

Transdisciplinarity in research and education

Mara Elena Lucia¹

¹Lucian Blaga University of Sibiu, Law Faculty, Private Law and Educational Sciences Department, Sibiu, Romania

Abstract

Transdisciplinarity leads to intensification of relations between disciplines and discovering new horizons of knowledge. Transdisciplinary research is radically distinct from disciplinary research, among them being a complementary relationship. Forming adolescents for life by valuing self-organization approach to personality is possible by employing an innovative learning that takes place in a context created formative personal development program based on values and principles of transdisciplinarity. Theoretical and practical basis of such a formative approach presented in this paper. The values, the specific aims of the program, its content elements and methodological and formative assessment are used predetermine the value of the program.

Keywords: transdisciplinarity, personal development, innovative learning

1. Transdisciplinarity in research, involves studying, exploring the complex processes and phenomena, so that by coordinating research and collating their results in order to arrive at the establishment of new disciplines. Its goal is to understand the present world, one of the imperatives is the unity of knowledge. Transdisciplinary integration (prefix trans-means "across", "beyond") involves an interplay of several

disciplines,[1] which may cause the emergence of new fields of knowledge. Concerns which are both different disciplines, across disciplines, and beyond all discipline. Transdisciplinarity leads to intensification of relations between disciplines and discovering new horizons of knowledge. Transdisciplinary research is radically distinct from disciplinary research, among them being a complementary relationship.

1.1 Transdisciplinarity is so often confused with interdisciplinarity and multidisciplinary (otherwise and interdisciplinarity is often confused with multidisciplinary) this is explained mostly by the fact that all three are beyond disciplinary boundaries.

2 Transdisciplinarity in education

Interdisciplinary teaching is a whole different relationship between content and activities involved in the teacher education with a relevant final step in plan formation learner. Cognitive accumulation of various fields of knowledge and multiplication of sources of modern education strategies require sizing and structuring content. It requires a new way of selection of information, decongestion, and other criteria to organize, prioritize, create and implement as appropriate reality and educational

objectives of achieving a vision of integrative, holistic students. Degrees of integration of knowledge, according to the experts in education [2] includes:

- multidisciplinary (studying an object from one and the same discipline by means of several disciplines at once).
- interdisciplinary (studying the transfer of methods from one discipline to another).
- transdisciplinarity (intended fusion of disciplines in terms of representation and problem solving, aiming at the understanding of the present world).
 - 1.transdisciplinarity as a tool (allows student individual work methods and techniques that can be used in new situations)
 - 2.transdisciplinarity as behavior (allows students to organize their knowledge of each of the steps or learning in different situations).

Transdisciplinarity is the most elevated degree of integration of curriculum, often going to the merger. Fusion is the most complex phase and radical integration. Transdisciplinary approach tends toward a "cut" full of subjects involved. Louis D'Hainaut distinguish the curricular plan between instrumental and behavioral transdisciplinarity.

Instrumental transdisciplinarity aims to provide student intellectual work methods transferable to new situations with which it is faced, it is geared more towards solving certain problems than the acquisition of knowledge "for the sake of knowledge." Transdisciplinarity behavioral plans as stress in the vision of D'Hainaut, to help the student "to organize each of its actions in different situations." [6] This approach focuses on activities that teach the subject, taking into account the psychology of learning, behavioral transdisciplinarity permanent stands in

close relation to significant life situations (that make sense) for the learner. Considering that paves the way to achieve a higher epistemological level, transdisciplinarity was raised to the rank of "new worldview." This "labeling" rooted in the belief that the relevance of transdisciplinarity is only able to lead to understanding and resolving multiple and complex challenges of the present world, and it has two different sides [3]:

a) one philosophical side, which is promoting a vision and a new understanding of reality in general and special educational reality transdisciplinarity attitude.

b) one methodological side, which is the development of concrete how to use the various stages of disciplinary power integration in the educational process. Skills, values and attitudes that students need for success in the context of personal and social dynamics of contemporary society can not be formed entirely through traditional school subjects (formal). Learning is not done only in school but also outside it. Families, the community and especially the media are a more meaningful measure learning environments. More learning aims in addition to acquiring knowledge and building capacity and intellectual skills. Among them:

- *learning to know / to know* - to master the tools of knowledge, learning essential tools for communication and oral expression, reading, writing thought and problem solving, while possessing extensive knowledge, and depth of key areas, the understand the rights and obligations of a democratic society. The most important aspect of this pillar is considered but learning to learn. Learning methodology becomes more important than the content itself given that knowledge multiplies rapidly and a greater selection becomes a matter of individual decision, but social.

