Arrangements for Cross-Skills
Training in Education Process

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Abstract: The term transdisciplinary is now in more projects, especially in the sphere of education, an amazing knowledge dissemination, which is not always matched by an adequate understanding of the vision that lies behind this operation concept. Disciplinarity is a specialized scientific field (a subject) homogeneous produce new knowledge and make knowledge obsolete old. Transdisciplinary in terms of education, aimed intertwining several disciplines in the form of curricular integration, by setting up, in time, a new discipline or a new field of knowledge, through what is called fusion - play the most radical integration. "Transdisciplinarity concerns - as indicated by the prefix" trans "- which is at the same time and across disciplines, across the different disciplines, and beyond all discipline. Its goal is the understanding of the present world, one of the imperatives of them is the unity of knowledge." (Basarab Nicolescu, Transdisciplinarity. Manifest) curriculum integrated is presented by education organized so that the crossing barriers of subjects, bringing together different aspects of curriculum significant associations that focuses on broader areas of study. Teaching and learning are viewed from a holistic perspective, reflecting real light, which is interactive. Intra-disciplinary integration teaching of interrelated content in the same field of study, to resolve a problem of studying a theme or development of skills.

Keywords: transdisciplinary; knowledge dissemination; curricular integration

The strongest argument for the integration of disciplines is the very fact that life is not divided by subject.

(J. Moffett).

The twentieth century brought a disciplinary big bang, it was reached, as basarab nicolescu warns us, at incredible number of 8000 subjects, hiper-specializarea is one of them, inevitably involving ignorance and incompetence in the other 7,999. The explosion of complexity, alike a source and effect of this disciplinary big bang, awakened two possible interpretations: whether it is chaotic, without any order, where knowledge becomes impossible case, be it hides a new order and a more subtle simplicity, but urgently require a new form of knowledge. "Complex" ("what is woven together") it's not synonymous with "complicated", therefore does

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not preclude simplicity, a disconcerting complexity of a Reality level it may be the simplicity of another level of Reality. Trandisciplinarity it is based on an acceptance of complexity, as it is understood by Edgar Morin and Paul Cilliers, whereas the unity of all levels of Reality open their plurality entails complex. There is a horizontal complexity of a single level of Reality inherent to each discipline, and a vertical complexity, brought to light by transdisciplinary, by crossing several levels of reality by means logic of the included. Transdisciplinary risks being distorted by some serious confusion by reducing them to: 1. *Interdisciplinarity* – transferring methods from one discipline to another, which can create new disciplines. interdisciplinarity multiply disciplinary boundaries, when they transgress transdisciplinary. 2. *Pluridisciplinarity (or multidisciplinarity)* – studiul obiectului unei discipline prin metode aparţinând mai multor discipline. Pluridisciplinarity remains between disciplinary boundaries, while transdisciplinary is seeking what lies between and beyond. *3. Enciclopedism* – in all disciplines 8000 current and a sum of all the accumulated knowledge, an approach impossible and useless. Trandiscplinarity does not propose an exhaustive accumulation of information coming from all disciplines, it seeks bridges between them, which make it possible to understand, a jump vertically to open the drive fundamentals of knowledge. 4. *Adisciplinarity (or Antidisciplinarity)* – denial disciplines, the study only what lies between and beyond disciplines, ignoring what is inside them. Disciplinarity and transdisciplinarity are not antagonistic, but complementary disciplinary investigation is put in a new light by opening disciplinary, but transdisciplinary research and it is nourished by disciplinary, which establishes transdisciplinary state. 5. A new discipline – a super discipline or another discipline in addition to the more than 8,000 existing specializations. If disciplinary investigation inevitably builds disciplinary boundaries, transdisciplinary has no such boundaries, it takes place outside their, without establishing new ones. In addition, each subject is limited to a single level of Reality, while transdisciplinarity implies a dynamic coherence between all levels of Reality.

Because we are today in full revolution of intelligence, we must understood that transdisciplinaryty reveals the poetic dimension of existence, crossing, as I said, all disciplines beyond them. Transdisciplinary education and multiplying dimensions.

