Meta-Transdisciplinarity and Education

“It is with complete availability that I give myself wholly to life: in mind and spirit, with critical thought, emotion, curiosity and desire, whilst in the same way, I learn to be myself in relation to others. Beyond this, I also give myself to the experience of acknowledging and accepting differences without fear or prejudice, thus learning to get to know myself better and building upon my profile…

(FREIRE, P.; 1997: 129).

Some questions about education and training models, and current researchers.

In this globalized world, we live in an important age of Educational Reform, which is linked (as in other historical ages), to economic, political and socio-cultural changes. Presently underlying these changes and reorganization, there are a range of extended possibilities and alternatives (educative, professional, personal, affectionate, spiritual, etc.), which people have to choose from. These choices also lead to issues that people and society have to face.

Hence, as most of these educational and training models, developed at an institutional level, are still far removed from the essence, and the true scenario of life, as well as one’s preparation to live it, it is essential that these educational reforms propose profound changes in relation to the educational and training models that we have today. These models are instructional and instructive, or rather, they rarely focus on the complexity of holistic and dynamic training, which underlies the constant evolution of life in life, and for life (Morin, 1980). These are models which essentially break with the ties between speech and action, and in which the various levels of reality are hardly combined, namely in what concerns the (inter) personal, social, group and institutional levels of reality.

These are educational models which essentially correspond to applied sciences models, and merely consider articulating models of reflective and professional academic practices, which include the experiences that continue to distinguish between the consumption of knowledge in relation to the production and experimentation of diverse types of knowledge. The training of practical and reflective professionals is something that is still a novelty in our institutionalized

educational reality.

Economical, technological, political, social and cultural dynamics, require a certain degree of urgency in the development of global and integrative attitudes and skills, in order to face the unknown viable that Freire has presented us with. They are challenges which require profound reforms in the educational systems in this XXI century.

Thus we raise the following issues/questions: The individual in training, or the training of the individual? What type of training? Who is going to train the trainer? What kind of educational approaches are to be used? How can we conceive and put into practice the profession, craft or science, whilst maintaining awareness of the need to not separate nature, society, culture and knowledge? Does training that develops the outlook of the institution impose itself upon the existing training? Are answers to vital needs and interests left out of institutional training?

If we start from the idea that these challenges can't be disentangled from the pre-established need for transdisciplinarity and a perspective of complexity, we raise the following issues: How to break from the inherited paradigms in order to recreate other perspectives? How do we implement and work from actions that incorporate transdisciplinarity and complexity? What kind of strategies have to be sought out to be included in the analytical and reflective processes of the experiences gained through practice? How do we build networks of co/creation and co/construction of knowledge to share, collectivize and most importantly, to combine learning, experiences, strategies, etc.? How do we analyze all that happens within these networks of co/ creation and co / construction of knowledge?

And if education doesn't work, because we have an educational system that prioritizes the training of specialists, we would have to recover older practices and recreate others, aimed at a science that touches people's hearts to become citizens of a globalized world.

The XXI Century presents us with challenges and opportunities of transdisciplinary learning

It is through transdisciplinarity that we are presented with a great challenge and opportunity for learning through the combination and dialogue between different subjects and life. We must bring meaning to the development of broader outlooks and the inclusion of dialogue in constant evolution, where the knowledge of various

subject areas makes room for the valuation of limits, complexities, complementarities and opportunity for interaction and/or the combination of various practices, in exchange for wisdom in relation to different perspectives, experiences and knowledge.

Academic skills are the priority that we address in relation to other sources of knowledge and practices, and it is on these that we count on to break with hierarchal and organizational limitations of obtained knowledge, thus bringing it closer to the practice, experience, and everyday life, through the processes of self /hetero reflection, self and hetero/training, broadening of horizons, dialogue, self/reflection, action, appropriation and developing of knowledge at a variety of levels (theoretical, experiential, existential, practical and others) that we acquire throughout life in experiential and practical ways. These processes need environments and a collective in order to develop. For it is through interaction that people learn not only from others but also to develop a greater knowledge of ourselves and the world around us.

The beginnings of the transdisciplinary perspective

The transdisciplinary perspective reached its height in the 90s, becoming key in providing answers to the complexity of the world we live in.

Transdisciplinarity is understood as a way of thinking, analyzing and acting upon and in conformity with the reality that surrounds us, combining knowledge and experience with life. This conception also aims at providing answers to various social problems that require different objects, thus reflecting a broader and global view of “humanity-nature”, whilst also considering that the disciplines that study these types of relationships be separated by specific methods or even aim to reach the unification of the sciences in a uniform pseudo-sincretism.

The fundamentals of the transdisciplinary perspective

Transdisciplinarity has been founded on the gnoseological principles of complex thinking, attempting to advance debate and plural or inter disciplinary discussion. Some of these conceptions (Bateson, Foerster, Heisenberg, Goel, Kunhar, Maruyama, Nicolescu, Prigogine and Shannon, among others) may be found within reasoning about the complexity which has helped us understand some epistemological conceptions.

These authors have contributed to knowledge of different perspectives, but in this case, we come back to Nicolescu, which is one of the main defenders of transdisciplinarity. This author claims the need to create a framework for reasoning which integrates scientific, social, cultural and spiritual analysis, in order to not only understand the present world but also moderate its evolution. For him, whilst differing, the term transdisciplinary derives from interdisciplinarity (Nicolescu, 1993).

