

The Transdisciplinary Approach in Education

Simona KONRADI

Technical University of Cluj Napoca, North University of Baia Mare

Abstract: *The quantum revolution brought about a change in the vision of the world. The complexity, the rapid rhythm of the changes and the seemingly fragmentary reality, characteristic of the times we live in, lead to a tendency of atomization, insularization and dispersion, but at the same time opens as an antidote, the path to transdisciplinarity. Along with science, literature, arts, theatre, dance are all recognized as forms of knowledge. New disciplines arise and discrete connections are established between them in a necessary unification process. It consists of accepting more levels of reality and perception, which exist and manifest simultaneously. The paper aims at demonstrating that a transdisciplinary attitude in education, and more specifically in the teaching approach, is not only an adaptation to the spirit of time, but it provides the right context for the development of cross-curricular competences, creativity, experimentation of knowledge, both with the help of reason, as well as of the physical body and affectivity. Briefly, it means accepting the multidimensional reality, different from one person to another, but having an inner core of common essence. Here individual thoughts and experiences meet, find themselves, overlap. Moreover, it resonates with the universal thoughts and experiences common to all people. It is an integrative didactic approach, through which learning becomes an experience of knowledge.*

Keywords: education, transdisciplinarity, methods, links, disciplines.

Introduction

Even a careless look over the subjects that preoccupy the modern world can easily identify the recurrence of one in all fields: the change. What brings about this change? People or time? How can it be dealt with? Is education a possible solution?

The present paper aims at approaching education from a perspective of a type of teaching connected to the data and the complexity of the world we live in.

More and more is talked about the rapid changes in technology, economy, social or religious life, all imposed by recent conquests of science. And, since what we know today can be contradicted tomorrow by science, facing a new reality, it is necessary, as human beings, to keep up the pace with the time we live in. And this should not be done randomly. Being known – and unfortunately demonstrated, – that every scientific discovery has good parts and drawbacks that could lead to self destruction, it is a must for all human being to develop new abilities which should enable them to adapt themselves to new life situations, while being at the same time in agreement with the laws of the whole. In other words, the man of his time is in agreement with his family, neighbours, friends, the people, the national culture and with all his

peers. If we judge things in this key, it may be claimed that what differentiates us as individuals or peoples, should no longer become the main source of international conflicts, just as Samuel Huntington predicts when talking about *the clash of civilizations*.¹ What can be seen today is the manifestations, which rather generates a lack of balance, of the concept of *unity in diversity*. Moreover, even Basarab Nicolescu brought into discussion, not without worry, the "babeling process"², in the context of losing the common denominator. The unpredictable and contradictory informational boom, as well as over-specialization lead to the fragmentation of reality, loss of the perspective of the whole and of the connections with all its parts. The consequences it has on the human plan is insularization and alienation of the ancient pattern of social being. The informational and communicational era is not necessarily an era of authentic communication, of "face to face" communication. We talk today about social networks which somehow offer a surrogate to replace the human vital need for communication and relationships.³ These relationships are affected and take place, mainly, just virtually. The uneasiness in conversation and behaviour, exaggerated individualism and indifference, intellectual apathy and the lack of motivation characterizes a big percent of nowadays people.⁴ This attitude is rendered by a social, political, economic architecture which excludes the principles of morality and balance, being exclusively based on consumerism, aggressivity, arbitrary exploitation of exhaustible resources, and mainly on a lack of respect towards the others and towards everything that life means. It is obvious

¹ In his work *The Clash of Civilizations and Remaking of the World order*, Samuel Phillips Huntington, an important American political scientist claims that what differentiates people in the world after the Cold War has nothing to do with ideology, economy or politics, but rather with culture. The values and social norms people are faced with are landmarks of the civilization they belong to. Religion is an important part of any civilization, capable to lead to powerful conflicts. The imbalances of the modern world will have as a starting point cultural differences. The western world – currently on force position- where values such as individualism liberalism, constitutionality, human rights, equality, free market prevail, is on an antagonic position from the other cultures whose history, beliefs and rules have a totally different reference. Cf. Iuliu-Marius Morariu, "An Orthodox perspective on political theology," in *Journal for the Study of Religions and Ideologies*, XVII (2018), no. 49, p. 153-157.

² B. Nicolescu, *Transdisciplinarity. Manifest*, Iași, Ed. Junimea, 2007, p. 51.

³ Galina Nikolaevna Zhulina, Svetlana Vasilievna Zholudeva, Irina Anatolyevna Pankratova, Galina Vladimirovna Palatkina, "Regina Valerevna Smirnova Features of emotional intelligence of adolescents with different levels of internet addiction," in *Astra Salvensis*, VI (2018), no. 11, p. 538.

