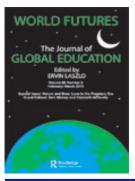
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A NEW EDUCATIONAL PARADIGM FOR EVOLVING DEVELOPMENT

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Despite considerable attention to the need for systemic education for a new society, it is surprising to note how little research has actually been conducted in this area with transdisciplinary approach. Besides, there are many papers about new educational approaches but they are focused on a specific level, for example on higher education. Very little has been done in terms of a systemic and comprehensive approach capable of guiding human development from preschool to postgraduates studies—and beyond. This paper has two purposes: (a) first, to articulate the theoretical framework of a new educational paradigm that responds to current needs of society and that integrates evolutionary perspectives on cultural and human development; (b) second, to suggest a research agenda that may be followed in the future to expand our knowledge base in the new educational paradigms area.

KEYWORDS: Humanistic philosophy, systems theory, andragogy theory, pandragogy.

It is undeniable the need for educational models with a systemic focus that go in accordance not only with the characteristics of our social reality, but also in accordance with the constant and inherent changing characteristics of this social reality. What are the core needs of such society? Although there are many answers to this question, one comprehensive answer, Without a doubt, is the very meaningful and urgent need of our modern society to become sustainable. It is as if the world is arriving to the stage where it hardly needs to show efficient planning, efficient assessment and efficient replanting of its actions, always having in mind what the close and far result of its actions could be. In order to perform this as a society it is necessary that we as individuals get to do so. Thus, now, the question to answer is What

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are the core characteristics people should have? After this, the authors agree with Milbrath (1989) who says that what people need to develop in a sustainable society is literacy, numeracy and ecolacy (taking this last as "a working understanding of the complexity of the world . . . a habit of mind that features more respect for nature's intricacies . . . " p. 20).

So it is towards the fulfillment of the already mentioned needs of society, as well as the fulfillment of the characteristics of people for this wished and needed kind of society that a new educational paradigm shall point out. Following, we present what is our vision of education.

The educational aspect (both formal and informal) of human life is considered to be a process of constant development, which extent occurs from birth to death. This process fulfils or builds up, and gets value as a product of the multiple interrelations and its purposes or meanings, among the different social and personal systems. As Laszlo and Laszlo (1997, p. 5) assert ". . . social systems in general, and human activity systems in particular, can be described as a function of their degree of purposefulness in terms of the role of human values in concrete circumstances."

Besides, in this paper, learning is being taken from an evolutionary perspective. As Laszlo and Laszlo (2002, p. 409) state, "to look at development from an evolutionary perspective involves making explicit and embracing the values, perspectives, assumptions, and knowledge required to move human societal systems to an ethical social innovation phase." It is the purpose of this document to articulate a theoretical framework as a new educational paradigm according to the needs of society. In this proposal, education is considered under the meaning of a holistic education. According to Miller (2000), "holistic education is based on the premise that each person finds identity, meaning, and purpose in life through connection to the community, to the natural world, and to spiritual values" (p. 206). The main idea of this new educational paradigm is to develop a holistic vision among the existing approaches that would encompass the educational phenomenon, from infancy to adulthood. Figure 1 represents that the continuum of education is composed by three constant elements, which act always in an equilibrium at any learning experience. The proposed basis for a new educational paradigm are: (a) the Humanistic Philosophy, (b) the premises of Pandragogy, and (c) Constructivism.

THE HUMANISTIC PHILOSOPHY

Educational philosophy studies the language of theory as well as what the educators do by analyzing the conceptual clarity that justifies both theory and actions. In other words, the philosophers of education analyze discourse and educational practice (Moore, 1999). Because of its balanced focus between theory and practice, because it allows making sense of activities, and shows consistency between 'saying' and 'doing,' Moore's proposal has been selected as the basis for defining our position. Since, according to him, without a theory to follow, acting cannot be labeled as practice. Rather, it would just be behavior without direction. Based upon the previous definition of educational philosophy, now it is briefly described how humanistic philosophy justifies discourse and educational practice, which, according to the authors, appropriately orients the ideas and activities towards the required state of the student.

