57 - THE PRODUCTION OF KNOWLEDGE IN THE FIELD OF PHYSICAL EDUCATION: A REFLEXION FROM AN EPISTEMOLOGICAL STANDPOINT

DORALICE LANGE DE SOUZA ROCHA
Universidade Federal do Paraná, Curitiba, Paraná, Brasil
e-mail: desouzdo@post.harvard.edu

Introduction

The goal of this paper is to develop, based on a literature review, a brief historical review about the main areas of interest of physical education (PE) and to discuss some aspects of the epistemological debate that has been permeating this field of knowledge. The paper was organized in two parts: The first contemplates the historical review. The second, aspects of the epistemological debate.

A brief historical review

Until the sixties, corporeal practices used to be justified with basis on their pedagogical potentials. They were highly regarded for their potential to promote health and moral education. These practices found support on the work of intellectuals from different areas, such as medicine, education and political sciences (BRACHT, 2003, p. 18). In the sixties, the field of corporeal practices started to modify its interests. It started to look for a more scientific foundation and became more interested in sports. In the seventies, as Bracht (2003, p. 21) explains, "the physical education was explicitly and purposefully put in service of the sportive system" (my translation):

> sports were imposed as content and as meaning of the PE field (...). In a few words, it could be said that the pedagogical discourse of PE was almost drowned
> by sportive performance; literally choked by the sociopolitical importance of Olympic medals, or by the ´desire´, turned public, for medals (BRACHT, 2003, p. 23).

But while there was a discourse in favor of physical practices having as a goal health and moral education until the sixties, and later, in favor of sports, these practices did not have a scientific foundation. As a study developed by the Ministry of Education and Culture (MEC) in the early 70´s o *Diagnóstico da EF/Desportos no Brasil (The Diagnosis of PE/Sports in Brazil)*demonstrated, there was barely any research on PE and sports in this country until then. This information motivated the federal government to invest in the formation of professionals at the *stricto sensu* level overbroad, aiming at the development of research and of graduate programs in Brazil (BRACHT, 2003). In the early 80´s, with the return of the researchers graduated oversees, a group of professionals started an effort to promote research, to ground the field of PE scientifically, and to implement graduate programs. Until then, the scarce scientific production available was dedicated to physical fitness and sports, and the majority of this research had as a theoretical and methodological basis, the natural sciences (BRACHT, 2003).

This reality only started to change, as some PE intellectuals started their graduate studies in Education and when the field of PE tried to consolidate itself on the level of graduate studies. This forced PE professionals to start a deeper dialogue with different areas of knowledgeespecially with the fields of education and social scienceswhich motivated them to transcend their almost exclusive focus on sports and physical fitness. Gradually the PE field started to be more influenced by the social, cultural, and educational areas (BRACHT, 2003).

A strong slant of the educational field that started to influence the PE in the eighties was the "pedagogia histórico-crítica dos conteúdos" (the historical-critical contents pedagogy), a Marxist approach leaded by the professor Demerval Saviani. This influence influenced various intellectuals to develop a commitment towards the political education of the PE professionals, which included a realization by the part of the latter in relationship to the political slant of the contents with which they work. Since the eighties, many professionals in the field have been dedicating their work to the articulation between "the physical education political-pedagogical project and the historical project of the working class" (DA COSTA, DUARTE, 2003, p. 149). One of the main goals of their work has been to contribute with the building of a more just and equal society.

While in the eighties much of the intellectual work in the field of PE was focused on an ideological dimension about the PE role in the transformation of society, in the nineties this work started to lean towards a discussion in the epistemological field. As Nóbrega et al. (2003) state in their analyses of the work published at the Annals of the *Congressos Brasileiros de Ciências do Esporte* (Brazilian Meetings of Sport Sciences Society), during this decade, a large amount of published articles privileged issues related with the specific knowledge of the PE field and with the epistemological identity of this field. This focus was also explicit in the main themes of these events: In 1991, the main theme was "The production and divulgation of knowledge in physical education, sports and leisure in Brazil: A critical analysis and perspectives". In 1993, "What kind of science is this? Memories and tendencies". In 1995, "Interdisciplinarity, science and pedagogy". In 1997, "Renovation, fashions and interests". In 1999, "Physical education/sport sciences: Intervention and knowledge". As Nóbrega et al. (2003, p. 176) point out, both the main themes of the events and the annals reveal a "concern of the physical education field with its knowledge and with a reflection about its doing, knowledge and practices" (my translation).

