

## **PEDAGOGÍA TRANSDICIPLINARIA UNA NECESIDAD EN TIEMPOS DE INCERTIDUMBRE**

### **PEDAGOGÍA TRANSDISCIPLINARY A NECESSITY IN TIMES OF UNCERTAINTY**

Dra. Libardo Flórez Villamizar<sup>a</sup>

<sup>a</sup> Universidad Pedagógica Experimental Libertador Instituto Pedagógico Rural Gervasio Rubio, Grupo de investigación Didáctica y Tecnología DITE  
Venezuela, libardoflorezvillamizar@hotmail.com

Recibido: 25-01-2015 / Aprobado: 06-06-2015

**Abstract:** Society in recent times is characterized by daily dealing with changes, transformations, advances, and innovations; that in one way or another impact on man and each of the sectors that make up the social network. From there, the interest to reflecting on a fundamental aspect from which emerges a cluster of elements that could generate contributions for meaningful development in society; as it is the Trans-disciplinary Pedagogy with a broad, deep and epistemic look that is the basis of an education that understands and perceives the current dynamics that serve to prepare and train the men and women of the future that can be successfully developed in times where uncertainty takes over humanity and knowledge is confronted with new styles of thoughts and a rethinking adjusted to the demands of contemporary man. It is time, to go beyond every day to establish a dialogue between knowledge, about overcoming the barriers of wisdom; where pure knowledge loses its validity and absolute truth trembles before the changes, challenges, and transformations of humanity; This way, the pedagogical action can be resized through a Trans-disciplinary Pedagogy.

**Keywords:** Trans disciplinary Pedagogy, Times of Uncertainty, Social Layout.

## INTRODUCTION

The realities of today's world are increasingly complex, multiculturalisms and technological advances are increasingly incessant; the society find in its way obstacles, vicissitudes, changes, advances, and transformations and, for this it is necessary to prepare the man in all its integrality; perhaps in any corner of the world where you are, it is perfect target to impact all those aspects in your personality, some positive, others negative and many improbable; It is time to take on stakes and challenges to prepare society in general to understand, perceive and to adapt to the multiple scenarios that daily life offers, because:

We have bigger houses and smaller families. More conveniences and less time. We have more study, but less sensitivity. More wisdom and less judgment. More experts, but more problems. More medicine, but less health. We have multiplied our possessions, but we have reduced our human values. (Carlin G. Paradoja de Nuestro Tiempo, HTTP: // [www.Pensamientos.Com.mx/paradoja\\_de\\_nuestro\\_tiempo\\_por\\_george\\_carlin.htm](http://www.Pensamientos.Com.mx/paradoja_de_nuestro_tiempo_por_george_carlin.htm) consult July 2015)

Reflecting on the social structure, scrutinizing, analyzing and de-constructing the multiple contexts (political, economic, educational, cultural, among others) that make up society is not easy at all, especially when uncertainty is added as a phenomenon that impacts on the man at any social level and stratum. It is the time to deconstruct, analyze and rethink the various processes that daily condition, surround and demarcate the action of the human being in their environment; from there, the interest in opening roads, paths and windows to visualize actions where pedagogy and education “assume the protagonism that corresponds to them and that so many needs the country, they must begin by believing in themselves, to discover the importance of their mission and Commit to their own transformation and to the gestation of a quality education”. (Pérez, E 2000:129). Therefore, it is sought that it becomes the basis to generate changes, transformations, and advances that go along with the events that daily arise in the global context.

Lately it insists on the stakes and challenges that the changes and transformations leave in its wake so that society visualizes an action according to the demands of the contemporary

humanity and thus face what some scholars have called the “light society” (terminology coined to Rojas E, 1995 in the work *Light Man, A Life without Values* cited in Botero 2001: 72). “Where everything is light, soft, decaffeinated, light, airy, weak and everything has a low caloric content; we could say that we are facing the portrait of a new human type whose motto is to take everything without calories”(ibid). With the intention of counteracting that vision is that, the “Trans-disciplinary Pedagogy a Necessity in Times of Uncertainty” arises. Not as a utopia or in its defect as a panacea, it is considered as a flexible, creative, innovative and generating approach that allows it to adjust to the realities that surround it and to the experience of those who are the protagonists and/or actors that apply it.

In this sense, a structure framed in fundamental aspects such as: "towards the bottom of the matter" is presented, there is a scenario that demarcates the causes and effects of why it is necessary to propose an approach adjusted to aspects that overflow the traditional within the pedagogy and its impact on the teaching action.

Following the “theoretical foundation” is presented, starting from an ontological vision, passing through an epistemological vision, gnoseological vision, an axiological vision, to a trans-methodological vision. Showing it its applicability and contextualization within the pedagogical scenario that perhaps for many is impossible to achieve but for others a model that can understand who the current generation who will obtain knowledge. It is important to emphasize those theoretical postulates that demarcate the actions of a Trans-disciplinary Pedagogy.

Then is the “characterization of the trans-methodological process” from a view of the dialogue of both empirical and scientific knowledge that defines trans-knowledge as an innovation to the way knowledge is apprehended and understanding of meanings.

Next, the “Articulation of trans-disciplinary pedagogical actions” is established. In this theoretical part, some actions that can be considered in the pedagogical process in the teaching activities and that become tools for a teaching adapted to the changes and transformations of society. Finally, it is shown as a culmination of an epilogue that

contains the details that arise in terms of the approaches outlined above.

The worldview of today's man over the real world has increasingly been marked by uncertainty; society often shows doubts or some perplexity about the changes, advances, transformations, stakes and challenges that are experienced in all fields of society (social, political, cultural, economic, among others; stopping to look at these facts induces reflect on events that have marked history in terms of science and its applicability that have been implemented for decades and that, thanks to its deepening, have led to other scenarios, for nobody is a secret the disappearance of the frontiers of knowledge, virtual reality, advances in medicine and perhaps even the most recent discoveries such as education in the cloud, artificial intelligence, synthetic biology, and the Higgs Boson, the latter for some called as the particle of God, among others. They become the center of attention of scholars and curious about the daily events.