⁴ A famous quotation of Albert Einstein is premonitory for a world that overuses technology: "I fear the day that technology will surpass our human interaction. The world will have a generation of idiots."

that we are at a crisis here, and from this perspective, a major turnover for the entire humanity is needed. An approach of unification and spiritualization⁵. It is the moment of intervening through what Basarab Nicolescu defines as an imperative of the present world: "the unity of knowledge"⁶. In the paper *Transdisciplinarity. Manifest*, the author claims that a change of paradigm is needed in what knowledge means, mainly shifting to the classic approach in Physics, based on the scientific theories of Galileo Galilei, Kepler or Newton extremely valuable at those times (1600) and valid to these days at a macro-physic level of the quantum physics appeared in 1900.

Classical physics discovers universal laws of mathematical character, whose applicability in all fields, with the same effect, led exaggeratedly to the scientist current, which claimed that the only truth is science. The rest, like poetry, religion, arts or other forms of knowledge, are considered fantasmagorous, things that are unworthy of consideration. Thus, knowledge is directed outwardly, in a linear unfolding, of cause-effect determination. The inner part of man, the depositor of emotion, of faith and creativity, has been canceled. The idea generated by classical physics through this exaggeration is that everything is reduced to a single level of reality: that which sees itself, resists experimentation, mathematical theories and formalizations. The other levels of reality were excluded. In the philosophical plane, the separation between spirit and matter (Descartes) is made, and the word God is replaced by the word nature (Francis Bacon). The supremacy of materialism and the reduction to a single level of reality led to the transformation of the subject into the object, which allowed the formation of the two totalitarian systems (communism and Nazism).

In December 1900, physicist Max Planck noticed, totally vexed, that there is nothing between two physical entities, no causal link as prescribed by the laws of classical physics. If at macrophysical level these laws work, at atomic level they are no longer applied, being something discontinuous. Here the principle of uncertainty functions, and a subatomic particle can be at the same time in several places. It follows that a body is at the same time the opposite. Both body and wave. Quantum Physics now appears and explains this paradox. The solution comes when we admit that there is still a level of reality in which this contradictory behavior is possible. With the advent of quantum physics, the whole world view will change. The existence of several levels of reality leads to the idea that not only the analytical

⁵ D. Constantin-Dulcan, *În căutarea sensului pierdut (Looking for the lost meaning)* Cluj-Napoca, Ed. Eikon, 2008, pp. 305-306.

⁶ B. Nicolescu, *Transdisciplinarity. Manifest*, p. 53.

dimension, but also the affective dimension and the physical body become cognitive dimensions for the human being. And from here, a real explosion of disciplines. There are new, boundary disciplines and multiple relationships between them. Thus, the author states: "Disciplinarity, multidisciplinarity, interdisciplinarity and transdisciplinarity are the four arrows of one and the same bow: that of knowledge."⁷

Education in the context of transdisciplinarity

If permanent adaptation to a changing world can be viewed, more or less, as a prestige of survival instinct, awareness of change and attitude towards it belong not so much to the superior operations of thought, but to consciousness. And we can only reach there through education.

In recent years, the reference framework for education - as well as the entire society - is subject to numerous changes at an accelerated pace. Under these conditions, the limits become flexible, sometimes fluid, sometimes fade altogether. The learning experience of children naturally follows the same course. Hence the need for other approaches in class. We are, of course, in face of a huge challenge, which has surprised us, too, with insufficient resources. However, the varied range of options can be reduced to two significant: we choose to position ourselves next to the conservative line, continuing to prepare our children for the past, or to take an open, inquiring, searchable look for new steps and tools to help pupils connect in a conscious, creative and altruistic manner to the complexity of their time. Redefining teacher competences - obtained through initial or in-service training - is indispensable in this context. Knowing that there is a relationship of interdependence between the quality of education and the quality of the teaching staff, it is necessary to ensure continuous training on the basis of rigorous standards, unique and as far as possible correlated with the standards existing in other countries.⁸

If we see education as a profession, then it is part of the group of professions that have a long-term social effect and whose success is not granted. From this perspective, no society can afford to wait until the first results are seen. That is why there is a need for a reflexive attitude and intermediate analysis, since, no matter how good the system is, until the "final product" a lot of other influences come into play, especially those that refer to the relationships between people. And here

⁷ B. Nicolescu, *Transdisciplinarity*, p. 56.

⁸ Adriana Denisa Manea, "Training of the didactic competencies. An exploratory study," in *Studia Universitatis Psychologia-Paedagogia*, LX (2015), no.2, p. 33-44.

the degree of uncertainty increases, generating a series of complex realities. Therefore, any educational approach can be attached to a greater or lesser degree of failure. It is proved by the existence of clinical psychologists, therapists in the field of alcohol or drug addiction, social workers, different types of educators, placement centers, protection or re-education centers, specialists in the reintegration of detainees.⁹ When meeting these realities with the dynamics and complexity of the modern world, a change of approach in education becomes an imperative. Extremely theorizing or over-the-counter educational system of cognitive level, ignoring the physical and affective side of the being, proved ineffective. According to Basarab Nicolescu, this tendency is even self-destructive at the moment:

„L'éducation actuelle privilégie l'intelligence de l'homme, par rapport à sa sensibilité et à son corps, ce qui a été certainement nécessaire à une époque donnée, pour permettre l'explosion du savoir. Mais cette préférence, si elle continue, va nous entraîner dans la logique folle de l'efficacité pour l'efficacité, qui ne peut aboutir qu'à notre autodestruction.”¹⁰