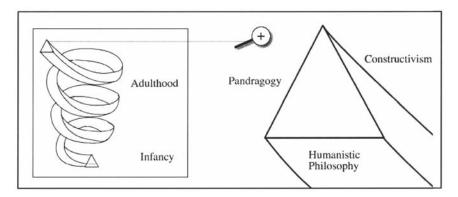


Figure 1. Whole continuum of education along the human life span and its foundations.

Outlined here are some premises of education with humanistic sense. Knowledge is a process of construction and self-construction, it is the cultural formation by which the individual, upon observing himself or herself, creates the world of culture and, through experience, recovers himself or herself as an enriched human being. The common denominator of the humanistic perspective is, according to Yurén (2000), to consider human dignity on one side for the criterion needed to determine principles, norms and values, and on the other side, as the horizon toward which human actions shall tend.

If human dignity is at the same time criterion and horizon, the question now is how to achieve it. Porlan (1997) says that humans go on making themselves. The condition of their existence is to form and integrate themselves. Formation is neither an essence nor a result, but rather a continual historic process of self-configuration and social integration. In other words, human dignity is an ideal, and because of this one can get closer and closer through a continual process of self-creation. The learner, says Yurén (2000), tends to self-create, due to the need for freedom, conscientiousness, sociability, and universality, which all increase as they get satisfied.

Based on these premises, it can be said that a humanistic education is one whose ultimate criterion and horizon is human dignity and to reach it one must fulfill the values that contribute to satisfy the need for freedom, conscientiousness, sociability, and universality. Yurén (2000) proposes five characteristics of the educational process with a humanistic sense:

- Generate the didactic-curricular conditions that enable the learners to build their personality and their own life project as free and responsible individuals who respects the other's freedom and opposes all forms of domination;
- Provide the weight that enables the learners to elevate their level of awareness and self-control, encouraging in them amazement, curiosity, the will to discover, and the capacity to interpret, explain and criticize;
- Support the learners to develop the competencies that allow them to interact communicatively and cooperatively with others, in order to understand each

other, coordinate actions that allow problems to be resolved, satisfy collective needs and develop affective relationships.

- Promote the creative participation of every learner in the production, reconstruction and transformation of culture; and
- Provide contributions that enable every learner to consciously build up their own identity and that of their community, recognizing others as well as themselves as members of humankind and part of nature.

By integrating previous concepts, it can be stated that the goal of humanistic education is the maximization of integral development human beings, as professionals and as constructive members of a society from which they benefit and in which they serve.

To complement the humanistic educational philosophy, the authors sought a theory that would allow the design of holistic learning conditions that would encompass the educational phenomenon from preschool through the stage of continuous learning in educational environments.

THE PREMISES OF PANDRAGOGY

In order to get a better understanding, the premises of Pandragogy as an educational proposal appropriate from childhood to adulthood, the models of traditional pedagogy, and those of andragogy will first be described.

The pedagogical model gives the teacher a total responsibility for making all decisions about what will be learned, how it will be learned, when it will be taught and if it has been learned. In other words, the professor leads the process, and the only role of the students is to follow his or her instructions.

The traditional pedagogical educational process can be characterized by an orientation towards results that can be seen and quantified, and these are based upon a deficient model that evaluates learning based upon standards of performance and schooling.

Differently, in the andragogical model learning—rather than teaching—is more important. The knowledge of the group, including the facilitator, is constantly being developed through joined planning, application, and evaluation of learning. With this method, it is promoted that the facilitator as well as the participants can develop new ways of thinking about what and how they are learning.

Based upon the evolutionary systems theory and the andragogical theory, the development of a discipline called Pandragogy is proposed in order to enclose the whole continuum of education along the human life span. Pandragogy would help both, individuals and groups to learn by creating their own meanings promoting lifelong learning, community, and sustainability. Based on Knowles (1990) and Reynolds (1997), the main characteristics of the above approaches to teaching and learning are depicted in Table 1.

In the Pandragogical model of education, both the process and the results are important; that is to say, learners and facilitators are cocreating their reality through participation based on their thinking and their actions.

