

Interdisciplinarity: an Impulse to Creativity and Innovation

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Abstract: The scope of this Paper is to share some Studies and Research work carried out on Interdisciplinarity that bring an Impulse to Creativity and Innovation. The first contribution comes from the field of spoken and written expression conducted under the Interdisciplinary vision / approach, revealing the expanded potential of the Being, unfolding in an open – ended creative and innovative way. The second contribution comes from the field of Teacher Development using the “Know Thyself” approach, in which teachers are prepared for their mission to help students get to know themselves better and access their potential, too. The third contribution comes from a research on Education in connection to the Indian communities in Pantanal through the Anthropological Interdisciplinarity. In all of them, the characteristic of involving the Being consciously towards the doing, together with unattachment of the results, has been invaluable to promote rewarding outcomes, that would not have emerged without the Interdisciplinary attitude.

Key words: Interdisciplinarity; Creativity; Innovation

1 Introduction

The educational processes have long been disconnected from the creative aspects. Knowledge has been transferred as a closed package for reproduction. Interdisciplinarity, in Theory and Practice, involves the dimension of the Being in the educational, professional and personal doing, in full awareness. For all that to be exercised by the teachers, there must be a starting point: being open, in tune, to identify the flow of our Presence. The flow is rhythmical, intelligent, revealing the Purpose at the beat of Creation.

There was a deep meaningful connection between us, the Researchers of GEPI with Prof. Ivani Fazenda and Prof. Arnaldo Hoyos before this moment was possible. They are both far reaching in their Presence. Their reach is oceanic. They built a loving bridge between you and us. A pure exercise of Interdisciplinarity.

It could only be in a country where reverence is part of Culture that we join to recognize Reverence as an essential attitude of Interdisciplinarity. We embrace you with Reverence, and feel embraced, too. This is the way Prof. Ivani and Prof. Arnaldo always receive each of us... in an exercise of mutual trust. Therefore, Interdisciplinarity starts with a firm connection between the partners. This is a partnership between Interdisciplinarity and Innovation. Ivani Fazenda often calls Interdisciplinarity the cradle of all subject matters.

To better understand the attitude of Interdisciplinarity, our own interactions here and now will be taken to highlight some points:

Here we are now in full Presence!

Here you are now in full Presence!

This is indeed an Encounter!

An Encounter to honour our worth.

The recognition of our worth as Human Beings.

A Celebration to Life: the Source of Creation connecting all Living Beings.

And here we are in reverence to the unfoldings of the Miracle of an Encounter:

a very big field of Research...

2 The First Contribution: By Christine

Christine Syrgiannis, a Professional for Human Development through Coaching in spoken and written expression in English/Portuguese towards Proficiency, for Academic and Professional Purposes for over 25 years, uses an Interdisciplinary Vision/ Approach involving the Being in the knowing and doing, bringing about Creativity and Innovation.

Having studied Music, Mathematics, Systems Analysis, English Language and Theatre, she

regards the Being as a very intelligent source of possibilities unfolding from inside in a rhythmical way, organized algorithimically around the own axis, thus coming to sustainable expression, opening prospects for new proposals, achievements together with personal realization.

As a member of GEPI and as part of the Master Course on Education: Curriculum, focussed on Interdisciplinarity by Ivani Fazenda, I am carrying out a Qualitative Research, on my own professional work, helping explicitate a few important elements of this Interdisciplinary vision / approach.

My work for human development through spoken and written expression in English/Portuguese towards Proficiency starts with my full Presence establishing real connection with the other Being: an Interdisciplinary Encounter.

It is a rhythmical process, bringing an awakening to the students' own perception of their rhythm through the heart beat, breath, which is also reflected in their mind, speech and physical movement. The foreign language structure is made known to them as they need it to convey meaning, the key word of the sentence matching their beat. Their intention gives birth to the language used. The connections are made out of words or pictures, born from the students and full meaning is revealed.

This step of my approach is called Creation. Education often skips it. However, with the growing demands for Innovative professionals, it has been hard to be disregarded.

My long observations of sustainable expression in the Being, after the step of Creation, show that it is absolutely essential to be developed and used to define Unity - a characteristic of Proficiency - time to consciously select three main aspects of a topic to stem like branches of the particular tree. The sub-branches and leaves being the examples and details of the branches. A specific title can then be given encompassing the elements of this particular proposal.