An attempt to break the deadlock has been, in recent years, the shift of the center of gravity in the area of acquiring knowledge on skills training and development, and the curricula have been modified accordingly¹¹. Competence¹² involves a triad, meaning that besides knowledge and abilities of the student, trait of his/her personality

⁹ Ph. Perrenoud, *La formation des enseignants entre théorie et pratique*, Paris, L'Harmattan, 1994, chapitre VII, pp. 147-173 (https://www.unige.ch/fapse/SSE/teachers/perrenoud/php_main/php_1993/1993_03.rtf, accessed 12. 01. 2018).

¹⁰ B. Nicolescu, *Vers une éducation transdisciplinaire*, <https://www.scribd.com/document/17718067/Basarab-Nicolescu-vers-une-education-transdisciplinaire>, accessed 01. 01. 2018: Today's education privileges intelligence to the detriment of sensitivity and body, which was certainly necessary in an era at some point to allow the explosion of science and knowledge. But if this preference continues, it will train us in the insane logic of effectiveness for the sake of efficiency alone, which will only lead us to self-destruction (our translation).

¹¹ In the context of globalization, we are talking about a European dimension of education, and the European Parliament and the Council issue, in 2006 *The recommendation regarding the key competences for long life learning* (2006/962/EC) The document recommends forming eight relevant key competences: *Communicating in a mother tongue, communicating in a foreign language, Mathematical, scientific and technological competence, Digital competences, Learning to learn, Social and civic competences, Sense of initiative and entrepreneurship, Cultural awareness and expression* (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006H0962&from=EN>), accessed 12. 01. 2018.

¹² *Competence* „A person's ability to have something to say over a matter, based on thorough knowledge of the matter into discussion ” (<https://dexonline.ro/definitie/competen%C8%9B%C4%83>, accessed 12. 01. 2018).

should be taken into consideration.¹³ It is, certainly, a step forward, but the path remains still open. In his book *Transdisciplinarity. Manifest*, Basarab Nicolescu sums up the conclusions of the Report provided by the International Committee for the 21st Century Education, made under the supervision of UNESCO, presided by Jaques Delors, passing them through the filter of transdisciplinarity. The report discusses "the four pillars of a new education"¹⁴ (in our opinion four competences that take the student closer to his times):

- 1) learning to know;
- 2) learning to do;
- 3) learning to live with the others;
- 4) learning to be.

"Learning to know", means, according to B. Nicolescu, intelligent access to the knowledge of our times, through scientific spirit, but not through abstract and formal accumulation of information, but through continuous interrogation which makes the child look for signification, and mostly, establish connections between information, finding their utility in life.

"Learning to do" means learning a profession, the knowledge and the practice associated to it, but above all, in the context of an ever changing world, from a transdisciplinary perspective, it means, building a core of connections which could sustain flexibility, adaptability of the student and thus quick access to a different profession if that be the case. Learning to do means, therefore, besides the regular practical aspect, creating, doing something new out of something old, valuing the individual potential of the student. The profession turns, this way, into passion, achievement, a field where the individual feels no longer obliged but fulfilled. And through this, the individual stays in balance with his inner self, and the competition- which generates conflict and violence- is replaced by the joy and the certainty of every person's utility and unicuity.

"Learning to live with the others" involves knowledge and observance of rules of cohabitation. To this, Basarab Nicolescu adds the understanding and acceptance of the rules so that they are not seen as external constraints, as a necessity to tolerate others, but as an opening to a "transcultural, trans-religious, trans-political and transnational attitude" which is, in fact, the capital of transdisciplinary evolution in

¹³ Definition of competences in *The EU Recommendation* „Competences are defined here as a combination of knowledge, skills and attitudes appropriate to the context.” (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006H0962&from=EN>, accessed 12. 01. 2018..

¹⁴ B. Nicolescu, *Transdisciplinarity*, p. 154.

education - contained in the formula, "to acknowledge itself in the image of the other." ¹⁵. "Learning to be" means to be in a state of continuous learning: the student from the teacher, but also the teacher from the student. Therefore, "the construction of a person inevitably passes through a transpersonal dimension"¹⁶. (trad. N.).

In the transdisciplinary vision of Basarab Nicolescu, the four pillars of the new education are not only interrelated but are in a trans-relationship, having as a source the very profound structure common to all human beings.

We consider that by accessing this territory we can reach to a type of education that addresses both the intellect and the body, the feelings, thus the conflict between material and spiritual disappears, the harmony between the external human and the inner one being re-established, as well as the social harmony. The cultural war will reach to an end, the blue ocean could slowly replace the red one¹⁷, because the youngsters will be brought up in this spirit.

Transdisciplinary education involves practising by both teachers and students of their ability to find-and if they do not find, they can build- bridges between knowledge, between subjects, between people, connections that have as starting point and destination the same space, that of the third person included, where the Subject and the Object are in harmony, where each person is reflected in the other|.