- *learning to do* - to your own skills to a profession and your own psychological and social skills needed to make decisions appropriate to different life situations, to fit in society and the world of work, participating local and global markets, the use of advanced technology tools, to satisfy your basic needs and act to improve the quality of personal and social life.

- *to learn to work together* - to accept interdependence as a characteristic of contemporary social environments, to prevent and resolve conflicts, to work with others to achieve common goals, while respecting the identity of each, to participate actively in the life and community leadership and create a healthy and harmonious family.

- *learning to be* - to develop your personality and be able to act autonomously and creatively in various life situations, to demonstrate critical thinking and responsibility, to value the culture and strive to develop their intellectual capacities, physical, cultural, to demonstrate aesthetic sense and strive to maintain a climate of peace and understanding.

- *learning to you and you turn to change society* - to learn, reflect and act upon reality, to adopt and transform it, to protect the environment and act for a non-discriminatory, to develop solidarity and social cohesion. Organizing learning formal disciplines classical criterion becomes insufficient in a dynamic and complex world characterized by information explosion and unprecedented development of technology. A learning across disciplines, traditional academic canons stiffness may be more profitable to the needs of contemporary man.

3. The macro or conceptual lens (focuses on the study of a unit, the main theme is a vehicle that allows the student to apply new knowledge to Oldest while

integrating their own reflection to gain deeper understanding of key concepts). Examples of the macro - love, nature, man of genius, thirst for enrichment, heritage, human society. According to researchers [4] who have dedicated studies contemporary world is one in deep transformation, so that the world becomes a breathing space. Howard Gardner reveals [7] the difficult task of educators, saying that the best preparation of the teacher is to adapt the ideas and experiences of changing (to what extent this constant fits in terms of the role of school discipline for which you prepare?). Core curriculum contains essential elements that set of learning orientation on a given subject, with unique feature reference system exams and national tests. Common core refers to the number of hours to be taken compulsorily by all students of a class. Elective/Optional courses is the variety of SDC which is a new school with the development of the discipline with new skills, different from those in the common core program.

4. Romanian literary folklore imaginary as an example of one elective/optional course is aimed at students in the first year of university in order to show students the importance of folklore. Imaginary reality coexist, reflecting daily, but not true, but in terms of a filter inside his own imagination and mental activities by setting basically a trans-reality, image immediate reality is "magnified, transformed, idealized" imaginary defining the as "a strange and reluctant faculty analysis consists in overcoming the real records, the creations of illusions, phantasms, mirages, myths, utopias"[5]. Thus, this optional course is not only an opportunity to discuss and interpret common it must become a necessity for intellectual and spiritual approach

among students. Its purpose lies in his power to influence students to mutual understanding and then for an understanding of text's values. The course must turn in a workshop shaping attitudes. Pleasure of being together in discussion and unconditional respect between pupils will become a force that will change passivity in activism, new behavior generator conscience released.

5. For communication in schools/universities is not confined to academic success and seeks human success in all conditions and at all times of life. Students being helped to communicate and to procure the fulfillment of spontaneous speech needs or well thought out and prepared. Thus, communication becomes effective and, in this way, the manifestation of freedom, encouraged by his power to communicate, the belief that ideas can give clarity and beauty, living, thinking.

6. References

- [1] Cerghit, I., Vlăsceanu, L., (coord.), *Curs de pedagogie*, p.132, 1988.
- [2] Bocoș, M., *Curriculumul școlar. Conținutul învățământului în „Pedagogie. Suporturi pentru formarea profesorilor”*, M. Ionescu, V. Chiș, (coord.), p.121, 2001.
- [3] De Landsheere, G., *Dictionnaire de l'evaluation et de recherche en education*, p.74, 1992.
- [4] Niculescu, R.M., *Teoria și managementul curriculum-ului*, p. 98, 2003.
- [5] Constantinescu, N., *Lectura textului folcloric*, p.35, 1986.
- [6] Hainaut, L.D, *Programe de invatamant si educatie permanenta*, p. 137, 2009.
- [7] Gardner, H., *Mintea umana – cinci ipostaze pentru viitor*, p.98, 2007.