Transdisciplinarity - the advantage of a holistic approach to life

Daniela Jeder *

“Ștefan cel Mare” University, 13 Universității Street, Suceava, 720229, Romania

Abstract

The transdisciplinary approach of holistic type, that overreaches the disciplinary fragmentation limits with its disadvantages, offers a vision of the world and life, as competent as possible, and has as starting point the human nature with all its complexity and diverse forms of manifestation.

This paper focuses on identifying the advantages integrated approach on the curriculum and provides clarifying examples for different school levels. The conclusion that emerges is the need for reform of thought in the area of training that will result in a reform that does not ignore the context, the situations diversity, the inter-conditioning and multiple approaches, prerequisite conditions for understanding and anchoring in the real life.

Keywords: Transdisciplinarity, integrated approach, reform of thought, real life;

1. Introduction

The term trans-disciplinarity lately receives attention in various fields and especially in education, that uses such an approach in order to streamline the education and training and to support the achievement of its fundamental purpose - preparing for integration in real social life. The ultimate goal of education is that students / children understand and learn how to live beautifully in a pluralistic, complex world, with many uncertainties, and through the trans-disciplinary approach of the curriculum we attempt to provide support to such expectations. In this context, creativity occupies or should occupy a central role in education and training, the trans-disciplinary approaches calling to the benefits of thinking’s creativity and flexibility.

The term has evolved from a first step to overcome the inter-disciplinarity by the meaning given by Jean Piaget who proposes the expression across disciplines to explain the concept to "a holistic approach of the real world that is interactive" and extremely complex; therefore "trans-disciplinarity concerns - as indicated by the prefix "trans" - which is at the same time across disciplines, and inside different disciplines, and beyond all discipline. Its goal is the understanding of the present world, one of its imperatives is the unity of knowledge." (Niculescu, 2010, pp.181).

* Corresponding author: Daniela Jeder. Tel.: +4-0748-397-923; Fax: +4-0230-520-465
E-mail address: danielajeder@usv.ro
Therefore, "the changes of social and individual attitude needs a new type of education, appropriate to the century in which we are living, fundamented on transdisciplinary principles" (Caciuc, 2002).

Because the universe is presented as a unit in itself, as an undivided whole, and education must describe and explain it as a whole and not as dispersed disciplines. Besides, life itself must be understood in its complexity and dynamics.

2. Trans-disciplinarity and learning experiences

2.1. Holistic curriculum process - Holistic approach to life

Holism, the theory supporting the relations of structural and functional elements of parts and whole, involves at the level of the curriculum the integrated vision of phenomena, objects and processes which are studied. The trans-disciplinary curriculum involves itself a fusion of ideas, knowledge, methods, values belonging to several disciplines or fields of study.

So, the trans-disciplinary, holistic approach, which overtakes the limits of disciplinary fragmentation with its disadvantages, provides a more complete vision of the world and life and has as starting point the human nature with all its complexity and diversity of its forms of manifestation. "Trans-disciplinary education is based on the reassessment of the role of intuition, imagination, sensitivity and body in imparting knowledge (Nicolescu, 1994). Therefore, in school, on the one hand, the student must be given the chance to present life and the world around in a harmonious and complex way, and on the other hand, the student himself must be regarded in its entirety, as a whole (Jeder, 2013).

Incidentally, this aspect is underlined by the Romanian author, Lucian Ciolan: “the holistic approach of the curriculum process involves two aspects: 1. The option for a "total", complete strategy of curriculum planning, which in turn implies: a maximum of coordination between the various stages of the process; the effective cooperation between the people involved, at different levels of decision 2. A certain understanding of the child, considered a whole, a unitary, complex human being and therefore the curriculum does not need to address separately one aspect or another of the child's development, but to look upon him as a whole.” (Ciolan, 2008, pp.199-200) On the other hand, life cannot be understood in black and white.

2.2. Models of application of cross-disciplinarity in school

At all school levels, trans-disciplinarity finds its valuable meanings and dimensions, and teachers use integrated activities aimed to its valuing, building/creating learning situations in which students can draw. In the preschool, for example, the Romanian educational system, is calling, for a while, to integrated curriculum projection, giving the children the opportunity to capture the essential aspects of life and the real world, the links with what is around, what they see and come into contact to. Thus, it is common knowledge that in an authentic learning the mind, the emotions and the body participate at the same time.