Education is an investment in man through a set of interventions that change him/her. A dictionary definition presents education as "a set of methods and measures applied systematically (and in an organized framework) with the aim of forming and developing intellectual, moral, physical attributes, etc." of children, youth or people or human collectivities",¹⁸, but also "social phenomenon".¹⁹This

¹⁵ B. Nicolescu, *Transdisciplinarity*, p. 159.

¹⁶ „Apprendre à être" est aussi un apprentissage permanent où l'enseignant informe l'enseigné autant que l'enseigné informe l'enseignant. *La construction d'une personne passe inévitablement par une dimension transpersonnelle.* (see: <https://www.scribd.com/document/17718067/Basarab-Nicolescu-VERS-UNE-EDUCATION-TRANSDISCIPLINAIRE>, accessed 12. 01. 2018.

¹⁷ *The strategy of the blue ocean* is a theory launched by the famous authors W. Chan Kim and Renée Mauborgne INSEAD professors— recognized as being the best management school in Europe—, through which creation of new markets is promoted, markets which are open, lacking competition where the employees feel valued in a new space of multiple opportunities, of innovation, of development (the metaphor of the "blue ocean") as opposed to the "red ocean", seen as a place of fierce, bloody competition on saturated and aggressive markets where the fight goes to eliminate competition. (Kim and Mauborgne 2015).

¹⁸ *Education* „1 A set of methods and measures applied systematically (and in an organized framework) for the purpose of forming and developing intellectual, moral, physical attributes, etc of children, youth or people or human collectives.2. Process of

process deals with the three major factors that can influence the formation of a human being: heredity, family and the environment. From the genetic point of view, we have to do with general schemes - patterns - which define the genus (general genotype), individual schemes that differentiate people by making them unique (individual genotypes) and schemes that contain potentialities - predominantly of a psychic nature . In the third area of potential, there is a space in which education can intervene. The way it exploits the potential of each child influences its realization as a being. There are, of course, a multitude of influences, but a huge responsibility along with the family lies, even more, on the school, as here we talk about a professionalized territory, where rules of educational science are functioning.

For this reason, we consider it absolutely necessary for the didactic approach to be reconsidered through a transdisciplinary attitude in teaching-learning-evaluation.

Teaching in a transdisciplinary approach

It is certain that we can no longer be content with the monodisciplinary approach, which proposes a single point of view, that of the discipline and thus fragmentation of reality or super-specialization to the detriment of the whole. Pluridisciplinarity is the next step and it involves bringing together several disciplines, using each specific method and means to study the subject from different perspectives. Together, they offers a more complex picture of reality. If multidisciplinary builds cumulative ties between disciplines without being interactive, interdisciplinarity is the bold process of combining and integrating associated disciplines and methodologies. Investigating difficult subjects that go beyond the possibilities of a single discipline can be achieved by using or modifying the methods and tools of other disciplines. Interdisciplinarity is "a form of cooperation between different disciplines on a problem whose complexity can only be surprised by a convergence and a prudent combination of many points of view."²⁰

systematic (and organized) influence on the formation and development of intellectual, moral, physical attributes, etc. of children, of youth or of people or of human collectivities through education," <https://dexonline.ro/definitie/educa%C8%9Bie>, accessed 12. 01. 2018.

¹⁹ Education „1. Fundamental social phenomenon of transmitting life experiences of adult generations and culture to generations of children and young people, empowering them to integrate into society. 2. Knowledge of good manners and behavior in society according to these.” <https://dexonline.ro/definitie/educa%C8%9Bie>, accessed 12. 01. 2018.

²⁰ C. Cucoş, *Pedagogy*, Iaşi, Editura Polirom, 1996, p. 77.

In the context of Romania's social, human, historical and geographical context, efforts are being made to identify solutions for a conscious education with universally valid values (truth, love, freedom, happiness, democracy, peace, justice, loyalty, responsibility) moreover, it is known that moral, ethical, socio-cultural, professional values support the personal and professional qualitative training of the individual and scientific development.²¹

This has led to the emergence of new disciplines (hybrids) such as medical imaging, neuroscience, bioethics. In terms of transdisciplinarity, it refers to "what is at the same time between disciplines within and beyond them, and its purpose is to understand the present world through unity of knowledge."²²

Basarab Nicolescu arrives after several years of research to define transdisciplinarity as a sum of three postulates: a. the existence of several levels of reality, corresponding to different levels of perception; b. the logic of the included third party, a vast logic that makes it possible to reconcile the opposite by switching from one reality level to another; c. the complexity or idea of universal interdependence. In his perception, transdisciplinarity does not deny knowledge. It expands it. It increases its level of validity. Now it can have ramifications in philosophy, metaphysics, in the dialogue between cultures and religions. We can see the possibility of translating from transdisciplinary to trans-cultural, trans-religious, trans-political, trans-linguistic, etc. The vision is generous, open by creating bridges and dialogues between exact sciences and humanities, including inner feelings. Concerning education, the "Charter of Transdisciplinarity"²³ provides:

„Authentic education cannot value abstraction over other forms of knowledge. It must teach contextual, concrete and global approaches. Transdisciplinary education revalues the role of intuition, imagination, sensibility and the body in the transmission of knowledge.”²⁴

The beauty of the vision lies in the holistic approach of the being subjected to education. The risk of its materialization, however, comes, paradoxically, precisely from the encounter with the system that should make it worth it, by the fact that education is recognized as one

²¹ Adriana Denisa Manea, "Features of Educational Activities in the Contemporary Society", in *Astra Salvensis*, VI(2018), no. 12, p. 245-253.