In a last few years, the term “transdisciplinarity” is associated with training at various levels, either to refer to a socio-interactive, reflexive, and paradigmatic transdisciplinarity (Paul and Pineau, 2005) or an educational and eco-educational outlook (De la Torre, 2006), etc. This leads us to understand that scientific, cultural, social or spiritual knowledge includes: hibridisation, reflection, heterogeneity, nonlinearity, transdisciplinarity, etc.

Therefore, this knowledge extends beyond the realm of a discipline, for it is through the transdisciplinarity that sense is made of the development of theoretical structures, methodologies, practices and current research. It is through the recognition and expression of the limits of each discipline, that we gradually reach transdisciplinarity and the complexity of the different realities that we are exposed to every day.

Science and the meta-transdisciplinary perspective

Based primarily on Morin’s conceptions, we understand that a science that is understood from this meta-transdisciplinary perspective tend to establish itself as a science that helps us to live differently, or to survive in a complex world. Is one that can prepare people for life with cosmic-cultural sense, which emerges spontaneously in their natural life. This science must be conceived as one which integrates knowledge which is both anchored on error and truth or accuracy. It should also be understood a rationale that combines distinct mediation processes, so as to clarify the object of study, considering different types of knowledge which stem from art, literature, poetry, meditation, or other particular means of constructing the world through channels that allow for understanding of the human condition within love.

Thus developing a culture of being, an ethic of human understanding from human uncertainty. A science that proposes that the individual fit the events of the his/her life and the world into a context and a history that may contribute to reconciliation

and integration of life. This is not easy to achieve and requires significant challenges.

The Subject-Object relationship within meta-transdisciplinarity

The meta-transdisciplinarity perspective requires knowledge created and constructed from a dialogical approach including action, experience and theorization that combine, intermingle and mutually support the questioning needed in recreation and reconstruction. It is from this perspective that we must develop a production of meaning that occurs when it is possible to understand a situation and a problem from different angles. If we are to aim at developing a work which is creative and generates development of life meaning, the involvement of a complex subject in this cognitive act is always present.

Especially within the human and social sciences, as well as biology, quantum physics or other sciences and experiences, meta-transdisciplinarity makes it possible to keep a breadth of options open with regard to the relationship between the subject and the object within its own universe. This implies the recognition of the said individual in the cognitive act, and the subject involved in permanent training and in transformation throughout life – set upon complex cognitive dynamics, equally including sensations, experience, imagination/intuition as the reason" (Paul, 2005:6). A world in touch with experiential inter-understanding.

Combining meta-transdisciplinary knowledge to rewrite our life and the world in evolution

The limitations of meta-transdisciplinarity become minute in relation to combining types of knowledge (empirical, intuitive, imaginative, eco-training, anthropological training, the conscious and the unconscious, poetic sensitivity or other types of knowledge), giving rise to a wider understanding of individual and universal evolution, which contains us as people, and contributors.

Therefore, action, theory and experience are bound rhizomatically in various types of knowledge- knowing how to do, and knowing how to be, which will support the emergence and production of meaning-making, whilst the other sources of knowledge that include research which brings answers to socio-cultural, economic, and educational situations.

A meta-transdisciplinary stance implies the creation of spirals which may be

positioned at the centre of conscientization, abstraction – development and practical approaches that propose to develop the relationship between imagination and creation, the singular and the universal, thus generating different levels of reality. This also implies a proposal for the development of auto, hetero and eco-training (Pineau, 2000), in order to bring meaning to the building of identity and social construction at various levels, which will contribute to the individual's development.

People enrolled in training and/or educational models are supported in building awareness of their identity's configuration and their existence. This is argued by various authors Barbier (1990) focusing on Cross-sectional Analysis and Existential Action, as well as Josso (1991, 2001) and Pineau (1983, 2005), who argues in favour of autobiographical training/research. These authors propose educative models aimed at the existential/social transformation of the individual in a process of metamorphosis within hetero/training/nomination and within auto/training/nomination, as well as *López Górriz's* (2007, 2008) autobiographical training model, based on meta-transdisciplinarity and proposing a new reorganization and reconstruction of the individual. This implying the study of the following dimensions: empirical, introspective, emotional, existential, psycho-social, relational, cognitive processing research, narrative communication, among others.

*Y algunas experiencias desde esta perspectiva meta-transdisciplinaria, que conlleva concebir a la educación como un fenómeno integral, son las llevadas a cabo por Francisco Gutiérrez y diversos equipos: "**Núcleo Generador** como práctica pedagógica nace durante el curso del Lenguaje Total en Oaxtepec (México); **el Texto Paralelo** como forma de expresión de lo aprendido; **la Mediación Pedagógica,** la promoción del aprendizaje es la primera regla de oro del proceso educativo; **el Doctorado en Educación."***

This advances : "*the self reconstruction of the individual, for as the process is developing in a dialectical way between destructuring and restructuring, a remodelling of self is achieved, generating the strengthening of the auto in relation to the hetero, thus reaching a key consolidation of the individual. This, being the reason why the model is considered a bringing together of the most intimate and existential with the theoretical and conceptual, whilst also considering research and social aspects. The model is understood as an important present and future projection*." (Lopez Górriz, 2008).

Some training, educational and research models are put into practice within this

meta-transdisciplinarity, and are also present in our educational practices today. They develop open and rhizomatic relationships between transdisciplinarity and education, which makes a new game truly possible, and enables the emergence of a place for educational processes and educationist and trainee roles, which intersect through an ethical and political vector that co-implicates the entirety of the auto/training, as it is ever existent, both for men and women. This becoming a dialogical relationship with others and the world, in a perennial movement of autonomy and freedom in life and in history, in which life transforms itself, and is re-written through itself and the conditions which have made it possible.

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