The epistemological debate

In the nineties, more specifically during the Congresso Brasileiro de Ciências do Esporte (Brazilian Meeting of Sport Sciences) of 1993, a discussion questioning the PE epistemological statute emerges. Some of the questions that started to be asked were the following: Physical education is only physical education? It is education of the body and/or through the body? Can it be called sports science or sport sciences, or should it be called science or sciences of human motricity? Can it be considered a science? Do we really want it to become a science? If the answer is positive, what kind of science should it be? What should be its object of study and epistemological approach? These questions are still current and various intellectuals in the field have been advocating different viewpoints in relationship to them (BRACHT, 2000).

The statute of "science" attributes status to the fields of knowledge, which lead them to struggle to accomplish it. This statute, nevertheless, is more easily accomplished in the case of classic disciplines such as physics, chemistry, mathematics and biology, which are basic fields of knowledge and serve as theoretical support for other disciplines. Yet in the case of the applied areas such as medicine, education and physical education, as they are based on different fields of knowledge and face an overlapping of theoretical traditions and scientific practices, they have difficulties to define themselves in epistemological terms. Consequently, they do not easily conquest the statute of science (BRACHT, 2000).

Some areas that give support to PE are physics, chemistry, biology, education, sociology, psychology, anthropology, history, philosophy and political sciences. Based on the theoretical and methodological foundations of these fields of knowledge, the PE has been exploring areas such as exercise physiology; movement biomechanics; motor learning and control; the pedagogy of movement; and public politics, administration, philosophy, sociology, history and psychology of physical education, sports and leisure. Therefore, even though PE is an academic discipline, and even though it is based on

different areas of scientific knowledge, its lack of clear boundaries do not allow it to reach certain epistemological requirements that could allow it to accomplish the statute of science. It is important to remark, though, that this by no means diminishes the PE merit, since it is an important social practice (BRACHT, 2003) and deals with quite important issues related to human survival and quality of life such as health, education and leisure. It is also important to remark that, as we know since Kuhn's (1970) work published in the early sixties, what is normally considered to be a scienceor not a sciencedepends on the paradigm which is dominant in a determined local and moment of time. In this context, therefore, I agree with PARDO e RIGO (2000), when they say that we should not be too much concerned with the question whether PE isor nota science.

The lack of an epistemological identity and of clear boundaries in the field of PE has been causing discomfort between many professionals in the area. Many of them have been asking questions such as: How should one classify PE in research agencies, scientific events and in university departments? Where does it fit better? In the natural, human, or social sciences? What kind of research should be fostered in this field? Which areas should the PE professionals be prepared to work? With children in schools? With physical fitness? With performance sports? With motor learning and development? With sports physiology? With movement biomechanics? Sports sociology? Sports psychology? With the history of PE, sports and leisure? With cultural aspects of human movement? With this all?

While some intellectuals have been defending that PE should better define its boundaries, so that everyone in the field can channel his/her efforts in the same direction, others defend that we should assume the multidisciplinary and/or transdisciplinary aspect of the field, even if it costs us not to accomplish the so desired status of science. Bracht (2000), for instance, defends the first idea. Based on the assumption that what defines a field of knowledge is its theoretical thematic, he argues that PE should restrict itself around cultural and pedagogical issues related to human movement. In other words, he defends that the thematic focus of PE should be the "human movement and its cultural manifestation in the perspective of its participation/contribution for the education of man (p. 62). According to him, areas such as sport history or sport sociology should be studied by history or sociology. Movement mechanics, for example, should be studied by orthopedic medicine or turn itself into an independent area. For him, the major preoccupation and the articulation element of PE as a field of knowledge should be its pedagogical intent. While I very much appreciate the very important theoretical contributions that this author has been offering to PE, I disagree with this specific position of his. From my viewpoint, it tends to impoverish the field.

