

## 142 - CONTEMPORARY DIALECTICAL SYSTEM – PROFESSIONAL GRADUATION PROPOSAL IN PHYSICAL EDUCATION

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### INTRODUCTION

As the new decade of a new century starts we must, in our history-logical oriented view, question what has been produced at an educational level in the Physical Education field, evaluating the process which has been developed and analyzing the conclusions that are reached aiming at the best education process for new professionals entering the labor market.

The perception crisis present in numberless academic universes needs to come to an end and only grounded on that it is possible to create a new Course. By establishing the new guiding points of this university career, which will be presented on the following topics, it is expected that, not only the existing obsolete is questioned, but also accomplishing an educational proposal corroborated by the modernity which is demanded by the society.

#### *Guiding Points:*

- PARADIGM, THEORIES OF KNOWLEDGE, SYSTEMS THEORY, CURRICULAR THEORY.

### PARADIGM

An institution which proposes it to develop a Pedagogical Project in the Physical Education field must insist, with special care, on a factor that will direct a “view of the world”. To this “array of beliefs and assumptions about the nature and purposes of a school, of teaching and of teachers and their educational backgrounds which will define specific means of practice to the preparation of teachers”, Popkewits, Tabachnick and Zeichner (in Ruso, 1997) called paradigm and Galera (2001) defined as “an array of elements which give coherence to a (educational) community when widely spread among its members”. Shiguno and Azevendo when researching the main pedagogical approaches which guide Brazilian Physical Education, based on the most important authors defend that:

*The technician approach is centered in the experience and development of sports modalities directed to Physical Education in schools and in other places in which sports are being inserted and systematized. It prioritizes the technical standards of gestures and movements learning in sports in Physical Education classes. Its objective is improving the appreciation of physical, intellectual and moral positive qualities. The actions of the students are physical more than they are mental.*

The usage of the paradigm hereby presented, which Capra named technician, provides a view of the human body as a machine and the view of living in a society as a competitive struggle for existence.

The professors in their Undergraduate Courses have forgotten to mention that the one responsible for the movement is the human being, thus what should happen is a process of education of the human being and not a process of training through his movements.

Paraphrasing Capra (1996), he states that the new view of reality was not easily accepted by Physicists on the beginning of the century, and we defend that the proposal of a Physical Education which considers the holism of the human being also finds resistance in its field.

This stereotype of a professional does not meet the needs of a society which, due to the daily stress, cries for respect to its most rudimentary form of expression, the movement.

We believe that when the leaders of educational institutions are able to give birth to a handless or feetless man, or even a headless one, if experience did not teach them that it is through the head that we think and it is the thought what identifies the man (Inginiero), then they will realize the need of this change and to Jover:

*...it changes our view of the real world and enriches our imagination and culture; if one can understand it as an investigation process which allows one to obtain new knowledge which, in turn, offers wider phenomena manipulation possibilities; it is possible to answer to its productive and practical impacts characterized as productive force which enables the transformation of the world and it is source of wealth.*

The necessary paradigm change and the consequent knowledge concerning the real world, in where social needs meet, from the Educational Institutions that offer the Physical Education course will only happen, in our view, when their leaders become aware of common characteristics of the discoveries from which new phenomena emerge.

*the previous conscience of an anomaly; the gradual and simultaneous emergence of an acknowledgement of the conceptual and observation plan;*

and the consequent change of categories and paradigmatic procedures (Kuhn, 2003)

As it was proposed by Kuhn, in a simple manner, paradigm is a model, a standard of appreciation and explanation to guide the description and comprehension of the surrounding reality.

The new standard proposed, called Human Motricity Science, was created by the Portuguese philosopher Manuel Sergio, who, with the support of Husserl's phenomenology, makes a strong criticism to the positivism and consequently to man's view under a technical prism, for it disqualifies personal and scientific experiences, taking them as not fulfilling experiences.

Complementing, Manuel Sergio says that “empirical sciences are concerned with factors and not with essences, and do not see that it is not possible to analyze a fact as a fact only” making it necessary to add Mearleau-Ponty's conception concerning perception: “Perceiving is making anything present with the help of one's body” (Manuel Sergio, 1987) for this allows one to view man not as a sum of bones and muscles, but as a human being with a

*conscience embedded with intentionality and a body endowed of movement, which when merged into a human unity, give origin to an existential significance, in which it is given to us a dialectic relationship between organism, thoughts and the world out there. (Manuel Sergio, 1987)*

Therefore, our focus puts aside the paradigm of simplicity defending that one should comprehend that the praxis is much more important than the theory, and that theory and practice are only relevant if grounded on the theory of praxis.