²² B. Nicolescu, *Transdisciplinarity*, pp. 30-40.

²³ „Transdisciplinary vision ins open as long as it goes beyond the field of exact sciences through dialogue and reconciliation not only with humanistic sciences but also with arts, literature, poetry and inner experience” (*Charter of Transdisciplinarity* Art. 5, <http://ciret-transdisciplinarity.org/chart.php#ro>, accessed 12. 01. 2018..

²⁴ *Charter of Transdisciplinarity*, Art 11, <http://ciret-transdisciplinarity.org/chart.php#ro>, accessed 12. 01. 2018.

of the most conservative areas. From this point of view, we consider that at present there are some barriers such as:

- the hierarchy of disciplines – the pride that some are more important than others (usually the exact sciences or the ones that imply national exams);
- the distance between disciplines, caused by differences in theoretical and methodological approach (eg between science / technology and the humanist field - religion, arts, literature);
- misunderstandings (different terminology or terminology with different meanings from one discipline to another);
- the expertise of the teachers

However, none of the above-mentioned obstacles are insurmountable. A change of attitude towards knowledge is required, which will automatically be reflected in the didactic act. And we are talking about a return journey, because it is only a matter of time until we realize that in order to keep the pupil connected to the taught content and the reality of the lesson, we need to speak the language of his time and access all the antennas through which he perceives reality. From this point of view, no discipline should be more important than the other, for the child perceives the world both physically and through thought and affection. Knowledge involves the sounding of the external space of being - "thinking" - with the help of the intellect, but also with the help of the physical body, the involvement of the senses (using different types of intelligence),²⁵ but also through the emotions generated by the encounter with the reality. There is a subliminal filtration of information and an emotional reaction to it. In this way the whole being is reached in the process of knowledge. Why then are poetry, theater, dance, music, painting excluded since they are disciplines that create catharsis²⁶ liberating and balancing the being? The

²⁵ The theory of multiple intelligences is developed by Howard Gardner, demonstrating that there is not only one type of intelligence but more and they correspond to different learning styles and skills. Gardner identifies 8 types of intelligence: *verbal-linguistic*, *musical*, *logic-mathematical*, *visual-space*, *corporal-kinesthetic*, *personal* (*interpersonal and intrapersonal*), *naturalistic*. These intelligences have a certain "distribution" on the "map" of the human brain, having a neural substrate. A new, existential / spiritual intelligence is controversial because it has no associated brain area. (see: H. Gardner, *Frames of Mind: The theory of multiple intelligences*, New York, Basic Books, 1993).

²⁶ A term used metaphorically by Aristotle in *Poetica*, to describe the purifying effects of tragedy on the spectator. In antiquity, there is a conception that art can make a spiritual purification, a removal of sins, and a regaining of the state of calm, balance associated with ethical behavior. Later, the German philosopher Lessing says that by catharsis the excess of emotions turns into "virtuous provisions". (v. <https://www.britannica.com/art/catharsis-criticism>) In psychoanalysis, Breuer and

information, the knowledge provided by the exact sciences is supplemented by the one provided by the artistic emotion. Thought generates emotions, and these generate behaviours and modes of relationship. Any element missing from the equation leads us to a fragmentary, incoherent reality that will in turn affect the child's perception, behavior, and relationships.²⁷

Being facets of exploring the same world, all disciplines are equally important, and the subject studied approaches them more than we believe, for they all find themselves, meet beyond them, in a common territory of knowledge. Trans-disciplinary attitude of the teacher can reduce the distance between disciplines, leading the didactic approach to an area of dialogue between them and allowing students to perceive different levels of reality. All the more, the new school curriculum aims at developing cross-curricular skills.

A possible example of this would be the study of the literary text in an integrated, multidisciplinary, inter- and trans-disciplinary approach. For this, we choose a theme that is itself transdisciplinary: love. For illustration, we opt for Nichita Stanescu's text, *Autumn Emotion*.

We propose the study of the theme, for a start, in an intradisciplinary key, by comparing it with two other texts belonging to the Romanian love lyrics: Mihai Eminescu's *Lake* and Lucian Blaga's *The spring of Night*. We will also identify the expressive values of language in constructing poetic discourse. Then love will be studied from the perspective of other disciplines that meet to broaden the learner's knowledge horizon, and in the end, what he has learned will be subject to a transdisciplinary perspective by studying the theme starting from the conceptual delimitation of the real terms and levels of reality, according to Basarab Nicolescu. We mention that these approaches "flow" from one another, the didactic approach being not a fragmented one, but a fluent one, in which the word of order is "link".