Reflection on the adequacy of the proposal brings the opportunity to perform any adjustments that might be necessary, leading to clarity and harmony for the spoken or written expression that follows as a form of achievement and personal realization, too. The sensation, thus, is that of joy at the evidence of being able. The doing reflecting the Being and the Being projected in the doing through the uniqueness of the way linking both.

This process gives an impulse to innovative proposals, which come as a reward to the respect of letting the seed be transformed in the tree it is meant to. The first movement in connecting our Being to the doing is like a sparkle - turning into a flame, carrying our primordial vibration to pass to others when we bring our contribution.

Interdisciplinarity shows we can bring our contribution by fully Being, not controlling the process as it has its own intelligence, unattached of the results. A full exercise of Being, knowing, doing, being conscious of our Being, our knowing and our doing continuously...

Making an analogy of all this process with the Anthropological Interdisciplinarity, we can say that just as a Scholar approaches an unknown community, so we approach the unknown areas of our possibilities. At first, notes are taken in the form of single words or pictures, to be slowly correlated to reveal meaning.

The construction of sentences emerges slowly and consistently. This approach in Interdisciplinarity is called by Ivani: looking in layers. Few things are grasped at first, but like the particles of light, they contain the design of the wave they belong to.

Should we believe that particles of light move at random, or should we look through and beyond to detect the law they represent? Just as the particles, we are part of a bigger whole, full of correlations, interactions and possibilities of endless portions of understanding.

It is in this respect that Interdisciplinarity is included in the unfoldings of the researcher and the learner. The learner is, after all, a researcher of him/her Self at the service of grasping instances of the Miracle of the continuous unfoldings of Life. This kind of vision never separates, but joins: never disputes, but cooperates.

We move as our steps create the choreography we dance together at the Beat of Creation. We are now in the age of Co-Creative Sustainability shown through the speech, developed through the Anthropological Approach unveiling the unknown.

As such, it becomes Conscious Evolution!

We wonder how we could prepare teachers with this Interdisciplinary Attitude and ask:

Is it possible for the teacher to regard the student as a whole Being?

What are the presuppositions for this?

What would the teacher's attitude be from this perception?

3 Telma's Research is a Contribution to Enlighten Our Quests

My proposal to introduce "Know Thyself" in the Graduation Course on Education was the result of my understanding that it is the backbone in Interdisciplinarity, which I had studied in the Post Graduated Course on Professor Development, where I also met Professors involved with Spirituality in Education. Since then, I have been a member of GEPI and INTERESPE. I linked my experience as a Professional in Physical Education to that of Master in Education, Coordinator and Professor, to offer the opportunity to students to experience the awakening of the conscious perception of their Being through Interdisciplinary practices involving Breathing, Corporal Expression, Meditation, Poetic Expression which enabled them move the internal / external processes of creativity using their talents.

The problem of my Research emerged after reflecting on the need of studying the human being more deeply, as I considered my own attitude as an educator and being conscious on how my process of individuation was constructed considering Jung (1986) I do believe in the whole, and therefore know that an educator will not be able to perform well If he/she does not know him/her self better in a process of expansion.

The object of the study was to introduce the subject "Know Thyself" in the curriculum of the Graduation Course on Education in the Centro Universitário Metropolitano de São Paulo – Guarulhos-S/P - Brazil under the full name "Interdisciplinarity: Educational Practices - Know Thyself" to be developed under the perspective by Jung (1986), who mentions Sokrates as the principle of wisdom when he says "Know Thyself".

The objective of this Research is to develop practices in the classroom, through methodologies aiming to maximize students' opportunities for reflexion in the direction of "Know Thyself" in an Interdisciplinary Investigation, so that they discover the importance of the role of an educator and the meaning of life in their own process of individuation and growth. These classes are carried out by me myself - a member of both GEPI and INTERESPE and FIQUE, doctorate student and researcher - registering the methodologies, how they are discussed in class, where they converge and complement each other, having a partnership of construction of methodological, praxiological and epistemological knowledge.

The metaphor chosen in this Research is the movement from inside-outside. The inner movement. Why do not the educators move themselves? Learning is changing, which is a process. As such, education is a process is transforming the one who learns.

Learning to be an educator, in my case is part of a process of nine years as Coordinator and Interdisciplinary Professor of the Physical Education Course, and now Interdisciplinary Researcher. All the time, I use the outer movement, the flexibility of understanding the other, and the movement of sensible hearing, assuring that the students of this course have both, specific knowledge, as well as the development of their criative individuality. "Educare" in Laten means put forth something from inside.