There is a growing multidisciplinary movement that recognizes the complexity and inter-permeability of knowledge and criticizes its artificial breaking into areas and disciplines. Considering the complexity of reality and of phenomena, and the growing awareness in relationship to the inter-relationships between everything and everyone in the universe, this movement defends that we need a way of thinking and of making science interdisciplinary and/or transdisciplinary. In other words, we need a way of thinking and a science that transcends the artificially created barriers that were created between the disciplines. While scientists have been traditionally trying to isolate and separate phenomena, things, objects, kinds of knowledge, etc., to understand reality "such as it is", the idea advocated by this movement now is not to isolate or to separate. This movement is based on the holistic theory (CAPRA, 1982) and the complexity theory (MORIN, 2000, 2002) and defends that the different areas and fields of knowledge should open and no longer close themselves off to others.

In the specific field of PE, it is possible to identify various authors who direct or indirectly identify themselves with the abovementioned movement. Vaz (2003) for instance, defends that PE should assume itself as a multidisciplinary field. He argues that the richness and possibilities of the study of the human body and movement and of the multiplicity of voices that come from the fields of knowledge that serve as bases for PE, should not be ignored in favor of a supposedly better definition of the PE field. Da Costa and Duarte (2003) and Santin (2003) also support the openness, permeability and dialog of PE with different fields of knowledge. They make an alert in relationship to types of problems that closed perspectives and "simplifying types of synthesis" can cause. Yet, Pardo and Rigo (2000) argue that the fact that PE is a multidisciplinary field and the fact that it counts on different theoretical and methodological foundations, do not represent a fragility, but a possibility for the field. They also argue that the lack of boundaries in the field of PE, should not be seen as a limitation, but as a quality; not as a problem, but as a challenge that can bring big advances to the field and to the reality where it is inserted.

Considering all that was said before, I now risk defend that PE should not give up the quality of being a multidisciplinary field. I also think that it should not give up the possibility of continuing to work with, and of becoming enriched with the different areas of knowledge that are a part of her and with the debates and disagreements that emerge from her dialog with different areas. As Nóbrega et al., (2003) claim, we need to learn to deal with uncertainty and new realities. We need a discourse that does not eliminate disagreements, but establishes a dialogue and an articulation between different visions. We also need a kind of knowledge that is self-reflective and refuses to accept linear and simplifying types of thinking. As Morin states in many of his publications, we live in a time when we need to learn with the complexity of reality. Things do not need to be one thing or the other. They can be one and other at the same time. It is in the openness of PE to the multidisciplinary dialogue that resides its potential to significantly contribute with the health, education, leisure and quality of human life.

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Doralice Lange de Souza
Professora adjunta do Departamento de Educação Física da Universidade Federal do Paraná
Endereço: Padre Germano Mayer, 1284 ap. 5 Alto da XV
Curitiba PR Brasil 80040-170
Telefone: (41) 3392-6772 Curitiba PR - 80040-170
e-mail: desouzdo@post.harvard.edu

THE PRODUCTION OF KNOWLEDGE IN THE FIELD OF PHYSICAL EDUCATION: A REFLEXION FROM AN EPISTEMOLOGICAL STANDPOINT

Abstract: The goal of this paper is to make a brief historical review about the main areas of interest in the field of physical education (PE) and discuss some aspects of the epistemological debate that has been permeating this field. In the sixties, there was a considerable preoccupation with some pedagogical aspects of the corporeal practices, mainly health and moral education. In the seventies, the physical education field became almost exclusively interested in physical fitness and sports. In the eighties, it started to demonstrate a preoccupation with ideological issues and with a need to help building a more just and equal society. In the nineties, this field started also to be concerned with epistemological issues. While some authors have been defending that the field of physical education should restrict itself to pedagogical issues, based on the complexity theory and in some authors of the field of PE that work with this theory, I present some arguments in favor that this field should be maintained multidisciplinary, since it is exactly in this characteristic that resides its potential to significantly contribute to education, health, leisure and quality of human life.

Key-words: Physical education, epistemology, history.

LA PRODUCTION DE LA CONNAISSANCE DANS LE DOMAINE DE L´EDUCATION PHYSIQUE: UNE RÉFLÉXION D`EMPREINTE EPISTÉMOLOGIQUE.