Table 1
Assumptions of Pedagogy, Andragogy and Pandragogy

Dimension	Pedagogical	Andragogical	Pandragogical
The learner	Learner is dependent upon the instructor for learning.	Adults have a deep psychological need to be self-directing.	Learner is a change agent for creating sustainable communities and can learn in both guided and self-directed ways.
The teacher	Teacher assumes full responsibility for what is taught and how it is learned.	The role of the teacher is to facilitate the learning process.	Facilitator has a co-responsibility to create conditions and propose tools and procedures for inviting learners to discover their capabilities to learn.
Readiness to learn	Students are ready to learn whatever school says they ought to learn.	Adults become ready to learn something when they experience a need to learn it, in order to perform more effectively in some aspect of their life.	For learners any possibility to improve and to evolve is likely to trigger a readiness to learn.
Orientation to learning	Learning is a process of acquiring content of prescribed subjectmatter.	Learning is organized around life/work situations rather than subject matter units.	Learning is organized around sustainable development of society.
Motivation to learn	Learners are primarily motivated by external motivators, competition for grades, and the consequences of failure.	Adults are motivated by internal motivators: Self-esteem, recognition, better quality of life, self-confidence, self-actualization.	Learners are motivated by internal motivators but also by the next social motivators: Transformation of social realities to increased social and environmental well- being.

CONSTRUCTIVIST THEORY

Constructivism is a theory consistent both with humanistic philosophy and with the premises of Pandragogy. It considers the socializing character of education and its function in the individual development of the learner. It also takes into account the social dimension that considers the participants as members of a community, and who thus participate and become jointly responsible for their objectives, for the development of processes and the results that derive from these, as well as holding adequate regard for diagnosis and taking decisions at any phase of the teaching-learning process. In other words, it can be suggested that constructivism is a perspective that emphasizes active participation of the learner in order to understand and make sense of the information.

The social constructivism approach is based upon the premise that learning is inherently social, and is integrated into a particular cultural environment; because of this, in order to design an educational process, it is necessary to consider the norms of the group and the identity of the individual (Woolfolk, 1999). Besides, according to Porlan (1997), constructivist theory is also interested in studying the influence of situations, beliefs, expectations, and feelings of those involved in the learning process.

DEVELOPING A RESEARCH AGENDA

What follows is a suggested research agenda whose main purpose is to validly contribute to the construction of the proposed new educational paradigm. In accord with the ideas already presented, there are several areas calling for research. Since the global objective embraces the articulation of a theoretical framework, a wide and long scope vision must be kept. This is meant to be the formulation of a developing new paradigm, so we shall not wait longer to give a good review to what has been done in order to well plan what must be done from now on.

First of all, it is suggested to do research on the fundamentals. That is, we must get sure we are working under an systemic world vision, which should be congruent with a Humanistic Philosophy foundation, which in turn must support the theoretical approach (constructivism in this case, as it has been explained before in this paper). This needs to be so because, up to now, there is not really a well-constructed theory that can give account on educational phenomena as a continuum whole, embedded in social needs in its immediate context, and informed by social evolution at the widest scope. Research on the fundamentals should assure the desired orientation of the rest of the activities to be done. In other words, it should assure the anchorage to system science and to sustainable evolution of a new paradigm.

Second, andragogy, even when it has proven to be empirically successful, it has not yet been proven to be quite a science. Rachal (2002), along his interesting article questioning andragogy, quotes what Pratt (1993, p. 21) asserts: "We cannot say, with any confidence that andragogy has been tested and found to be, as so many have hoped, either the basis for a theory of adult learning or a unifying concept for adult education." So it seems to be really urgent to develop research on the following lines inside the logos of evolving education along the life span, what we are calling "Pandragogy":

It is also recommended to conduct research on the following areas:

- Research in order to develop the three basic theoretical assumptions of Pandragogy, already mentioned in this article.
- Research on the definition of every one of the different educational levels Is it
 going to be defined by school grade, by sort of context, by kind of delivering
 modality, by age of the participants, etc.? What are the criteria to be followed?

- Research on clearly defining what procedures constitute educational practice for each one of the different educational levels.
- Research on the appropriate methodology that needs to be used, in order not to loose congruence inside the desired theoretical framework.
- Research on the learning assessment procedure for the different educational levels, needs, and objectives of the participants.

Summarizing, what we are suggesting is a research agenda on different dimensions and needs inside a wide educational context as well as on the structure of the scientific framework that supports it. It is a call on the ever present need to guard and take care of basic research as well as applied research in order to better accomplish the goals of an ever evolving society.

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