Facing such events, modern man is not unknown and it is there where pedagogy is required to fulfill its primary function to form and train for life and to perceive and understand the dynamics that surround it;

from a dialectic of knowledge where everyday wisdom complements scientific knowledge in terms of being able to understand it better for its applicability; that is, this aspect is visualized in the procedural part of the teacher.

The pedagogical action must be pertinent to the environment, adapting the planned contents to reality in order to make them as functional as possible, taking full advantage of the knowledge of the student, the teacher and the members of the community through their cultural and experiential contributions, which guarantees a solid and significant knowledge.

The knowledge must be correlated with the expertise and it is worth mentioning those that Ríos, C, (2007: 23) points out “All beings have the faculty of knowing and deepening in relation to what is known in their cognitive function that is carried out through a dynamic process”. According to this concept, it is important to point out that a deep, critical and thorough analysis of what is being considered in today's society is required and combined with what is established in the various disciplines to generate new learning that will allow the men of tomorrow to train

and they will have the responsibility to guide the trails of the nation.

Therefore; Trans-disciplinary Pedagogy in a complex, comprehensive and/or global context becomes an approach to make the essence of education a flexible, critical, creative, and innovative model with firmness and conceptual solidity where knowledge is conjugated. The knowledge, truths and beliefs, among others, and adapt and raise new scenarios that allow "understanding the set of manifestations that show a way of life in correspondence with the culture reached by a society in a certain time" (Ugas, 2005: 110). Where the person who serves as a teacher or counselor of the educational process understands the reality, the environment, and the cultural and experiential baggage of the main protagonists of the learning process. In effect, this is achieved under a process of deconstruction (Derrida, 1993) for a rethinking of the pedagogical action in the reconstruction of knowledge, and in the apprehension of knowledge in favor of a favorable implication for an optimal development before the existing realities.

That said, the trans-disciplinarity must be conceived as the organization of knowledge that exceeds the disciplines in all their characterizations,

conceptualizations and theories; that is, it surpasses the various disciplines and transcends the frontiers of wisdom, generating appreciations about complex knowledge and, in this case, going deeper into the pedagogical process in which diverse elements of different disciplines are immersed. This leads to rethinking the actions of correlating and combining content of subjects and objectives to implement from the transversality and complementarity of knowledge, forming and training free man for a development in accordance with the demands of today's society; It is time to contribute to the transformation and change for a better education. (Morín, 2001).

### **Theoretical foundation.**

Theories, postulates and/or theoretical foundations are the fundamental basis of any proposal or model to follow. In this sense, it is pertinent to define some theoretical-conceptual visions that demarcate the bases or foundations for this proposal. It is thus, that the ontological vision is first considered, understanding that ontology is in charge of giving a vision of being with the reality. Likewise, it presents the epistemological vision that is framed in the study of knowledge its genesis, its procedures, and its

applicability; within the same idea, the gnoseological vision that will allow defining the theories in which the present theoretical approach is framed is shown. The axiological is attached to this vision since values should not be left to one side but on the contrary they should be present in all pedagogical actions considered as a transversal axis and to close this theoretical section we can see the trans-methodological vision that indicates the way forward for the realization of an approach framed in the dialogue of knowledge that involves the apprehension of knowledge

### **Ontological vision:**

From the ontological perspective it is important to specify aspects of marked importance in the development of the human being related to three planes such as being - to make this first plane is linked to the daily actions of man in front of the various elements that emerge from everyday life; joined to it, there arises another plane that is reflected in the tasks of ontology and is the feeling - thinking; in effect, this plan shows that from the feeling one thinks of a diversity of aspects, some positive and others that can be improved, but all in search of the guarantee

of a well-being according to the human being in society.

The third plane focuses on knowing - coexisting; it is nothing more than a sample of personal traits of the man that perhaps focuses its action to greater knowledge, looking for thousands of ways to coexist in a complex social context marked by uncertainty and that is where a re-organization for a good adaptation before the demands of society. In fact, the previous plans are ontologically complemented by three notions, namely "overcoming the constituted", which is framed in that it is necessary and pertinent that existing knowledge must be overcome by adding everyday knowledge in order to generate new solid knowledge based on the dialogue of existing knowledge.

The binomial "transversality - trans-disciplinarity" joins the previous notion in this aspect, it is significant to note that transversality allows the correlation and conjugation of knowledge in this case supported by the various elements (conceptions, characterization, and application) of the disciplines with their impact in everyday life. Likewise, the notion "Process of Inter subjective Articulation" is presented where it is evident that from the interaction of

previous knowledge, new knowledge is generated and from there, a creative dialogue of knowledge is revealed in order to reinvent the processes of knowledge apprehension. "This requires us to place thought in reflective tone and reading in participatory rhythm to rethink pedagogical theories and educational practices in their intentionality, argumentation, and meaning". (Ugas, 2005: 146).

### **Epistemological vision:**

The knowledge, is a factor that has been present since the beginning of humanity and probably if it is extinguished, it will be extinguished with it, this element is fundamental for individual and group development, the progress of the peoples is also due to this; hence, the importance of combining the meanings that arise from this as a basis in the formulation of notions that allow us to theorize about a complex and integral pedagogy that is called on this occasion trans disciplinary pedagogy. Within this vision it is appropriate to point out that knowledge is combined with knowing what results in knowledge, understanding that it is the product of everyday knowledge framed in beliefs and scientists visualized in the truths detached from the method. Currently the social

sciences achieve that alloy and it is there, where transdisciplinarity appears as a model or approach that allows previous and experiential knowledge to be complemented with the scientific knowledge of the various sciences and disciplines and can generate an invention and innovation loaded with creativity and adaptability to the different scenarios that today's society faces and that is locked in "complex thinking that is not the opposite of simplifying thought, but integrates it; if the paradigm of simplicity requires separating and reducing, the paradigm of complexity advocates gathering without ceasing to distinguish "(Ugas, 2005: 98). Elements that combine to generate new scenarios of complex learning that are strengthened with transversality and complementarity seeking the integral formation of humanity; immersed today in times of uncertainty.

