Here and there, we begin to see that the divorce between humanistic culture and scientific culture is disastrous for both, but those who strive to bridge the gap between them continue to be marginalized and ridiculed (Morin, 2001, p. 288).

So, for example, if we try to think about the fact that we are simultaneously physical, biological, social, cultural, psychic and spiritual beings, it is clear that complexity lies in trying to conceive of the articulation, identity and difference between all these aspects, whereas simplifying thinking either separates these different aspects or unifies them through a mutilating reduction. It is clear that the ambition of complexity is to report articulations that are destroyed by cuts between disciplines, between cognitive categories and between types of knowledge. In fact, the aspiration to complexity tends towards multidimensional knowledge.

Edgar Morin's thinking provides reflective alternatives for everyday life today, between knowing and doing, between understanding science and technology as possibilities for human development, with sustainability and no longer fragments that don't meet.

When science and technology are put to the test in terms of their ability to humanize and improve people's lives, they need to be answered more broadly, consistently and, above all, analyzed in terms of concrete facts. Nowadays, denying the advances in science and technology is naïve, as it is turning a blind eye to the inequality and problems they generate, from the lack of access by the poor to the relational and psychological issues that are increasingly in evidence due to people's isolation in the so-called virtual world.

The work of scientific and technological education policies must be related to the totality of learning, in other words, aiming for complete educational development. With this, we could assume that this situation is capable of helping in the process of forming citizenship, developing the totality of being. Considering these points, it is important to carry out clear investigations that permeate the educational field, providing an opportunity to discuss science and technology and their positive advances, as well as their critical points and possible changes.

Morin says that blind intelligence destroys sets and totality isolates all objects from what surrounds them, so that we can overcome our inability to articulate the knowledge in which we are immersed.

Complexity makes us recognize that we still need to advance in the integration of knowledge, areas of knowledge and between the true role to be resized in relation to science and unification with society.

In relation to the criteria for drawing up school programs, it is important to broaden the vision using the principle of human understanding, which takes into account individual differences, profiles and needs analysis, cognitive level and degree of potential.

The action of teaching and learning in the construction of the teaching method will advance if we apply the principle of the human condition, where everyone has the right to self-knowledge and the opportunity to identify needs and dreams and be respected for their own individuality. Thus, we are faced with an effective education where each subject is a participant in the construction of knowledge.

Ethical quality in education, an indispensable component of total quality, is to reformulate the way in which all the actors in the school, educators and students, relate to each other, in accordance with the different characteristics of human action rooted in freedom and aimed at the good. Therefore, complexity as a theory of action needs to take ethics into account in the practical conduct of education professionals.

It is important to recognize and observe that complexity requires teacher training to be thought of as a whole, in an integrated and articulated way in relation to the different processes and dimensions involved. This understanding is in line with the systemic-organizational principle which explains that a system is a global unit organized by interrelationships (Morin, 1997). Therefore, to think in a complex way is to see the object rationally, because we cannot fragment what is complex and relational. In the words of Morin (1999), everything that isolates an object destroys its reality, so in order to understand the whole, for example the teacher training system, we need to know the whole/parts relationship. This principle links the knowledge of the parts to the whole and vice versa, which means that the changes being suggested are not just about continuing training, but also about initial training processes, making them more suitable and competent for current demands.

Both types of training are constituent parts of an integrated totality that makes up a teacher training system. As a principle

that regulates thought and action as a way of thinking about and understanding reality, complexity demands that we think about teacher training from the point of view of an integral training process, one that is holistic in its goals, integrative in its proposals, adapted to different contexts, multi-skilled in its assessment strategies and systems. A model that goes beyond knowledge, because education is not a transmissive act, but a creative, constructive and transformative one.

In his proposal for comprehensive training, he conceives of training as change and his theoretical references or presuppositions are change as the conceptual organizer of reality and the principle of knowledge construction, consciousness as a construct that makes present what was absent, visible what was invisible, possible what was imaginary, confrontation or inferential tension that is at the origin of all change, complexity as a quality inherent in human action, thought and feeling, communication as a vehicle for expression and realization, communication in its broadest sense, which humanizes us.

Expanding this theoretical construction a little further, we recognize that change is one of the fundamental epistemological presuppositions of any innovative and transformative process based on the theoretical foundations explained above. It is an important component of any formative and transformative process; it is intrinsic to the very nature of being, matter and life. As a constitutive and organizing element of matter, that which has energy as its principle and change is also present in all levels and domains of reality, which is also present in the processes of knowledge construction and learning.

Change is the silent witness of any formative process, it helps us to realize that the educational and formative process has achieved its purpose, as well as helping us to understand the importance of our mistakes as stages in

a broader and more comprehensive learning process, it is possible to realize that everything that forms reality is transformed within each one of us, as a function of human knowledge.

Knowledge and learning involve self-transforming processes that involve a global cooperation that takes place in the different dimensions present in human corporeality, this broader awareness of the processes of change that helps us to build and rebuild our autonomy in the daily practice of our teaching tasks. Change is at the root of the formative and self-transforming processes that involve human complexity as a constitutive factor of reality.

We believe that complexity, as a constitutive factor of reality and life, is therefore inherent in the subject's action, in their thinking and in the object they work with.