Freud use the concept of catharsis in the context of releasing psychic tension by associating emotion with the memory of the event that triggered it.

²⁷Human behaviour and relationships are influenced by emotions or better said by the way in which emotions are managed. In his book *Emotional Intelligence* (Ed. Curtea Veche, București, 2001), Daniel Goleman observes there is a huge difference between intelligence from a cognitive perspective and emotional intelligence. The persons with a high IQ but low emotional intelligence are, most of the times, unfulfilled, unadapted, inexpressive emotionally cold while the persons with a high emotional intelligence succeed better in life, they show empathy, they are balanced, cheerful, connect easily and quickly get over problems. While the IQ is something genetic, which cannot be improved after the age of 12, emotional intelligence can be developed at all ages. That is the reason why Goleman considers it really important to educate emotional intelligence through awareness and naming emotions and through managing them.

The poem *Autumn Emotion* captures the vulnerability of the lyrical ego confronted with a possible end of the relationship. The end is associated here with the autumn, seen as the season of extinction, but also bearing in its depth the symbol of sleep during which everything is transformed only to return, more intense and renewed, to life. The text begins with a simple sentence, with the verb at Past Tense Simple. Mood of certainty, time of action started and ended in the past. Implacable ending, "Fall came ...". The poetic discourse moves from an ample, exterior, possibly real, space to the inner space, through a suggestion of the autumn cold, which brings the need for protection. But the one to be protected is the heart ("... cover my heart with something"). And if at a first reading the heart could be regarded as an anatomical supporter of life, the following verse turns it into the main perceptual organ of feelings. The poet's vulnerability is love - vital as the heart - and remains uncovered in front of the cold. It is an undetermined area that oscillates between real - exterior and fictional - interior, but anyway, located in an etheric, non-physical space of the shadow ("with the shadow of a tree or better with your shadow"). The sweetheart is no longer a physical presence, but only what has been projected in an indirect light. For a better understanding, it is appropriate to clarify the notion of shadow from the point of view of Physics, so as to get to its symbol:

„ The shadow is an area in which direct light generated by a light source cannot be reached because its transmission is prevented by the existence of an opaque object between the light source and the shadow area. The shadow is a two-dimensional projection of the interposed opaque object, reproducing with some precision the three-dimensional body figure.”²⁸.

Judging in this register and considering the source of light the poet's love itself, which, by directly lighting his sweetheart makes her what she is, it might be said that between the two something interposed, so the light became indirect and the girl a shadow.

This triggers fear, which actually appeared, as a premonition, from the title, through the noun "emotion|" -designating an uncertain feeling, thus, having lower intensity. Slowly, fear grows reaching to terror, while at the same time bringing about a terrifying vision as possible consequence: " I fear that perhaps I won't see you sometimes/That I'll grow sharp wings up to the skies/That you'll hide within a foreign eye/ and it will close with a wormwood leaf". In the conditions of indirect light, the only certainty is the fear ("I am afraid," the verb at the present indicative versus future constructions: "I will not

²⁸ See: Wikipedia definition at <https://ro.wikipedia.org/wiki/Umbr%C4%83>, accessed 12. 01. 2018.

see you again," "I will grow," you will hide", "it will close" used for strange projection). It is the only denomination of emotion in this first stanza. The other feelings are only suggested: the sadness, classically rendered by the presence of the autumn, the feeling of vulnerability, attached to the stringent need captured by the verb to imperative "cover me" and the love squeezed in the text by the presence of the noun "heart" and the possessive adjective, "your". Another suggestion is fear (feeling more intense than fright), transformed into horror and pain, through the hyperbolized wings that grows to the lover "to the clouds", and which are "sharp," making the flight more difficult.

The epithet *sharp* conveys the idea of cutting, violent and painful²⁹. Love has turned into a painful flight. The stanza ends in the emotions register with a tremendous bitterness, suggested by the wormwood leaf, seen as an eyelid that permanently closes the "foreign eye" - the metaphor of "the other." Human nature is represented in the plane of feelings through the eye, known as the window of the soul. At the same time, as a light-sensitive organ (the woman became light itself through love), the eye means the place where the image of the girlfriend is captured.

Reaching a limit situation that has been going on for too long (idea suggested by a series of four indirect objects: I won't see you sometimes/That I'll grow sharp wings up to the skies/That you'll hide within a foreign eye/ and it will close with a wormwood leaf"), to a climax in the area of feelings, apparently impossible to surmount, the poet seeks an exit. After a stanza made up of 6 long verses, with the variable measure (10-15 syllables), in which the fear of losing love reaches huge proportions, follows a shorter stanza, of only 4 verses, shorter too, and having variable measure (7-11 syllables), in which joy completely cancels all the fears. By recreating love, the poet recreates, in fact, the world through love.