Authentic education can not value abstraction over other forms of knowledge. Education should focus on contextual, concrete and globalization. Transdisciplinary education revalues the role of intuition, imaginaţiei, body awareness and knowledge transmission". (Nicolescu, Carta transdisciplinarităţii)

Postulates of transdisciplinarity

1. Disciplinarity and multidisciplinary, interdisciplinary and transdisciplinary are the four arrows of one and the same circle: *the knowledge*. (Nicolescu, 2007)

2. As with disciplinary, transdisciplinary research is not antagonistic, but complementary multidisciplinary and interdisciplinary research. 3. Transdisciplinarity it is nevertheless radically different from the multidisciplinary and interdisciplinary in its end – understanding the present world, what purpose can not be accomplished in the disciplinary investigation. 4. Multidisciplinary finality and interdisciplinary research is always disciplinary. 5. If transdisciplinarity is so often confused with interdisciplinarity (as, indeed, and interdisciplinarity is often confused with multidisciplinarity), this is explained mostly by the fact that all three overflow disciplinary boundaries. 6. While recognizing radically distinct character of transdisciplinarity in relation to disciplinarity, multidisciplinarity and interdisciplinarity, it would still be extremely dangerous to absolutize this distinction, because in case transdisciplinarity would remain emptied of all its content and the effectiveness of its action would be reduced to zero.

Skills - key formed by transdisciplinary approach

Transdisciplinary skills can not be sorted by content discipline, as it happens with the monodisciplinary. They can be defined as:

1. *General skills – Methodological: observation, experimentation, plotting, data interpretation,*etc.

2. *Metacognitive skills* – assessment of the degree of difficulty of the task, strategic planning, performance evaluation, behavioral monitoring, personal learning techniques.

3. *Positive, motivating* – realism, interest in learning, tolerance for conflicting information, positive attitude to personal performance.

4. *Pragmatic skills* – personal initiative, ability to concentrate, targeting actions towards solving task, work habits.

The difference between the cross- curricular skills is especially in the pragmatic, than the theoretic.

Transdisciplinary Integration

Transdisciplinaryty – is the most elevated degree of integration of curriculum, often going to fusion. Through its degree of complexity, incorporating transdisciplinary approach them on the previous, proposing an approach based on the dynamics and interaction of four levels of educational intervention: *disciplinary, multidisciplinary, interdisciplinary and transdisciplinary.*

Considering that opens the way to achieving a higher epistemological, transdisciplinaryty was elevated to "new worldview".

Transdisciplinarity issue has at least two essential sides:

a) philosophical side, which is promoting a vision and a new understanding of reality in general and particularly educational reality - transdisciplinary attitude.

b) methodological side, pertaining to the development of concrete manner the use of various degrees of integration in education - transdisciplinaryty competence.

Basarab Nicolescu defines transdisciplinary through three methodological postulates: levels of Reality, the logic of the included middle, and complexity.

D'Hainaut identify three types of transdisciplinary, according to a horizontal course, vertical or transverse, this time replacing the concepts and principles of the initial table, support of his theories demonstration, with requests expressed by the following verbs and phrases:

- Will communicate *(reception);*
- Will comunicate*(broadcasting);*
- Will *respond to the environment*;

W*ill translate*, to adapt, to anticipate, to learn, to decide, to choose, to appreciate, to examine the action, to action, to apply, to solve problems, to create, to transform, to organize, to direct, to explain, to steal, to proove and thereby closer to what we now call transdisciplinary skills and also guessing that intra/inter and multidisciplinary nature are varying degrees of the same phenomenon transdisciplinary, The fundamental thesis of conception of Trandisciplinar Group from CIRET, Paris.