Complexity as an expression is what makes life possible and favors the development of intelligence, thought and the evolution of living systems. This means that it governs events, actions, events and processes and, in this way, ontologically and epistemologically speaking, it does not allow us to separate being and reality, subject and object, educator and learner, objectivity from subjectivity, subject, culture and society, as well as stripping the teaching subject and the student of their most sensitive qualities.

Complexity helps us to better understand and explain educational reality, clarifying that it is not only made up of rationality and fragmentation, but also of intuitive, emotional, imaginative and sensitive processes, although we human beings are also made up of poetry and prose, emotion, feeling, intuition and reason, all of which is organically and structurally articulated in our corporeality. It is our corporeality that informs us that educational reality is not predictable, orderly or determined, and cannot be imprisoned by this or that model of science, nor by this or that reductionist thought, which is unique and true.

The same is true of training processes, since a large part of them are built on conflictive, disordered, indeterminate and often absolutely chaotic situations, because chaos is a phenomenon that presents itself in any dimension of reality and thus also in educational processes, causing unpredictable, indeterminate situations. In education, we must also accept the presence of uncertainty, disorder, chance, innovation and the unforeseen, which bring with them movement and change as inherent elements in life situations, often presenting themselves in formative, formative and, in reality, self-transforming situations.

Based on this understanding, we need to stop fearing the presence of these factors in our lives and in our teaching practices. The important thing is also to learn how to work in difficult, chaotic and uncertain situations, getting the best out of them, as well as recognizing and learning how to work with emergencies and unexpected bifurcations. We have difficulties in recognizing them and living with them. Our teacher training has all been guided by a linear causality, of the cause-effect type, by a teaching linearity of the stimulus-response type, by processes of the beginning-middle and end type, forgetting that the effects retroact on the causes, feeding them back or modifying them.

The enunciation of one of the fundamental principles of complexity, the recursive principle, which has circular causality, of a retroactive or recursive nature, as one of its main epistemological operators, based on this principle, deviations, errors and emergencies start to dialog and feed the system again and evolve with it (Morin, 1997).

Another interesting aspect is to realize that this same complex causality allows us to see complex phenomena in a different way, whose dynamics are processual, unfinished and transitory, as well as the interactions between subject and object, theory and practice, both of which break with linear causality, because

the action of one has a retroactive effect on the other, feeding it back or modifying it. One is always fertilizing the other, improving our practice, this improvement on the concepts worked on will illuminate the theoretical construction developed, being more enriched, this conceptual body, which will have a new look at practice, being able to modify it.

FINAL CONSIDERATIONS

We present here a reading of quite complex and profound prepositions and reflections that bring us back to the considerable importance of teaching comprehension, which is pointed out as the goal of future education.

From this article we have been able to reflect on the current reality of education in parallel with the reflections on the education needed for the future addressed here by the researchers.

Morin's thinking contributes to the clarification and relevance of the perspective of complexity by permeating and articulating disciplinary knowledge, so that from there, an understanding of the whole can be achieved, and at the same time, complexity draws attention to respect for the various dimensions of being, which points to incompleteness and uncertainty as important points to think about when dimensioning such thinking.

Edgar Morin's theory of complexity inspires us to map, understand and reconstruct steps in this encounter between science, technology, society, human beings and the planet. The aim is not to rival or instigate competition between these areas, but to make efforts to integrate them, so that they go hand in hand, and development can truly assimilate the notion of life's sustainability.

However, we are always thinking about the possibility of developing a spirit where knowledge of human ethics is capable of re-evaluating values and concepts over time and building a new awareness in line with our times

and with new human needs based on changes, innovations and, above all, new contributions to broaden reality and seek to be guided by a new, more humanized, ethical outlook.

Dialogue between different positions enriches the discussion and plays the role of dialectics, which is so important and necessary for the academic, social, political, cultural and educational development of society.

Education, therefore, must occupy life, be confused with it and impregnated with it, life itself lived in its fullness of peace and harmony, and not just an aggregate of procedures and techniques that prepare for a productive life. In this way, it is necessary to develop in all areas of society, and here we highlight the school, an ethic that strives for the integrity of the primordial sacred reality of the universe, establishing a new contract of solidarity in favor of the earth, life and humanity.

In the meantime, we need to take on the dialogical ethics of responsibility that promotes the right balance between efficiency and fairness, always focused on respect for the individual and the collective good, the present and the future, freedom and solidarity. Notwithstanding the actions that have promoted the disintegration of humanity and the destruction of nature, therefore, we can see a movement towards associative and community globalization, in which the school must immediately take part.

This utopia, which opens the way to what is possible in the opposite direction to passive acquiescence to the real present state of things, is the sense of the utopia of an unprecedented but viable world, which reveals to us the possibility of a possible world of peace, integral development and solidarity, capable of overcoming the limiting situations in which humanity and the planet find themselves.

Considering that we are educators and identify ourselves in the situations reported during the development of the classes, Morin's

book “The Seven Knowledges Necessary for the Education of the Future” has brought valuable contributions to our human experience, as it refers to transdisciplinary reflections on our cosmic genesis.

In conclusion, in order to educate in this modern society, in this world that is so connected and globalized, teachers need to deconstruct their concepts, retrace some paths, try and make mistakes, and position

themselves with humility and respect for the individual they are tasked with teaching. We need to have an open mind in order to get to know and listen, because when education allows you to drink from other cultures, it allows you to see your own and that of others, in this way the teacher is building a personal mosaic of cultures, and it is through education that this is possible.

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