A professional preparation founded on the Human Motricity Science should take into consideration “the problematic

situation of reality, in such a manner that only by thinking its own life and others' lives, the student learns how to move" and that the educator provides the possibility that through movement one seeks one's transcendence.

The Professional Preparation Course acting via this paradigm will make it possible for Physical Education not to end in a gym's wall, pool's edge or lines of a sports court, but in the horizon. Following, a glossary on human motricity related words:

Motricity: "the corporeity experience to express actions which implies on human being's development" (Trigo and collaborators, 1999) regardless of "social situation or condition".

Corporeity: "the experience of doing, feeling, thinking and desiring" in a manner in which we will be able to connect with human beings (Zubiri, 1986), for human being is and only lives through his corporeity. We are born in a body which since birth conforms itself as corporeity, through action. Through action and motor sensory perception (sight, hearing, touch, taste, smell, synesthetic) we learn how to feel and to think.

This process develops throughout all of our life, in a manner in which we keep on changing acknowledging ourselves according to the corporal image we have of ourselves and the image others return us of our self. The process ends in our death, in which we stop being corporeity to become nothing more than a body. (Trigo, 2000)

#### **MANIFESTATIONS OF MOTRICITY**

Ergo motricity = related to the world of work;

Ludo motricity = Actions which are a result of activities which a human being does without a finality out of the scope of the actions;

Ludoergomotricity = Actions by horse between the playful and the ergonomic;

Paldomotricity = pedagogical branch of the Human Motricity Science;

Khun states that the constitution of a paradigm defines not only the way to solve the problems but also what the problems are and if it is convenient to solve them. Having this responsibility due to a direct change in the paradigm, we have to provide our students a "tool" which always guarantees their professional competence. We call this tool **KNOWLEDGE**.

According to the Universal Dictionary, the amount of knowledge on a specific subject, obtained from a personal method is called science, thus, we come to the conclusion that by developing knowledge in our students we will be making science. The word science, or the expression "making science", due to common sense takes people to places (laboratories) in where people wear white lab coats, thick glasses and are usually elders.

This common sense view is due to television shows or movies in which the man making science is represented by different people from the ones we see on the streets.

Therefore, it is possible to analyze science as a system of knowledge which modifies our view of the world and enriches our imagination and our culture, which can be understood as an investigation process which enables us to obtain new knowledge, offers wider phenomena manipulation possibilities, allows an answer to its productive and practical impacts, characterizing it as a productive force which provides a transformation in the world and a source of wealth. (Jover, 1999, p. 23)

This can be done, in our opinion, by any person in a society, in our study of the society of scholars in Physical Education, who has good judgment and awareness of his responsibilities being an educator. The change in paradigm will enable for the student and, consequently, the professional a new view of man. This new view will result in knowledge, which according to Jover (1999) will modify the view which they (professionals and students) have of the world. And the new knowledge which will result of it, according to our perspective, supported by Jover (1999), will enrich our imagination and our culture as a consequence of the discernment of the professional, according to Inginiere (1960), all that exists is necessary.

This view of a totality of the human being leads us to a systemic way of thinking, in other words, we have to promote knowledge on the education of a Physical Education professional, make it with pedagogical procedures which will allow the student to realize that the connections between the components of a specific location are fundamental and that when we are confronted with a certain social need we have to contextualize the professional inside his global reality and avoid segregating him from his universe by analyzing him and forgetting his surroundings.

According to the systemic way of thinking we have to forget the metaphor of knowledge as a building and replace it for the idea of a network.

If the systemic approach / network that the sum of the parts is bigger than the whole were a fact on the preparation of a Physical Education professional, the chaos we talk about would not be more than a bad dream.

When we consider the importance of the knowledge of the whole which compounds the human being in order to have a competent professional, it would be extremely ironic not providing this knowledge where it will be used, society, for society is a continuum with many dimensions in where each phenomenon, including knowledge development, demands meaning, relates itself exclusively to the whole. (Jover, 1999)

"Thus it is necessary, when knowledge is built by the student, a constant praxis of theoretical subjects, but in a wide variety of social spheres this set of relationships subject-subject is indispensable to science". (Jover, 1999)

Based on the statements that were made, concerning the importance of a contact with society and consequently with the praxis, we sustain that a Professional Graduation Course in Physical Education with a systemic approach is supported by Maturana, Vigotsky and Piaget.