With the second stanza, the poetic register changes altogether. The dynamics of the text increases by describing the actions. But not before everything is reduced to silence: the mind, the words. It is like a shift to another dimension, which can only be achieved by suddenly stopping the sound of words, scenarios and feelings. The tool through which they have materialized, the word, the one that named the fear,

²⁹ *Sharp* adj. I. (about objects) having a thin edge or point that can cut something or make a hole in something. II. Fig. 2. (About feeling etc) Intense. (about conflicts, wars etc.) Violent 3. (Despre vorbe, looks) That pierces; Borer; harsh, sharp. <https://dexonline.ro/definitie/ascu%C8%9Bit>, accessed 12. 01. 2018. Dmitrii V. Enygin, Nataliia Iu. Fominykh, Anastasiia V. Bubenchikova, Joseba Inaki Arregi-Orue, Rakhila Aubakirova, "To The Definition Of The Notion „Multicultural Educational Environment," in *Astra Salvensis*, VI (2018), no. 12, p. 604.

amplifying it and multiplying it by attributing it various aspects, is drowned in the sea. We face the natural impulse of the suffering lover to withdraw from the world to loneliness and silence in order to consume his sadness and inability.” And then I get closer to the rocks and get silent/I take the words and drown them into the sea. „Taking the shape of sea in Nichita’s poetry, that of the lake in Eminescu’s verses, or that of the spring in Blaga’s poetry, water is, beyond all different significances, primary element, principle of life and eternity carrying the memory of all human experiences before birth to the end, the memory of happiness or despair, of joy or sufferance, of victory or helplessness. And not by chance, as water is everywhere and forever³⁰ „ and from a physical perspective it is the only element on earth that can undergo change, going through three different states of aggregation: gas, liquid, solid, each state being symbolically associated with the being’s feelings. The sea is the one that can wipe away sufferance by drowning the words, the lake is the place that offers isolation where a dream love can come to life, being at the same time witness of the poet’s disappointment and the spring is a relentless source of mystery and love. Water and stones are elements of a safe place in Nichita Stanescu’s poetry. But this regression³¹ in a possibly real space, far away from human kind and close to the mineral world, is just a pretext to return to a primordial time, close to the genesis, with the thought to start it all over again. Thus, in a transdisciplinary key, the levels of reality and perception experienced by the poet give the opportunity of revealing the sacred hidden within the profane. The authentic, material space (the sea, the stones) becomes an access path to a different reality. The one-dimensional universe gives birth, empowered by feelings, to a multi-dimensional universe. It is the place where the hidden third is revealed. The poet is human and Creator at the same time. The two hypostases do not exclude each other but allow the emergence of a third one: the Human-Creator, which includes them both. At this level of reality we can pass the border that opens the path to immortality,

³⁰ In the Genesis (*The first book of Moses*), water appears from the very beginning , from day one, when the spirit of God was moving above waters . In the second day God separated water from water making a vault to separate the water under the vault from the water above it. In the third day God created the land and the union of waters was called seas (*Genesis 1, 2-10*).

³¹ *Regression* s.f. [...] 5. (biol.) a return to a previous and less advanced or worse state, condition, or way of behaving.
<https://dexonline.ro/definitie/regresiune>, accessed 01. 01. 2018.

The Antics devided the material world in three , from inferior to superior, this way: mineral world, vegetal world, animal world. Aristotle had a hint about the existence if a hierarchy of structures, from simple to more complex ones within each world, which allows moving from one world to another.

meaning is recreated and the innermost part of the human being is troubled, and repositions itself on a different dimension: that of the creator. Recreating love, the poet recreates the world according to his own set of rules. A new world emerges from another, and this can only be revealed through silence and symbol. The stones on earth are magically linked to the stone in the sky. We witness a process of re-sacralization through a plenary experience: "I whistle the moon and I rise her and turn her /in a great love". The poet is healed from the love that caused him pain through a different love. Energy springs and passes through worlds and beyond them, in an area of absolute transparency where all people's loves meet, purified and immaterial, with God's love, the love-being. It is the space from the biblical text:

"⁴Love is patient, love is kind. It does not envy, it does not boast, it is not proud. ⁵It does not dishonor others, it is not self-seeking, it is not easily angered, it keeps no record of wrongs. ⁶Love does not delight in evil but rejoices with the truth. ⁷It always protects, always trusts, always hopes, always perseveres. ⁸Love never fails." (I Corinthians 13, 4-8)³².

Among *the great enlighters*³³ created by God, the poet, who has reached this space of pure, and eternal love, chooses for his creation the moon, the night's star, the romantic symbol of love-just like in Eminescu's poetry-the light that boosts the mystery of darkness- just like in Blaga's poems- the heavenly body with indirect light which blurs the things' contours (otherwise extremely visible in day light) and which enhances multiple perceptions and leads to an explosion of reality levels. The idea reaches at this point the principle from quantum physics formulated by Heisenberg according to which it is not possible to know with precision the speed or the direction of a particle that receives an impulse, thus existing a multitude of simultaneous possibilities.