The knowledge considered as the source of expertise has left significant traces in the future of humanity and that is why it is necessary to redefine, characterize and rethink the unthinkable so that knowledge that guides and leads the activities of the man in everyday life; perhaps in that complex and demanding social web. To achieve such an effect; it is necessary to include the trans disciplinary pedagogy in

it, visualize infinity of elements both conceptual and procedural which will gain space, and draw the attention of those who currently wish to achieve a knowledge adjusted to what society demands.

### **Gnoseological vision:**

Gnosiology, as theory of knowledge is fundamental in any approach or proposal that has as a north to correlate or concretize the interconnection of knowledge both daily and scientific. From that threshold it is necessary to value the knowledge that in the case of trans-disciplinary pedagogy must overcome barriers and break paradigms to adjust to the demands of today's society; that in the words of Pérez, (2002: 61) states:

The main wealth of a country lies in the levels of knowledge of its people. The most important currency to participate productively in the society of the 21st century is the knowledge or expertise that each person and society as a whole possesses.

In this sense, the intellectual collective makes the solidity of knowledge and without fear of mistake becomes the basis to generate critical, innovative and creative categories accompanied by procedures that at all times seek to satisfy the individual

and collective desires in terms of wisdom and development before the changes, advances and transformations that are experienced daily. Reason why it is convenient to consider that the trans disciplinary pedagogy focuses its attention on the theory of complexity (Morin, 2004) derived from the complex thought that according to Morín, (2004: 3) indicates:

It must be remember that we are part of a complex Eco-social system, that is, with moral and economic networks and hierarchies, where the social sciences, under the classical scientific method, have been the great "accommodating" of social phenomena to the deterministic linear approach interpreted by the classic method fitting the path of societies in a progressiveness that seeks stability, when in reality, we are governed by uncertainty.

That is why it is pertinent to be clear and present that the paradigm of complexity plays a very important role in what is complex and comprehensive education for communities, and in the case of the present proposal is complemented with what establishes the theory of action (Argyris and Schön 1990) understanding that its role lies in the organizational study of institutions, and in effect trans disciplinary pedagogy requires institutionalism and this



is linked to the theory in use that is observed in the applicability of procedures.

Similarly, it is worth referencing in this theoretical aside the theory of the image (Villafañe, 2006) being very clear that its intentionality is reflected in the iconic nature is important to consider it in the trans disciplinary pedagogy, because it focuses on what is pertinent to include in the pedagogical action all the details contained in the daily life of modern man and it is perceived that most human beings are very good observers of there the intention of including the image for the apprehension of the knowledge; since, what is seen is what generates imagination and this can promote changes and transformations according to what the current man wants.

#### **Axiological vision:**

The axiology becomes the theoretical - conceptual part that flows in the connecting thread that unites the knowledge or the knowledge of the different disciplines with the daily and experiential knowledge resulting in the strength in the axiological planes: ethical, aesthetic and logical and is So it is important to consider the values, because at present there are multiple interests where sometimes the human being forgets

the values only for personal satisfaction. From this perspective, trans disciplinary pedagogy includes the ethics of care (Gilligan, 1987). In its pedagogical action, care must be taken in the procedural part of the process of formation and training of the human being. Understanding that man must be in constant preparation requires strengthening this part as knowledge must be increased and this is achieved as the learning intensifies and as Treviño points out (2004: 25 citing Savoy 1984):

We would say that the human being is able to grow through the diverse learning that he carries out throughout his life; the man is instructed (from the Latin educate, edify), is formed (acquires form), is educated (from the Latin educare, feed) with the cultural elements that through successive learning incorporates his personality.

As knowledge is acquired, the personality is also being fed, which indicates that a complex and integral education must not lose sight of what concerns values; because these are essential food for the personality of man and this requires that from the institution a better way of life is promoted and this is achieved if the values are worked; more when it is very true that at

any stage of life is born, values are formed and raised around a better life and social welfare adjusted to the demands of society.

### **Trans-methodological vision:**

The present vision becomes the scheme to follow or, failing that, the guiding way to incorporate transdisciplinarity in the pedagogical context and for this, it is important to start from the set of meanings that exist in a given space and time. This allows concretizing the intellectual efforts in function to the events that for the moment and the place are being executed and to reach this aspect it is convenient to rely on the diagnosis of the realities that lead us to a new step to follow that is constituted in the relation of the being with the reality evidencing in this way the cultural and experiential baggage of those who are participants in the process.

Following up on this trans-methodological process, it is necessary to include the multidimensional character in the first place, considering the man in his complex cognitive structure, in the second instance assessing the discipline that is being conjugated in that dialogue of knowledge that throws as a product the process of apprehension of the knowledge and explanation of the facts when it is necessary to extrapolate, ally, conjugate

and/or correlate knowledge to rethink actions that are adjusted to what happens in society.

In effect, this trans-methodological process concludes with the confirmation of the image or symbol; that is to say, a new knowledge emerges from the rethinking of the unthinkable with the firm intention of constituting knowledge that adjusts to the changes, advances, transformations and / or demands of the current society that at any moment shows that the paradigms are outdated and require of innovation, creativity and without a doubt will approach a possible truth that does not last long; since, the barriers of communication leads us to the knowledge society.

### **Characterization of the trans-methodological process.**

The trans-methodological process is proposed in two ways; the first is framed in diagnostic research; it is necessary to specify significant elements that will make it possible to demonstrate realities with details and as a second way it is important to consider the pedagogical fact from personal understanding to collective understanding to define the ways and means of carrying knowledge. It is worth remembering at this moment that the teacher is who, considering the previous

ways, can constitute the path to follow in order to be successful in what corresponds to the procedural part.