Currently, according to Maturana (2002, p. 146), the most widespread view considers the nervous system a tool through which the organism obtains information from the environment, which, in turn, uses it to build a representation of the world which permits it to compute an adequate behavior in order to survive. The author sustains that we must take as a starting point that every act of knowing and every act of doing depends on who knows it, to put in other words, that every act of knowing depends on the structure of who knows it.

Considering what has been said so far, we must keep in mind the following when the pedagogy of the system is structured.

It is of no use to a student a single piece of theoretical information regarding every acting spheres and fields of a Physical Education professional. The assimilation by the student may or may not occur, and it must be bore in mind that the construction of this world of knowledge is a direct result of how it is informed to the resulting student.

According to Maturana, the explanations of a professor are formulated based on the experience of the teacher, but not all reformulation of experience is an explanation.

An explanation is a reformulation of an experience which is accepted by an observer (cognition, p. 29), for we have to understand or know as effective action an action which enables a living being to continue its existence in a specific environment when it makes a new world emerges". (Maturana, 2002, p. 36)

This construction, according to Vigotsky, must be done in society, for in it data are reality and not translated and taught

to someone in a theoretical manner.

The capacity that students of the proposed system will have to solve social problems will be put into praxis, using the principles and the zone of proximal development, in other words:

- A first contact with the support of a professor;
- A second contact, if desired by the student, with the support of a professor;
- A third contact by himself;

It is possible to notice that what it is attempted is to make the student slowly build his meanings (Maturana, 2002) in order to value, or which is in accordance with, his mental structure.

It cannot be forgotten in this knowledge creation process that this occurs through the usage of three mechanisms, which, according to Piaget, are:

- Assimilation – making a new experience adequate in its structure.
- Accommodation – changing existing experiences with the new element.
- Balancing - to act as a result of this accommodation

### CONCEPT AND SYSTEM

Antônio Prada (2002). In order to establish a concept of system we must analyze the components it has:

- a set of elements;
- which compound a whole properly organized;
- dynamically related (the elements);
- compounding an integrated activity;
- aiming at an objective, operating on data / energy / matter;
- in order to provide information / energy / matter;
- submitted to the interferences of a higher hierarchy system.

According to Capra (1999), the systems science shows us that living systems cannot be comprehended through the partial or single analysis of each of the parts isolated from the others. The properties of the parts are not intrinsic, but can only be understood inside the context of the larger whole.

This way, the systems and contextual thoughts are, once they explain things considering their context, environment.

The curriculum and its development are made under the optic of the General Systems Theory since they present a central objective and a highly complex system which requires analyzing parts in function of the whole properly organized and interrelated aiming towards a predetermined goal to the aforesaid curricular system.

### CONTEMPORARY DIALECTICAL SYSTEM (CDS)

According to Tôrres

*A view of the world is a conceptual window through which we perceive and interpret the world, to comprehend it and to change it, as well. When we understand that the truth is that our method of observation is what enables us to perceive, we will be able to recognize that our view of the world formats our mental models, through which we observe, systematize, interpret and give meaning to our own experiences in the world.*

Providing students of a Physical Education course a conceptual window of the world is an obligation of every undergraduate course in this field.

At the beginning of this article it is noticeable the little knowledge of the professional fields from the students of the Physical Education when we confront ourselves with the labor market, similarly, we could notice the nonexistence of Physical Education professionals in many areas of activity.

Data demonstrates the flaw on the current teaching system due to the little knowledge provided to the Physical Education course undergraduates.

The National Students Performance Exam (ENADE) more specifically, the questions regarding specific fields of Physical Education of this higher education evaluation tool shows that linear education must be put aside and that the Cartesian knowledge provided to students must be reviewed, based on this indication we present the Contemporary Dialectical System (CDS)

Its application depends on stages that must be followed such as:

- Collection of the social difficulties this professional shall cater to;
- Definition of the knowledge this professional must possess in order to cater to these difficulties;
- Gathering of these knowledge in Fields of Knowledge, promoting a combination of two or more academic fields;
- Valuing the student's own knowledge (andragogy);
- Informing him of the benefits which he will have when these new knowledge are mastered and properly applied (andragogy);
- Demonstration of the benefits which he will have when these new knowledge are mastered and properly applied (andragogy);
- Development of classes in which the student continuously participate;

### FINAL CONSIDERATIONS

In an interview with the students of a certain Higher Education Institution regarding the efficiency of the proposed system, high levels of acceptance were reached.