For example, aspects of civic moral education, such as the issue of respect (respect for others, self respect, for nature, for the future etc.) can be addressed by calling to areas of language and communication, people and society, aesthetic and creative, science and even the psycho - propellent (when referring to the spirit of collegiality, team, fair play that develops in this space). This basically covers the entire spectrum of analysis by calling to the fields of study provided by the preschool curriculum. It is a fact that, "in education there must be an intern conditioning between knowledge, beliefs, attitudes and behaviour. In building up the preschool or the small school age children’s moral-ecological conscience and behaviour, (for example, n. n.) it is necessary to pass through all these components that will reflect in an adequate behaviour shown by the children in their life and social activities, on what concerns their neighbours and also nature. They will show an attachment towards plants and animals, towards everything that nature represents (Caciuc, 2012).

Moreover, respect, civility or politeness etc. that are part of the fundamental axiological core and stand out to all those involved in the educational process can be addressed through integrated ways at all school levels: primary, for example, respect can be internalized as a value in so far as it refers to real life - knowledge, ideas, examples merge and form a construct based on understanding and affective dimension; Romanian language and literature offers texts that support this value - respect for language, for a proper communication, respect for self and others, for books and
reading etc; History supports respect for ancestors, traditions and country, positive relationship with others, Maths involves respect for thought and good work, for order and rigor, consistency in thought and action, music - respect for beauty and harmony, natural sciences- engraves respect for life and nature, respect for diversity etc.

But how to approach such a topic in middle school? There might be a number of "curricular cuts" within some disciplines to study the topic discussed, achieving an infusion approach. Thus, this problem can be understood, making a call to history (Respect for the culture and traditions in Antiquity, the Middle Ages, Renaissance, The Enlightenment, Modernity and Postmodernism) Civic Culture (Human rights - children's rights), Religion - (Respect for parents and their neighbour), Foreign Literature and Languages (Respect for the culture and traditions of different peoples), even Physical Education (Culture for movement and respect for health) etc. Each discipline "will contribute through its own particularities, specific issues in setting the theme and achieving the proposed aims." (Jeder, 2013, pp.23).

All these perspectives complete and extend the student's image on the subject, giving him a complex and comprehensive vision, which is based on different perspectives of the involved disciplines.

The hybridization is an alternative approach and involves the selection of cross-curricular themes, border, intersecting several disciplines, forming the so-called hybrids, which can be integrated into the official curriculum, but can be shaped as an optional discipline or separate integrated projects. Of course, the formation of transversal skills with high complexity is pursued.

For example, Education for and through values - could be such an issue that involves cross-curricular articulation of disciplines that are part of the formal curriculum; for an integrated project or optional subject there can be exploited virtually most of the subjects studied by students, through them, promoting various values: good, truth, justice, beauty, harmony, civility, respect, love, order, responsibility etc.

A transdisciplinary curriculum can be built by calling to the so-called satellisation model which consists in selecting a topic within a discipline - for example, the theme of Tolerance specific to Civic Education can be addressed with the support of other disciplines that become satellite of the basic discipline. Therefore, the cross-curricular theme chosen by us can inspire a trans-disciplinary dialogue between history, literature, religion, human rights education, intercultural education and so on, domains that may be cores that articulate in the dynamics of relations, with the purpose of uniting between knowledge, experience / feeling and application.

The subjects promoted by ethics, by their nature can not be addressed but trans-disciplinary and is actually a starting point for building multiple cross-curricular themes.

For high school, homework can be more complex and generally appeal to youngster’s capacity for reflection and abstraction, the capacity for synthesis and interconnection, for creating information networks, for solving problem situations etc., absolutely necessary to overcome the limits of knowledge fragmentation and comprehensive coverage of the meaning of life. The relationship between science and religion, The living world, Cultural journey in the world, Surrealist literature and art, Meaning of life or Math of life are just a few examples of topics that can be addressed at this trans-disciplinary level. In this regard, we recall the statement of the Romanian academician, Solomon Marcus, at a scientific conference that there are subjects that can be understood only through a transversal approach of several areas, such as the logarithmic function finds a common denominator in linguistic, computer science, psychology, biology, that the proportions we like seeing are the same we like hearing or that the metaphor is not only expressive, but it becomes a way of being.

In this context, there can be interconnected fields as sociology, logic, philosophy, anthropology, psychology, ethnology etc. as resources for achieving the objectives of curricular integration – “a) linking different segments ("division") within the study programs, b) linking the process of learning (experiences) to concrete situations of life. According to these directions, it is considered that one of the main starting points for initiating these steps to integrate the curriculum, is the global (full) approach of student's personality in interaction with significant socio-cultural and dynamic contexts” (Ciolan, 2008).