Thus, I regar Education as the development of a sensitive system, in harmony with other broader systems, developing a holistic process of transformation in tune with the great process of life. Fregtman (1989, pag 207) considers Education as an Art form, the art of creating an "integral" being.

I justify what moves me in relation to the above mentioned, on the topic chosen, when I reflect on the thinking by Jung (1986). He says that life has meaning, but the future of humanity will depend on the number of people who manage to fully evolute, that is, through the process of individuation – a process through which one becomes a psychological "individuum", that is, an autonomous unity, a conscions totality. Thus, he was convinced that besides the researches on the external reality, it is necessary to investigate the internal origin of the scientific concepts, opening an immense field for the possibilities of modern Physics and on the humanistic Knowledge which has completion in the BEING.

Japiassu (2006, p.26) tells us that the bounderies of knowledge move endlessly, giving rise to questions that would not otherwise be asked. Each solution gives rise to new enigmas, new problems place new challenges to "learning" and force an advancement.

The movement I mention involves two directions: internal and external that my students will reflect on their own practice as educations. Many of them are already teaching, so for the "know Thyself" they can bring elements from the transformations coming from the pedagogical & personal relations with their students.

As mentioned by Fazenda (2002, p.14) the interdisciplinary process plays a decisive role do make manifest Education in the light of wisdom, courage and humility [...].

My participation in GEPI & INTERESPE has been an enlightenment to my steps towards a purpose. I learn a lot with the presentation of researches carried out by other members of the Group. The principles of Interdisciplinarity mentioned by Fazenda (2008) which are: humility to recognize we build the world;

coherence between what we think and do; respect for oneself and the other, who may be different but not in opposition; unattachment, both of intellectual and material elements, being open to new ideas; maturation: observation of many phenomena in time and space, and after reflection, action in the most adequate time.

When we exercise the principles mentioned above, they will lead us to an interdisciplinary practice, opening new ways for practice in the classroom. All such attitudes require lots of discipline and self-awareness.

To assure my Research is scientific I will be grounded in the 3 pillars of an Interdisciplinary Investigation: Epistemologic, Praxiologic and Ontologic.

In the Epistemologic pillar, the author seeks for theoretical depth in classical or modern bibliography exercising a constant questioning in an ascendant way which enables him/her to develop a concept with interdisciplinary characteristics. Thus, I intend to extend as much as possible my quest getting support for the understanding of the metaphor of movement.

In the Praxiologic pillar emerges the investigation of the action of the researcher who finds in the cultural and historical context the methodological principles which bring together the mediator and the mediated transforming knowledge in wisdom.

In the Ontologic pillar, you will be led to know yourself better throughout the readings, questionings with different authors and practice with the authors who are part of your research and are turned to fostering, "Know Thyself". Weekly, after the meeting, we will become more and more involved and committed with the other and the inner and outer movements will bring about big revelations.

For Japiassu (1991), Interdisciplinarity seeks for connections and correspondence between scientific disciplines, that is, between the different levels of describing reality. I regard it as a balance between the fragmented analysis and the simplifying synthesis, between the specific knowledge and the general knowledge, between the knowledge of the Specific scientific and the knowledge of the philosopher.

It is imperative to proceed the interpretation of reality to better meet the needs of educators and fulfill a lack of this quest in life.

When Jung (1986) states that the own Self is the center of a circle and also the whole circle, which encompasses both human consciousness and unconsciousness, and more, that the Self is the target of life, he gives a fantastic impulse to the cultural progress of human beings. It is a message directing us to the "Know Thyself" and to the full realization of the human being.

Espirito Santo (2008) adds that most of the transformations are permanent and inexorable, both in Universe and human existence taking place in an unconscious way, being a great challenge to make them more and more conscious.

Gusdorf (2006) regards Interdisciplinarity as a must in face of the big fragmentation of sciences and fields of Knowledge. What I seek converges with his concerns on what he calls "pathologies of knowledge" and the urgent need to help the educator perform his/her transformations.

4 Ana Lúcia's Contribution Comes with and Research in Anthropological Interdisciplinarity

She points out that Modern Society has been going through deep changes with overestimation of knowledge. Therefore, the processes of knowledge acquisition have been taking an outstanding role requiring a critical and reflective Professional with ability to keep a conversation, work in teams and to know him/her self better. It is up to Education to prepare such professional to perform in the perspective of articulation through the dialogue between theory and practice. As a Professor for the Course on Education at the Campus of Aquidauana - Central Area of Brazil, as a Researcher to Assist the Research Group: "History on teaching, culture and identity in Aquidauana" by CNPq and in the research projects; "The Indian School education: language, race, culture and identity" (UFMS/PROPP/PIBIC/CNPQ), "Native Indian Peoples from Pantanal in South Mato Grosso: education, language and culture in question" (UFMS/PROPP/PIBIC/CNPQ), developed in Aquidauana and High Pantanal (IBGE) my quests turned me to the Indian school education, development of Indian teachers and planning of practices and Indian pedagogical researches, specially in Arts and Culture as a possibility of work in connection to an interdisciplinary proposal.