Its main characteristics fall in creativity and innovation is necessary to rely on some sciences or disciplines such as heuristics to generate strategies that draw the attention of those who are part of the process because nowadays it is observed that some students attend for convenience, but not by vocation what hinders the implementation of the approach and sometimes hinder the pedagogical action. Likewise, the previous characteristics are complemented with the dynamics, flexibility, and concretion of the processes understanding that the latter will take into account the environment, place and moment in which the approach is considered.

In this sense, the characterization of the trans-methodological process includes three fundamental aspects that fall into the processes of deconstruction, reconstruction and the dialectic; which leads to generating theoretical-conceptual aspects that result in the creation of meanings from the construction of new knowledge according to the topic that is being developed. The intentionality of the trans-methodological process is to combine both individual and

collective knowledge to adjust to the changes and transformations that society currently requires.

### **Articulation of trans-disciplinary and trans-methodological pedagogical actions.**

The trans-disciplinary pedagogical actions are multiple in the case of the present theoretical approach is intended to deepen six (assertive communication, the tetralogy loop, into creativity, music therapy, and permanent research); which are considered applicable to the teaching action with the intention of generating options so that those who conduct the pedagogical fact can also propose and design their own mechanisms and methods to convert the process of training and training in an appropriate way for those who are interested in assuming an apprehension of knowledge in an innovative, creative and flexible way to make this process an entertaining methodology that draws attention to those who are part of the creation of knowledge from its conjugation, interaction and interconnection, thus forming new conceptual elements.

In this sense, a conceptual vision of each one of the actions considered with the intention of visualizing the path to follow

in the procedural part is proposed in order to open roads, windows, and paths for its applicability, it is significant to point out that one of the advantages of transdisciplinarity is that it does not have defined patterns but that at the moment of application of the methods whoever is the guide can take into account the aspects that consider necessary. Therefore, it will be deepened in each of the actions that are:

#### **Assertive communication:**

Nowadays it is one of the innovations of great boom applied in diverse contexts of society (educational, business, cultural, political, among others), with the intention of transmitting ideas openly, clearly and precisely respecting the opinions of others and achieving a consensus among the interlocutors. In effect, it is a process that takes care of from the visual contact, the appropriate use of the tone of voice, the respect for the ideas and without any doubt demonstrating interest in the subject that is being treated in a suitable climate of respect and avoiding at all times the conflict to achieve significant agreements in the ways and ways of carrying knowledge.

#### **The teleological loop:**

At present, the loop theory (Morín, 2001) becomes a method applicable to pedagogy; since it contains four fundamental phases for the concretion of the process in the acquisition and apprehension of knowledge. It starts from the disorder where positive and negative aspects are evident and that is where the intentionality of a new knowledge originates; which indicates that it is the point where the reconstruction of knowledge is done; going through the necessary interactions to refine the order that must be in order to achieve effective knowledge for those who are part of the organization, the latter becomes the goal to be achieved is observed so that everything has as its effectiveness and effectiveness organizational . It is used in trans-disciplinary pedagogy to provide the necessary mechanisms that seek at all times the reconstruction of knowledge and then be extrapolated to similar situations with similar characteristics and elements.

#### **The Onto-creativity:**

The applicability of onto-creativity in the processes of trans-disciplinary pedagogy is extremely important, since there is evidence of the direct relationship between the being and the creative; understanding that it is the profound way of visualizing the self with forms and way of living in a

social context that guarantees social welfare. At all times, it is sought to awaken interest in situations that generate options to provide adequate treatment when solving and/or proposing actions for the apprehension of knowledge. The onto-creativity allows to conjugate six dimensions to know the biological, corporal, sexual, emotional, intellectual and spiritual, with the intention of bringing knowledge of each one of the dimensions to the creations of new knowledge generating meanings to constitute significant conceptual contributions.

#### **Music therapy:**

Music in recent times has managed to seize various scenarios in society is used for medicine, education, culture among others. In this sense, it is intended to apply in trans-disciplinary pedagogy with the intention of achieving concentration, awakening creativity, reflect on actions and generate new ways and ways of seeing other aspects leading to visualization so that man can face the demands of multiculturalism. Music therapy becomes a method of support for pedagogy as long as it is applied effectively; the music impacts the physical, emotional, mental and spiritual of the people and nowadays music

is used as a treatment to relieve and improve stress; more when you live in a sea of uncertainty where new things appear every day and sometimes unthinkable and for that it is necessary to form today's society is the time to establish the foundations of a future full of hopes to guarantee a social well-being adjusted to the current demands.

#### **The cyber lingua:**

The fundamental basis of cyber lingua constitutes in complexity the exchange that emerges from cyberspace Fraca, (2006: 302) "is a variety of language, a living machine, a self-eco-re-organization of the cyberspace environment within society net". It is constituted in this way with the intention of establishing a dialogue of daily knowledge with those that occur in the network society and generates new knowledge with the intention of seeking technical application in trans-disciplinary pedagogy, in this sense it is necessary to use the mechanisms of cyberspace to promote the education and training of men and it is worth pointing out one of the advances of marked innovation in recent days that fall on cloud education where many organizations are moving to train their human talent adjusted to the demands asked by today's society.

**The permanent investigation:**

Research is paramount in every pedagogical process and more when it comes to implementing in a complex context; it is appropriate to point out that transdisciplinarity requires research in the first place to define paradigms (quantitative and/or qualitative) and secondly to visualize the points where it is necessary to reinforce theoretical-procedural aspects; research becomes the basis of the process of acquisition and creation of knowledge from the environment from which knowledge is detached it is appropriate to point out that research is the basis for generating products based on that correlation of concepts, contents and/or theories that they become the foundations of new conceptions based on the dialogue of knowledge that, when it emerges, becomes part of the process of apprehending knowledge to generate new options and visions of existing.