Résumé: L´objet de cet article c´est de faire une brève retrospective historique sur les principaux domaines d´intérêt dans le champ de l´educacion physique (EP), et à partir de cette discussion, présenter quelques aspects du débat d´empreinte épistémologique qui s´est interposé ce champ de connaissance. Em résumé, on peut affirmer que dans la décade des années 60, il y avait une grande préoccupation avec les aspects pédagogiques des pratiques corporelles, ayant comme but la santé et l´education moralle. Mais dans les années 70, l´education physique (EP) s´est tourné presque exclusivement, à la question de l´aptitude physique et du sport. Dans les années 80, elle a passé à démontrer une croissante préocupation avec des questions de marque idéologique et avec le besoin d´un travail dans le sens de se construire une société plus juste et égalitaire. `A partir des années 90, elle a commencé à se préocccuper aussi avec des questions épistemologiques. Pendant que quelques auteurs ont défendu que le champ d´agissement de la education physique doit se restreindre au champ pédagogique, en prenant comme fondement la théorie de la compléxité et le travail d´auteurs du champ de EP que adoptent cette théorie, je présente quelques arguments `a faveur de que la EP se mantienne comme un champ multidisciplinaire, car c´est justement dans sa multidisciplinariété qui reside sa possibilité de contribuer significativement envers la santé, éducation, loisir et qualité de vie humaine.

Clé des mot : education physique ; épistemologie; histoire.

LA PRODUCCIÓN DEL CONOCIMIENTO EN EL CAMPO DE LA EDUCACIÓN FÍSICA : UNA REFLEXIÓN DE CUÑO EPISTEMOLÓGICO.

Resumen: El objetivo de este artículo es hacer una breve retrospectiva histórica sobre las principales áreas de interés en el campo de la Educación Física(EF) y, a partir de esta discusión, presentar algunos de los aspectos del debate de cuño epistemológico que ha permeabilizado este campo de conocimiento. Resumiendo, se puede afirmar que en la década de 60 había una gran preocupación con los aspectos pedagógicos de las prácticas corporales, con vistas a la salud y la educación moral. Ya en los año 70, la EF volvió, casi que exclusivamente, a la cuestión de aptitud física y deportiva. En los años 80, pasó a demostrar una creciente preocupación con cuestiones de cuño ideológico y con la necesidad de un trabajo en el sentido de construirse una sociedad más justa e igualitaria. Ya a partir de los años 90, pasó a preocuparse también con cuestiones epistemológicas. Mientras algunos autores han defendido que el área de actuación de la EF deba limitarse al campo pedagógico, tomando como base la teoría de la complejidad y el trabajo de autores en el campo de la EF que adoptan esta teoría, presento algunos argumentos en favor de que la educación física se mantenga como un campo multidisciplinar, pues es justamente en su aspecto multidisciplinar que reside su posibilidad de contribuir de forma significativa para la salud, salud, educación , esparcimiento y calidad de vida humana.

Palabras-llave: Educación Física; epistemología; historia.

A PRODUÇÃO DO CONHECIMENTO NO CAMPO DA EDUCAÇÃO FÍSICA: UMA REFLEXÃO DE CUNHO EPISTEMOLÓGICO

Resumo: O objetivo deste artigo é fazer uma breve retrospectiva histórica sobre as principais áreas de interesse no campo da Educação Física (EF) e, a partir desta discussão, apresentar alguns aspectos do debate de cunho epistemológico que tem permeado este campo de conhecimento. Resumidamente, pode-se afirmar que na década de 60, existia uma grande preocupação com os aspectos pedagógicos das práticas corporais, com vistas à saúde e à educação moral. Já nos anos 70, a EF voltou-se, quase que exclusivamente, à questão da aptidão física e do desporto. Nos anos 80, passou a demonstrar uma crescente preocupação com questões de cunho ideológico e com a necessidade de um trabalho no sentido de se construir uma sociedade mais justa e igualitária . Já a partir dos anos 90, passou a preocupar-se também com questões epistemológicas. Enquanto alguns autores têm defendido que a área de atuação da EF deva se restringir ao campo pedagógico, tomando como base a teoria da complexidade e o trabalho de autores do campo da EF que adotam esta teoria, apresento alguns argumentos a favor de que a EF mantenha-se como um campo multidisciplinar, pois é justamente em sua multidisciplinaridade que reside a sua possibilidade de contribuir significativamente para com a saúde, educação, lazer e qualidade de vida humana.

Palavras-chave: Educação Física; epistemologia, história.