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## CONTEMPORARY DIALECTICAL SYSTEM – PROFESSIONAL GRADUATION PROPOSAL IN PHYSICAL EDUCATION

### ABSTRACT

The sustainability of a professional is directly connected to the capacity of noticing the possibilities for this professional. The professional graduation in Physical Education is currently, despite of being more focused on the health field, connected to the aesthetic questions. As a consequence it is aimed at and concerned about building a body following standards taken as the aesthetically beautiful. In this study it is proposed a change in the current paradigms of the undergraduate courses in Physical Education for one in which can be viewed the whole of the human being, what happens with human motricity. As a consequence it is proposed the professional graduation in a systemic format, once that, by developing professional activities in Physical Education, this is done with the human being in his integrity and not only from the neck below, as it is currently observed.

**KEYWORDS:** paradigm – knowledge – complexity

## SYSTÈME CONTEMPORAIN DIALECTICAL - PROPOSITION DE FORMATION PROFESSIONNELLE DANS L'ÉDUCATION

### RÉSUMÉ

La possibilité d'avenir qu'entrevoit un professionnel détermine sa durée dans sa profession. La formation professionnelle en éducation physique d'aujourd'hui, bien qu'elle soit plus ciblée dans le domaine de la santé, est liée à des questions d'esthétiques. De cette façon on visualise et concentre en fournir un corps considéré comme esthétiquement beau pour les normes. Cette étude propose modifier les paradigmes actuels de cours de premier cycle en éducation physique de sorte que vous pouvez voir tout l'être humain et ce qui se passe au mouvement humain. Par conséquent on propose une éducation dans un format méthodique, parce que les activités professionnelles qui développe l'éducation physique s'occupe de l'être humain comme un et pas seulement une seule comme on le voit aujourd'hui.

**MOTS CLES:** paradigme - connaissances - complexité

## SISTEMA CONTEMPORANEO DIALETICAL – PROPUESTA DE LA FORMACIÓN PROFESIONAL EN EDUCACIÓN FÍSICA

### RESUMEN

La sostenibilidad de un profesional está vinculada directamente a la visión de las posibilidades de este profesional. La formación profesional en educación física, aunque hoy se centre más en la salud, está vinculada con cuestiones de estética. Así, el enfoque y la preocupación están en proporcionar un cuerpo estéticamente bello dentro de los criterios considerados. En este estudio se propone cambiar los paradigmas actuales de los cursos de licenciatura en Educación Física para que se pueda ver todo el ser humano, lo que ocurre con la motricidad humana. Como consecuencia se propone una formación en un formato sistemático, porque en el desarrollo de la actividad profesional de Educación Física lo hacemos con el ser humano en su totalidad y no sólo del cuello para abajo, como se observa en la actualidad.

**PALABRAS CLAVES:** Paradigma – Conocimiento - Complejidad

## SISTEMA CONTEMPORANEO DIALETICAL – PROPOSTA DE FORMAÇÃO PROFISSIONAL EM EDUCAÇÃO FÍSICA

### RESUMO

A sustentabilidade de um profissional esta ligada diretamente a capacidade da visão das possibilidades, de atuação, deste profissional. A formação profissional em Educação Física atualmente, apesar de estar mais voltada para a área da saúde, está ligada as questões da estética. Desta forma visualiza e preocupa-se em proporcionar um corpo dentro dos padrões considerados como belo esteticamente. Neste estudo propõem-se a modificação dos paradigmas atuais dos cursos de graduação em Educação Física por um que se possa visualizar o todo do ser humano, o que ocorre com a motricidade humana. Como consequências propõem-se a formação profissional em uma formatação sistêmica, pois ao se desenvolver atividade profissional da Educação Física o fazemos com o ser humano em sua integralidade e não somente do pescoço para baixo, como é observado atualmente.

**PALAVRAS CHAVES:** paradigma – conhecimento - complexidade