**By a Colophons way**

The intention of the present theoretical approach is to show a cluster of ideas, notions and categories that arise from the theoretical-conceptual approaches of trans-disciplinary pedagogy with the intention of deepening in the first instance on the

preparation that should be based on changes, progress and transformations and secondly, the dialogue of everyday and scientific knowledge should be considered in order to structure a creative approach that allows its actors to rethink the unthinkable in order to structure methods and/or mechanisms to be effective, efficient and effective in the processes of apprehension of knowledge. Likewise, it is evident that theoretical foundations are based on the ontological, epistemological, gnoseological, axiological and trans-methodological vision with the intention of determining the path to follow in order to structure the bases of new knowledge starting from the conjugation and interaction of the everyday knowledge and scientists to achieve with it the apprehension of new knowledge in order to achieve new ways of understanding the dynamics that surround the current man.

On the other hand, some actions can be articulated to establish a model of trans-disciplinary pedagogy based on elements that can strengthen the ideal way to guarantee success in the different operations of an organization and / or company; In this sense, the assertive communication, the theological loop, the onto-creativity, the music therapy, the cyber lingua, and the permanent research

are considered, so that from the creation of the known solid structures can be constituted with firmness that at all times guarantee a process according to the demands of today's society. Finally, it should be pointed out that in times of uncertainty, new visions and advancement options are required to understand and understand the complex social dynamic that is a framework full of vicissitudes, stakes, and challenges that today's man faces. The worldview of today's man over the real world has increasingly been marked by uncertainty; society often shows doubts or some perplexity about the changes, advances, transformations, stakes and challenges that are experienced in all fields of society (social, political, cultural, economic, among others; stopping to look at these facts induces reflect on events that have marked history in terms of science and its applicability that have been implemented for decades and that, thanks to its deepening, have led to other scenarios, for nobody is a secret the disappearance of the frontiers of knowledge, virtual reality, advances in medicine and perhaps even the most recent discoveries such as education in the cloud, artificial intelligence, synthetic biology, and the Higgs Boson, the latter for some called as the particle of God, among

others. They become the center of attention of scholars and curious about the daily events.

Facing such events, modern man is not unknown and it is there where pedagogy is required to fulfill its primary function to form and train for life and to perceive and understand the dynamics that surround it; from a dialectic of knowledge where everyday wisdom complements scientific knowledge in terms of being able to understand it better for its applicability; that is, this aspect is visualized in the procedural part of the teacher.

The pedagogical action must be pertinent to the environment, adapting the planned contents to reality in order to make them as functional as possible, taking full advantage of the knowledge of the student, the teacher and the members of the community through their cultural and experiential contributions, which guarantees a solid and significant knowledge.

The knowledge must be correlated with the expertise and it is worth mentioning those that Ríos, C, (2007: 23) points out “All beings have the faculty of knowing and deepening in relation to what is known in their cognitive function that is carried out through a dynamic process”. According to

this concept, it is important to point out that a deep, critical and thorough analysis of what is being considered in today's society is required and combined with what is established in the various disciplines to generate new learning that will allow the men of tomorrow to train and they will have the responsibility to guide the trails of the nation.

Therefore; Trans-disciplinary Pedagogy in a complex, comprehensive and/or global context becomes an approach to make the essence of education a flexible, critical, creative, and innovative model with firmness and conceptual solidity where knowledge is conjugated. The knowledge, truths and beliefs, among others, and adapt and raise new scenarios that allow "understanding the set of manifestations that show a way of life in correspondence with the culture reached by a society in a certain time" (Ugas, 2005: 110). Where the person who serves as a teacher or counselor of the educational process understands the reality, the environment, and the cultural and experiential baggage of the main protagonists of the learning process. In effect, this is achieved under a process of deconstruction (Derrida, 1993) for a rethinking of the pedagogical action in the reconstruction of knowledge, and in the apprehension of knowledge in favor of

a favorable implication for an optimal development before the existing realities.

That said, the trans-disciplinarity must be conceived as the organization of knowledge that exceeds the disciplines in all their characterizations, conceptualizations and theories; that is, it surpasses the various disciplines and transcends the frontiers of wisdom, generating appreciations about complex knowledge and, in this case, going deeper into the pedagogical process in which diverse elements of different disciplines are immersed. This leads to rethinking the actions of correlating and combining content of subjects and objectives to implement from the transversality and complementarity of knowledge, forming and training free man for a development in accordance with the demands of today's society; It is time to contribute to the transformation and change for a better education. (Morín, 2001).

### **Theoretical foundation.**

Theories, postulates and/or theoretical foundations are the fundamental basis of any proposal or model to follow. In this sense, it is pertinent to define some theoretical-conceptual visions that



demarcate the bases or foundations for this proposal. It is thus, that the ontological vision is first considered, understanding that ontology is in charge of giving a vision of being with the reality. Likewise, it presents the epistemological vision that is framed in the study of knowledge its genesis, its procedures, and its applicability; within the same idea, the gnoseological vision that will allow defining the theories in which the present theoretical approach is framed is shown. The axiological is attached to this vision since values should not be left to one side but on the contrary they should be present in all pedagogical actions considered as a transversal axis and to close this theoretical section we can see the trans-methodological vision that indicates the way forward for the realization of an approach framed in the dialogue of knowledge that involves the apprehension of knowledge

### **Ontological vision:**

From the ontological perspective it is important to specify aspects of marked importance in the development of the human being related to three planes such as being - to make this first plane is linked to the daily actions of man in front of the various elements that emerge from

everyday life; joined to it, there arises another plane that is reflected in the tasks of ontology and is the feeling - thinking; in effect, this plan shows that from the feeling one thinks of a diversity of aspects, some positive and others that can be improved, but all in search of the guarantee of a well-being according to the human being in society.

The third plane focuses on knowing - coexisting; it is nothing more than a sample of personal traits of the man that perhaps focuses its action to greater knowledge, looking for thousands of ways to coexist in a complex social context marked by uncertainty and that is where a re-organization for a good adaptation before the demands of society. In fact, the previous plans are ontologically complemented by three notions, namely "overcoming the constituted", which is framed in that it is necessary and pertinent that existing knowledge must be overcome by adding everyday knowledge in order to generate new solid knowledge based on the dialogue of existing knowledge.