Pursuing the topic, I presented my Research Project: "Interdisciplinarity and the relations between teacher/ student/ University/ communities / Indian Culture/ Arts and Education" in the Program for Doctorate in Education PUC/SP with Tutor PhD Ivani Fazenda in connection to GEPI. I confess that at first, the complexity of the topic made me feel anxious. However, along the talks born at GEPI,

the topics addressed showed to be essential items to keep in a round table those who felt uneasy with the fragmented teaching and that understand as a consequence, that the process of teaching and learning must be replaced by a more global new of reality.

In this round table, I have been getting support to make articulations with my Research Project by the way our Professor Ivani Fazenda treats the questions related to a more fulfilled human being. Regarding Education as human development implies in putting effort in identifying the most adequate form to contribute with the Indian culture. Educational processes are known as being universal, but vary from culture to culture, profession to profession, group to group, both in content as well as in context. Learning and educating are processes that involve the construction, settlement and production of knowledge, memories, senses, meanings, practices and performances.

The moments of discussions and guidance by Prof. Ivani Fazenda proved to be provocative, instigating the construction of some concepts for my Project, concerning an interdisciplinary dimension in the Indian pedagogical practice. And, if we seek for the elaboration of new elements of knowledge, we are made to rethink the question of research establishing the following question: How can we contemplate the requests and needs from the reality in their dwelling places and Indian reserves of the peoples in Pantanal: Atikum, Guató, Kamba, Kadiwéu, Kinikinau, Ofaié and Terena, reflecting their identity, art, culture and History, as well as their ideals of educations, when we consider the culturally rich scenario of Pantanal in South Mato Grosso?

And still another question: Why is the reading of images, as personal expression and as art and culture an important instrument for the cultural identification? We believe that the redimensioning of the problem of research requires analysis and reflexion around the values created by generations of Indians mainly when we seek to read images, which are a way of amplifying power in the symbolic expressions of the different “Peoples of the Pantanal”.

It is important to point out that the true changes and real provitalization of these peoples are in the hands of those who are the target of our work. It can be said that Arts enables a human being not to feel a foreigner in his/her own country. Arts overcome a possible state of depersonalization, inserting the person in the place where he/she belongs, amplifying it (FANON, 1961, p 89). Thinking on Arts teaching is, therefore, thinking on our sensitive relation with the world and justify the need to give worth to Arts in the Indian education, as an opportunity for meaningful productions, in which, both teachers and students take part of commonly built practices, starting from a curriculum reelaborated to meet the needs of the community in which they are inserted.

Thus, facing the challenge of bringing a contribution with Arts and culture, as an interdisciplinary educational action in the Indian school education is not an easy task, but requires the search for ways, as I am doing in the Doctorate Course, through the questioning of knowledge and understanding to contemplate the requests and needs from the areas of dwelling and reserve of the Peoples of Pantanal: Atikum, Guató, Kamba, Kadiwéu, Kinikinau, Ofaié, e Terena, reflecting their Art form, Culture, History and ideals for education.

5 Conclusions

Indeed, the more we work with Human Beings, the more we understand why Interdisciplinarity, as mentioned by Fazenda, concerns the invisible elements of inner processes.

We show a poem written by Christine in 1996 referring to the Human Development exercised then, through English Language Development in connection to a group of professionals in a company in São Paulo.

Transcendence
 To see the invisible things,
 To hear the inaudible sound,
 To find the hidden enlightenment
 And bring all of them to the top!

To smell the scent of Creation,
 To fly the highest skies,
 To try & identify your true colors
 And show how brightly they shine!

This is your beat,
 The music you play,

No matter how lowly,
No matter how low;

It's tuned with Universe
In only one sound,
It's tuned with Love,
All in love recognize it!

And I know,
If you only believe you are able, you will
And you'll make the invisible seen,
When you play in the Symphony!

And the world will be better for this,
That one man conscious of his part,
Performed it the best he could
To be one with the infinite Life!

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