This approach aims to train and develop the integrated thinking that is “the ability to perform with agility the patterns and connections between facts, ideas and examples, and to synthesize information at a conceptual level” (Erickson, 2008, pp. 8) essential dimension for the formation of autonomous personality to meet the challenges and attributes of the knowledge society.

3. Trans-disciplinarity- a profitable way to meet the challenges of modernity
Although there is some inertia to the change proposed by the trans-disciplinary curriculum, teachers feel the need for change and a new approach to teaching, learning and assessment, and most of the teachers involve in this process, considering the opportunities and advantages, issues we are trying to summarize in the following.

3.1. Advantages of trans-disciplinarity

The holistic trans-disciplinary approach provides a comprehensive perspective on life, which has as support the problematical question, the heuristic and search, the research, the insight into various levels of knowledge and reality, as a link between abstract and concrete dimension of experience. Invitation to reflection, to find answers, trans-disciplinarity is a way of intrusion of the ineffable because "the best way to answer a question without an answer is to incessantly keep to yourself the question. Thus, it can feed from all the answers" (Nicolescu, 2007, pp.34), states Basarab Nicolescu.

The trans-disciplinary methodology is a way to facilitate referral and understanding of the relationship between the laws of nature and the human ones, between the humanist and the exact sciences, between people, cultures, faiths, which emphasizes the incompatibility with the mere acquisition of knowledge, but transfers and flexibility of thinking, ease in making relevant choices and rigor in finding solutions to the problems of life which in turn are just trans-disciplinary. Through the trans-disciplinary methodology, the child / human being is understood as a whole and is thus addressed consequently, without a reduction to unfavourable and unproductive fragmentation.

Fundament of the formative act, the need for comprehensive understanding is and must be educated through trans-disciplinary approaches of the curriculum; opportunity for motivation, inspiration and stimulation of the interest in knowledge and exercise of critical thinking and creativity, this way of organization and deployment of teaching and learning is a win for everyone involved. Communication in different spaces teaches students that there is diversity in the way of thinking, feeling and living and opens decks to a modern understanding of the world and life which school should prepare. Moreover, trans-disciplinarity is understood as "a new vision of the world" (Niculescu, 2010).

Moreover, the cross-disciplinary approach often involves challenges by problematizing issues, problem-solving situations, dilemmas and new situations that incite the natural curiosity of youth / students, motivate, inspire and support the outbreak of authentic learning. The active involvement of students in the activity is truly a great asset and results in increased responsibility for what they do or initiate and supports sustainable learning throughout life.

There is a better link with life at all levels, students becoming more aware of the importance of the visible and less visible links between areas of knowledge which gives them greater certainty in reporting to the world around, sustained by the increasing expertise in such an approach to life. Basically students learn how to learn productively.

As cross-disciplinary involves complementary to other forms of organization of content, mono-disciplinarity, interdisciplinarity, multidisciplinarity provides flexibility and a personalized scroll of themes, stimulating a correlative thinking, training and practice of metacognitive skills, transversal competences such as learning strategies, communication, relation skills etc.

A holistic approach to the curriculum which involves freedom, autonomy and creativity in the curricular decisions (from the teacher), results in a holistic view of life, which means a higher level of understanding and an effective management of their own lives.

Cross-disciplinarity is a way to increase the attractiveness of students towards learning and towards school in general and it is focused on the promotion and internalization of the authentic values and development of positive attitudes towards life.

3.2. Teacher training in cross-disciplinary perspective

Teachers themselves need to be trained in the spirit of cross-disciplinarity. To meet this challenge, it requires thorough knowledge, the capacity to achieve the connections between different areas, the ability to shape the assumptions, to make good decisions in complex situations, teamwork ability etc. On the other hand, it requires understanding from the trainers of the opportunity of flexibility and permeability of the curriculum, but also the courage to educate in cross-disciplinary spirit.
Teachers must be initiated in the design and implementation of the integrated curriculum, in building and using the necessary strategies for cross-disciplinary skills, in counselling the integrated learning and the cross-curricular assessment that considers the student as a whole. It needs to be inculcated in the initial and continuous teachers’ training of a logic of teaching to assure the educated the link with everyday life.

4. Conclusions

The conclusion that emerges is the need of a reform in the area of training that results in a reform of thinking that does not ignore the context, the diversity of situations, the inter-seasoning and multiple approaches, prerequisites for understanding and anchoring in real life.

References