The binomial "transversality – trans-disciplinarity" joins the previous notion in this aspect, it is significant to note that transversality allows the correlation and conjugation of knowledge in this case

supported by the various elements (conceptions, characterization, and application) of the disciplines with their impact in everyday life. Likewise, the notion "Process of Inter subjective Articulation" is presented where it is evident that from the interaction of previous knowledge, new knowledge is generated and from there, a creative dialogue of knowledge is revealed in order to reinvent the processes of knowledge apprehension. "This requires us to place thought in reflective tone and reading in participatory rhythm to rethink pedagogical theories and educational practices in their intentionality, argumentation, and meaning". (Ugas, 2005: 146).

### **Epistemological vision:**

The knowledge, is a factor that has been present since the beginning of humanity and probably if it is extinguished, it will be extinguished with it, this element is fundamental for individual and group development, the progress of the peoples is also due to this; hence, the importance of combining the meanings that arise from this as a basis in the formulation of notions that allow us to theorize about a complex and integral pedagogy that is called on this occasion trans disciplinary pedagogy.

Within this vision it is appropriate to point out that knowledge is combined with knowing what results in knowledge, understanding that it is the product of everyday knowledge framed in beliefs and scientists visualized in the truths detached from the method. Currently the social sciences achieve that alloy and it is there, where transdisciplinarity appears as a model or approach that allows previous and experiential knowledge to be complemented with the scientific knowledge of the various sciences and disciplines and can generate an invention and innovation loaded with creativity and adaptability to the different scenarios that today's society faces and that is locked in "complex thinking that is not the opposite of simplifying thought, but integrates it; if the paradigm of simplicity requires separating and reducing, the paradigm of complexity advocates gathering without ceasing to distinguish "(Ugas, 2005: 98). Elements that combine to generate new scenarios of complex learning that are strengthened with transversality and complementarity seeking the integral formation of humanity; immersed today in times of uncertainty.

The knowledge considered as the source of expertise has left significant traces in the future of humanity and that is why it is

necessary to redefine, characterize and rethink the unthinkable so that knowledge that guides and leads the activities of the man in everyday life; perhaps in that complex and demanding social web. To achieve such an effect; it is necessary to include the trans disciplinary pedagogy in it, visualize infinity of elements both conceptual and procedural which will gain space, and draw the attention of those who currently wish to achieve a knowledge adjusted to what society demands.

### **Gnoseological vision:**

Gnosiology, as theory of knowledge is fundamental in any approach or proposal that has as a north to correlate or concretize the interconnection of knowledge both daily and scientific. From that threshold it is necessary to value the knowledge that in the case of trans-disciplinary pedagogy must overcome barriers and break paradigms to adjust to the demands of today's society; that in the words of Pérez, (2002: 61) states:

The main wealth of a country lies in the levels of knowledge of its people. The most important currency to participate productively in the society of the 21st century is the knowledge or expertise that each person and society as a whole possesses.

In this sense, the intellectual collective makes the solidity of knowledge and without fear of mistake becomes the basis to generate critical, innovative and creative categories accompanied by procedures that at all times seek to satisfy the individual and collective desires in terms of wisdom and development before the changes, advances and transformations that are experienced daily. Reason why it is convenient to consider that the trans disciplinary pedagogy focuses its attention on the theory of complexity (Morin, 2004) derived from the complex thought that according to Morín, (2004: 3) indicates:

It must be remember that we are part of a complex Eco-social system, that is, with moral and economic networks and hierarchies, where the social sciences, under the classical scientific method, have been the great "accommodating" of social phenomena to the deterministic linear approach interpreted by the classic method fitting the path of societies in a progressiveness that seeks stability, when in reality, we are governed by uncertainty.

That is why it is pertinent to be clear and present that the paradigm of complexity plays a very important role in what is complex and comprehensive education for communities, and in the case of the present

proposal is complemented with what establishes the theory of action (Argyris and Schön 1990) understanding that its role lies in the organizational study of institutions, and in effect trans disciplinary pedagogy requires institutionalism and this is linked to the theory in use that is observed in the applicability of procedures.

Similarly, it is worth referencing in this theoretical aside the theory of the image (Villafañe, 2006) being very clear that its intentionality is reflected in the iconic nature is important to consider it in the trans disciplinary pedagogy, because it focuses on what is pertinent to include in the pedagogical action all the details contained in the daily life of modern man and it is perceived that most human beings are very good observers of there the intention of including the image for the apprehension of the knowledge; since, what is seen is what generates imagination and this can promote changes and transformations according to what the current man wants.

### **Axiological vision:**

The axiology becomes the theoretical - conceptual part that flows in the connecting thread that unites the knowledge or the knowledge of the different disciplines with the daily and

experiential knowledge resulting in the strength in the axiological planes: ethical, aesthetic and logical and is So it is important to consider the values, because at present there are multiple interests where sometimes the human being forgets the values only for personal satisfaction. From this perspective, trans disciplinary pedagogy includes the ethics of care (Gilligan, 1987). In its pedagogical action, care must be taken in the procedural part of the process of formation and training of the human being. Understanding that man must be in constant preparation requires strengthening this part as knowledge must be increased and this is achieved as the learning intensifies and as Treviño points out (2004: 25 citing Savoy 1984):

We would say that the human being is able to grow through the diverse learning that he carries out throughout his life; the man is instructed (from the Latin educate, edify), is formed (acquires form), is educated (from the Latin educare, feed) with the cultural elements that through successive learning incorporates his personality.

As knowledge is acquired, the personality is also being fed, which indicates that a complex and integral education must not lose sight of what concerns values; because

these are essential food for the personality of man and this requires that from the institution a better way of life is promoted and this is achieved if the values are worked; more when it is very true that at any stage of life is born, values are formed and raised around a better life and social welfare adjusted to the demands of society.