Structural models of cross-curriculare integration topics

I. The infusion

The infusion

It involves the formation of objectives/general competence or character defining thematic areas having transdisciplinarity (cross-curricular).
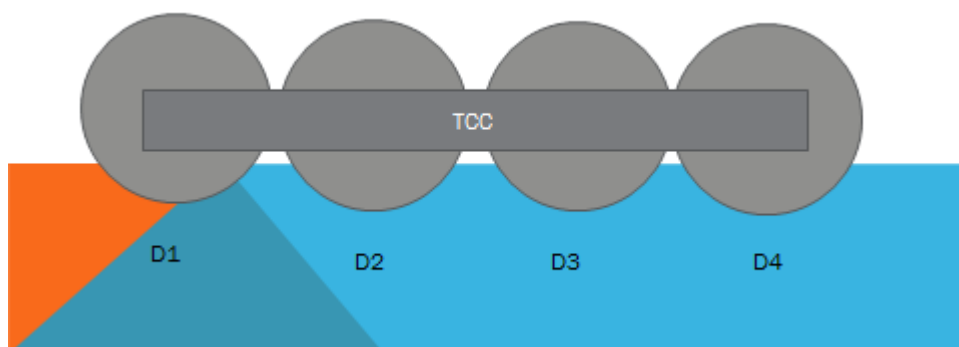
It requires the formulation of objectives/general skills or definition of thematic areas Having transdisciplinary nature (cross curricular) common to all the learning objectives included in curriculum or a group of disciplines, such as configuring a particular curricular area. Mentioned objectives are considered as the starting point in achieving "curricular-cut" in the disciplines. The theme is quoted in this case learning outcomes (goals or cross-curricular skills)

Examples of themes that fall into this category:

- Quality of Life;
- Environmental Education.

II. The hybridization

Assume achieve objectives which, by their complexity and integrated specifics, it requires the establishment of a (sub) independent field (hybrid).
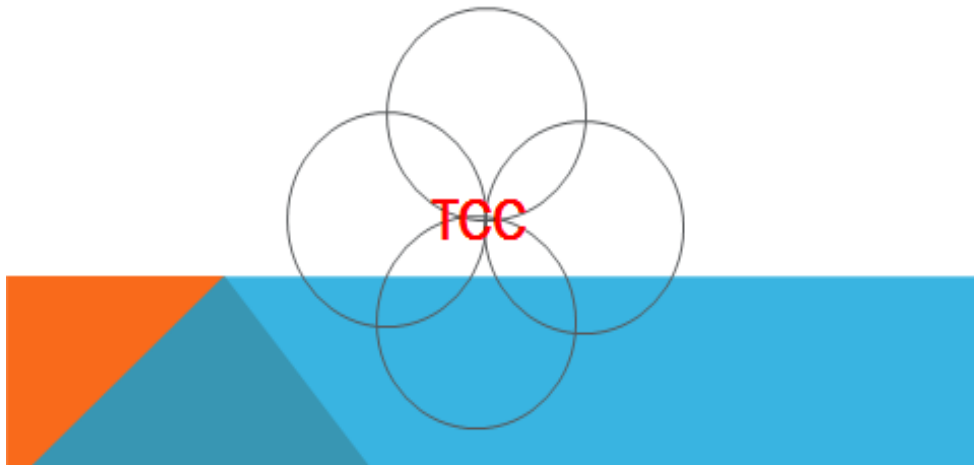

Possible examples of topics, officially included in the curriculum in different countries:

- Health and Hygiene;
- Housekeeping;
- Road education;
- Entrepreneurial education.