The poet, just like God, has turned the inert mineral into life, passing from one world to another. God gave life to the piece of earth by breathing over it:

³² *The Bible or the Holy Scripture*, București, Editura Institutului Biblic și de Misiune al Bisericii Ortodoxe Române, 2011, p. 1651.

³³ *The Bible or the Holy Scripture*, p. 772. In Psalm 135, "God appears as the one who on his own created the great enlighters such as the sun to rule over the day and the moon and stars to rule over the night/ [...] / soarele spre."

„ Then the Lord God formed a man^[a] from the dust of the ground and breathed into his nostrils the breath of life, and the man became a living being..” (Genesis 2, 7)³⁴.

The lover „whistles and the moon receives *anima*” turning into a soul capable to bear the *great*, sacred *love*. The positive form of the adjective *great* has, in its simplicity, the meaning of an absolute superlative. And if the first stanza is entirely visual, the second one is addressing the auditive. The profound silence from the first stanza is followed by the grave, serious, sharp and mysterious sound of the whistling. It is the sound of the Genesis, similar to the music of the heavenly bodies in their rolling. The stanza’s sonority is stylistically sustained through alliteration, by the repetition of the consonant ”s” (seven times in four verses) and of the more liquid consonant ”r” present 9 times (in the original Romanian verses). Also, the frenzy and the joy associated to the creation are rendered by rapid succession of present Simple verbs, in an unusual association. In terms of transdisciplinarity we can identify trans-language, which in the logics of a single level of linguistic reality is impossible (the verbs *to whistle* and *to rise* are, in Romanian, intransitive and only to be used with the 3rd person singular.)³⁵, As the moon is turned into love, the language is transformed, renewed, out of itself only to meet the deeper meaning of all things. The noun *love* from the last verse of the poem names the feeling that cancels all the others. In the series of terms *emotion-I fear-love* which send directly to the reactions of the lyrical self , love is the one which saves and transforms the being It is exactly what the Apostle Paul says:”¹³And now these three remain: faith, hope and love. But the greatest of these is love.” (I Corinthians 13, 13)³⁶. Consequently a possible solution from the crisis is reconsidering love from a different perspective ,a perspective which involves simultaneity of the worlds , completed by continuous renewal and transformation of the world and of the being. The feelings sustaining the entire existence as presented by the biblical text is shown to the world through multiple scintillations-brought about by the same amount of perceptions-which somehow meet in a common source. The loved shared only in imaginary projection in Eminescu’s poetry, the love-mystery as a form of knowledge in Blaga’s or the love that creates in Nichita Stanescu’s

³⁴ *Genesis*, p. 24. Cf. Iuliu-Marius Morariu, "The Spiritual Autobiography in the Eastern space in the second half of the XIXth and XXth century", in *Astra Salvensis*, III (2015), Supplement no. 1, p. 169.

³⁵ *Whistle* , vb. I. Intrans. 1. (about wind, storm etc. 3) to produce a powerful , sharp sound Rise , vb. IV. Intrans. 1. (about stars, only in the 3rd person sg.. 3) to appear on sky, at the horizon.

³⁶ *The Bible*, p. 1651.

poetry are individual perceptions (which find each other and are reunited in the universal flow of human experiences) for different levels of the same reality. They all co-exist and glorify the miracle of love. Studied in this key, the literary text involves both the rational and affective sides, it opens to students, allows them acces to interpretation and different significances, contextualizing and optimizing learning. The purpose of such an approach is a reflexive, creative student capable to think critically.

Conclusions

In a complex, ever changing world, where the foundations of knowledge are no longer stable, and constantly needing successive resettling at an alert pace, the way to stay connected is non-resistance and acceptance of multiple levels of reality. Although seemingly fragmented, reality is composed of elements that vibrate together, trapped in a magical connection - a subtle energy quantum - that makes them co-exist simultaneously even under contradictory aspects. The quantum physics revolution brings a new vision of the world. The higher the complexity, the lower the degree of precision, suggesting that nothing can be localized or expressed accurately so that there will always be more possibilities, all of them bearing the same degree of validity.

To acquire this deeply necessary acceptance exercise, education is essential, and its great challenge is to acquire and develop coherently a pluri-,inter-and transdisciplinary component. The success of the macro approach is given by practising transdisciplinary attitudes to the micro-level of class interactions. This implies a communication that is realized, according to Basarab Nicolescu, by the correspondence of "the right places within oneself and the other". Perhaps this is the purpose of the discourse in the literary text. The writer and the reader find themselves, "fit" in the right places.

And within the group or class, the emotional state, the balance of a student is what it is because all the other students are what they are at the same time. And this is possible due to the fact that all of them have access to a space where they can experience, perceptions, places suitable for them. And when space is matched, access to meaning, communication, harmonization, freedom, and respect for the rules is open. The pupil lives his experience of individual, fragmentary and total knowledge to the same extent through creativity. Personal experience unifies, beyond the limits of being, with universal, ancestral experiences through the lessons of literature, religion, science, for any of these are open to transdisciplinary approach.

"The Transdisciplinary Approach in Education," *Astra Salvensis*, VII (2019),
no. 14, p. 113-129