### **Trans-methodological vision:**

The present vision becomes the scheme to follow or, failing that, the guiding way to incorporate transdisciplinarity in the pedagogical context and for this, it is important to start from the set of meanings that exist in a given space and time. This allows concretizing the intellectual efforts in function to the events that for the moment and the place are being executed and to reach this aspect it is convenient to rely on the diagnosis of the realities that lead us to a new step to follow that is constituted in the relation of the being with the reality evidencing in this way the cultural and experiential baggage of those who are participants in the process.

Following up on this trans-methodological process, it is necessary to include the multidimensional character in the first place, considering the man in his complex cognitive structure, in the second instance assessing the discipline that is being

conjugated in that dialogue of knowledge that throws as a product the process of apprehension of the knowledge and explanation of the facts when it is necessary to extrapolate, ally, conjugate and/or correlate knowledge to rethink actions that are adjusted to what happens in society.

In effect, this trans-methodological process concludes with the confirmation of the image or symbol; that is to say, a new knowledge emerges from the rethinking of the unthinkable with the firm intention of constituting knowledge that adjusts to the changes, advances, transformations and / or demands of the current society that at any moment shows that the paradigms are outdated and require of innovation, creativity and without a doubt will approach a possible truth that does not last long; since, the barriers of communication leads us to the knowledge society.

### **Characterization of the trans-methodological process.**

The trans-methodological process is proposed in two ways; the first is framed in diagnostic research; it is necessary to specify significant elements that will make it possible to demonstrate realities with details and as a second way it is important to consider the pedagogical fact from

personal understanding to collective understanding to define the ways and means of carrying knowledge. It is worth remembering at this moment that the teacher is who, considering the previous ways, can constitute the path to follow in order to be successful in what corresponds to the procedural part.

Its main characteristics fall in creativity and innovation is necessary to rely on some sciences or disciplines such as heuristics to generate strategies that draw the attention of those who are part of the process because nowadays it is observed that some students attend for convenience, but not by vocation what hinders the implementation of the approach and sometimes hinder the pedagogical action. Likewise, the previous characteristics are complemented with the dynamics, flexibility, and concretion of the processes understanding that the latter will take into account the environment, place and moment in which the approach is considered.

In this sense, the characterization of the trans-methodological process includes three fundamental aspects that fall into the processes of deconstruction, reconstruction and the dialectic; which leads to generating theoretical-conceptual aspects that result in

the creation of meanings from the construction of new knowledge according to the topic that is being developed. The intentionality of the trans-methodological process is to combine both individual and collective knowledge to adjust to the changes and transformations that society currently requires.

### **Articulation of trans-disciplinary and trans-methodological pedagogical actions.**

The trans-disciplinary pedagogical actions are multiple in the case of the present theoretical approach is intended to deepen six (assertive communication, the tetralogy loop, into creativity, music therapy, and permanent research); which are considered applicable to the teaching action with the intention of generating options so that those who conduct the pedagogical fact can also propose and design their own mechanisms and methods to convert the process of training and training in an appropriate way for those who are interested in assuming an apprehension of knowledge in an innovative, creative and flexible way to make this process an entertaining methodology that draws attention to those who are part of the creation of knowledge from its conjugation, interaction and

interconnection, thus forming new conceptual elements.

In this sense, a conceptual vision of each one of the actions considered with the intention of visualizing the path to follow in the procedural part is proposed in order to open roads, windows, and paths for its applicability, it is significant to point out that one of the advantages of transdisciplinarity is that it does not have defined patterns but that at the moment of application of the methods whoever is the guide can take into account the aspects that consider necessary. Therefore, it will be deepened in each of the actions that are:

#### **Assertive communication:**

Nowadays it is one of the innovations of great boom applied in diverse contexts of society (educational, business, cultural, political, among others), with the intention of transmitting ideas openly, clearly and precisely respecting the opinions of others and achieving a consensus among the interlocutors. In effect, it is a process that takes care of from the visual contact, the appropriate use of the tone of voice, the respect for the ideas and without any doubt demonstrating interest in the subject that is being treated in a suitable climate of respect and avoiding at all times the conflict to achieve significant agreements

in the ways and ways of carrying knowledge.

#### **The teleological loop:**

At present, the loop theory (Morín, 2001) becomes a method applicable to pedagogy; since it contains four fundamental phases for the concretion of the process in the acquisition and apprehension of knowledge. It starts from the disorder where positive and negative aspects are evident and that is where the intentionality of a new knowledge originates; which indicates that it is the point where the reconstruction of knowledge is done; going through the necessary interactions to refine the order that must be in order to achieve effective knowledge for those who are part of the organization, the latter becomes the goal to be achieved is observed so that everything has as its effectiveness and effectiveness organizational. It is used in trans-disciplinary pedagogy to provide the necessary mechanisms that seek at all times the reconstruction of knowledge and then be extrapolated to similar situations with similar characteristics and elements.

#### **The Onto-creativity:**

The applicability of onto-creativity in the processes of trans-disciplinary pedagogy is extremely important, since there is

evidence of the direct relationship between the being and the creative; understanding that it is the profound way of visualizing the self with forms and way of living in a social context that guarantees social welfare. At all times, it is sought to awaken interest in situations that generate options to provide adequate treatment when solving and/or proposing actions for the apprehension of knowledge. The onto-creativity allows to conjugate six dimensions to know the biological, corporal, sexual, emotional, intellectual and spiritual, with the intention of bringing knowledge of each one of the dimensions to the creations of new knowledge generating meanings to constitute significant conceptual contributions.

#### **Music therapy:**

Music in recent times has managed to seize various scenarios in society is used for medicine, education, culture among others. In this sense, it is intended to apply in trans-disciplinary pedagogy with the intention of achieving concentration, awakening creativity, reflect on actions and generate new ways and ways of seeing other aspects leading to visualization so that man can face the demands of multiculturalism. Music therapy becomes a method of support for pedagogy as long as

it is applied effectively; the music impacts the physical, emotional, mental and spiritual of the people and nowadays music is used as a treatment to relieve and improve stress; more when you live in a sea of uncertainty where new things appear every day and sometimes unthinkable and for that it is necessary to form today's society is the time to establish the foundations of a future full of hopes to guarantee a social well-being adjusted to the current demands.