Satellization

It is one of essentially multidisciplinary, an important topic within a subject open for an integrated multi-perspective, with input from other relevant disciplines, which temporarily turns the satellites of the main discipline.
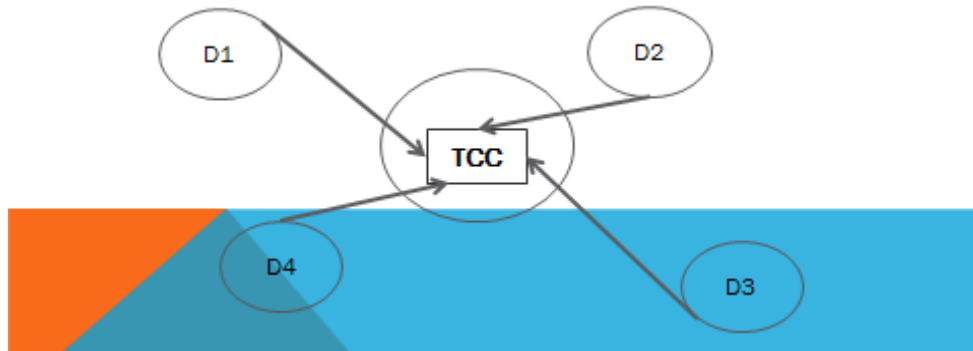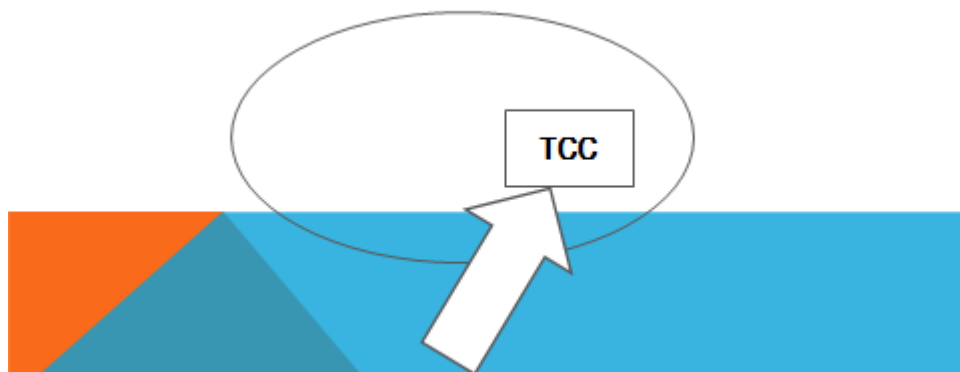
Examples of themes that fall into this category:
-   Visual arts.

The insertion

Assume the appearance and introduction of themes nedisciplinare scholar curriculum or in principle can not be directly assigned times to allocate the origin of classical subjects studied in school.

Examples of themes that fall into this category:

-        Education for media

And for comparison - A model for integrating cross-curricular themes in education in the Netherlands. (Mandatory cross-curricular themes are incorporated in extracurricular activities, which contribute to "forming a unitary image of reality").
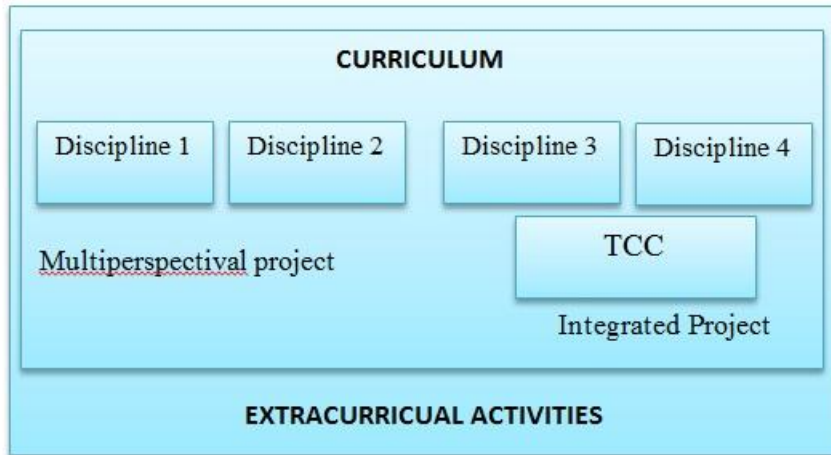
Within a modern, multi-disciplinary approach and interdisciplinary science base and ensure its efficient on. Interdisciplinary perspective involves addressing complex phenomena and processes, contributing to "forming a unitary image of reality", to "acquiring a uniform methodology approach to reality" (Antonescu). Human climate is specific schools that students perceive as true learning communities where they feel free to interact and to learn from the experiences shared in common with other students. Self-discipline and communicating successfully replaces rules and control. Atmosphere is democratic channels of communication open and welcomes any interests and needs of organization members.

Management lesson helps us in this regard by creating an open educational space within which "we have to do only with the transmission of a given curriculum and prefabricated building but especially with its daily and negotiated." (Păun, 2002, p. 21) Among the many realities of this world there is one that may be regarded as reality par excellence. This is the reality of everyday. Its privileged position entitles the title of supreme reality. (Berger & Lukmann, 1999)

Conclusion

Transdisciplinarity – It requires an integrated approach to curriculum by focusing on problems of real life, pe important issues as they appear in everyday context, with a focus on identifying solutions to real-world problem solving, in order to develop *skills for life*.

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