#### **The cyber lingua:**

The fundamental basis of cyber lingua constitutes in complexity the exchange that emerges from cyberspace Fraca, (2006: 302) "is a variety of language, a living machine, a self-eco-re-organization of the cyberspace environment within society net". It is constituted in this way with the intention of establishing a dialogue of daily knowledge with those that occur in the network society and generates new knowledge with the intention of seeking technical application in trans-disciplinary pedagogy, in this sense it is necessary to use the mechanisms of cyberspace to promote the education and training of men and it is worth pointing out one of the advances of marked innovation in recent days that fall on cloud education where



many organizations are moving to train their human talent adjusted to the demands asked by today's society.

### **The permanent investigation:**

Research is paramount in every pedagogical process and more when it comes to implementing in a complex context; it is appropriate to point out that transdisciplinarity requires research in the first place to define paradigms (quantitative and/or qualitative) and secondly to visualize the points where it is necessary to reinforce theoretical-procedural aspects; research becomes the basis of the process of acquisition and creation of knowledge from the environment from which knowledge is detached it is appropriate to point out that research is the basis for generating products based on that correlation of concepts, contents and/or theories that they become the foundations of new conceptions based on the dialogue of knowledge that, when it emerges, becomes part of the process of apprehending knowledge to generate new options and visions of existing.

### **By a Colophons way**

The intention of the present theoretical approach is to show a cluster of ideas,

notions and categories that arise from the theoretical-conceptual approaches of trans-disciplinary pedagogy with the intention of deepening in the first instance on the preparation that should be based on changes, progress and transformations and secondly, the dialogue of everyday and scientific knowledge should be considered in order to structure a creative approach that allows its actors to rethink the unthinkable in order to structure methods and/or mechanisms to be effective, efficient and effective in the processes of apprehension of knowledge. Likewise, it is evident that theoretical foundations are based on the ontological, epistemological, gnoseological, axiological and trans-methodological vision with the intention of determining the path to follow in order to structure the bases of new knowledge starting from the conjugation and interaction of the everyday knowledge and scientists to achieve with it the apprehension of new knowledge in order to achieve new ways of understanding the dynamics that surround the current man.

On the other hand, some actions can be articulated to establish a model of trans-disciplinary pedagogy based on elements that can strengthen the ideal way to guarantee success in the different operations of an organization and / or

company; In this sense, the assertive communication, the theological loop, the onto-creativity, the music therapy, the cyber lingua, and the permanent research are considered, so that from the creation of the known solid structures can be constituted with firmness that at all times guarantee a process according to the demands of today's society. Finally, it should be pointed out that in times of uncertainty, new visions and advancement options are required to understand and understand the complex social dynamic that is a framework full of vicissitudes, stakes, and challenges that today's man faces.

## BIBLIOGRAPHY

- Albornoz, O. (2002, Septiembre 7). Los Aforismos de Morín. El Nacional. (Papel Literario), p.3.
- Argyris, Ch. y Shon, D. (1990). Organizational Learning: A Theory of Action Perspective. C.A. Addison-Wesley.
- Botero, J (2002) Postmodernidad y Juventud. Riesgos y Perspectivas. Primera Edición. Editorial San Pablo. Bogotá Colombia.
- Carlin G. Paradoja de Nuestro Tiempo, [http://www.Pensamientos.com.mx/paradoja\\_de\\_nuestro\\_tiempo\\_por\\_george\\_carlin.htm](http://www.Pensamientos.com.mx/paradoja_de_nuestro_tiempo_por_george_carlin.htm) consulta Julio, 2015.
- Derrida, (1993) De-construir la Actualidad Entrevista con Jacques Derrida (Passages, n° 57, septiembre de 1993, pp. 60- 75) [www.feeye.uncu.edu.ar/web/.../Derrida/artefactualidades.htm](http://www.feeye.uncu.edu.ar/web/.../Derrida/artefactualidades.htm)
- Fraca, L (2006) La Ciberlingua Una Variedad Compleja de Lengua en Internet. UPEL – Instituto Pedagógico de Caracas. Instituto Venezolano de Investigaciones Lingüísticas y Literarias Andres Bello. Caracas Venezuela.
- Gilligan, C (1987) In a Different Voice: Women's Conceptions of Self and of Morality," Harvard Educational Review 47, n° 4 (Noviembre 1987).
- López, J, (2002) La de-construcción curricular. Primera edición. Cooperativa Editorial Magisterio. Bogota .Colombia.
- Morín, E. (1990). Introducción al Pensamiento Complejo. España: Gedisa Editorial.
- Morín, E. (1999). La Cabeza Bien Puesta: Repensar la reforma, reformar el pensamiento.

- Argentina: Ediciones Nueva Visión.
- Morín. (2001). Los siete saberes necesarios a la educación del futuro. Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura.
- Pérez, E. (2000). Más Y Mejor Educación. Segunda Edición. Editorial San Pablo. Caracas Venezuela.
- Pérez, E. (2002). Una propuesta de educación popular. Editorial San Pablo. Caracas Venezuela.
- Ríos, C (2007) Epistemología. Fundamentos Generales. Universidad Santo Tomas. Santa Fe de Bogotá D.C. Colombia.
- Treviño J y Otros, (2000) Educación en Valores. Ediciones Trillas. México.
- Ugas, F. (2005). Epistemología de la Educación y la Pedagogía. Ediciones del Taller Permanente de Estudios Epistemológicos en Ciencias Sociales. San Cristóbal Táchira Venezuela.
- Villafañe, J. (2006) Introducción a la Teoría de la Imagen. Ediciones Pirámide. Universidad Complutense de Madrid.