39 - AN INTERDISCIPLINARY DISCUSSION: TEACHERS' CONCEPTIONS OF BODY IN THE BASIC EDUCATION

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INTRODUCTION

The body, in the school environment, constitutes one of the fundamental concerns of all physical education professionals, as well as the other educators, when it comes to dealing with human nature. This year's congress inspires us to discuss the conception of body along with teachers from different areas of knowledge who develop their activities with students from the basic education. Since it is not possible to cover all the issues regarding the body in this paper, we have decided to focus on the conceptual nuclei “body” and “interdisciplinarity”, which are little discussed in the daily reflections of professionals within the schools. These concepts are also little dealt with in teachers' formation programs, which does not invalidate the discussions and reflections built along the professional life of the teacher, as Tardif stresses (2014).

Discussing the conceptions of body in the discourse of basic school teachers as well as their possible consequences for teaching is the aim of this paper, which stems from a wider research entitled “Body: teachers' conceptions in the basic education”. The empirical field of research is formed by two schools of basic education located in Teresópolis, Rio de Janeiro State (Brazil); the participants are twenty-two teachers of basic education from different areas of knowledge and the data were collected through the WhatsApp application. We bring into this discussion the total of five conceptions, expressed in the extracts of two physical education teachers and three math teachers. The study is justified by the growing social and cultural demands of thinking knowledge from an interdisciplinary perspective. Thus, our research question can be presented as it follows: what are the teachers' conceptions of body in the basic education? Our discussions, focusing on basic education, are based upon the philosophical dimension as highlighted by Catarino (2013).

Hence, in the first part of this discussion, we have chosen to focus on philosophical dimension of teaching in the basic education, showing a brief discussion on interdisciplinarity in school. Then, we show the results and analysis on the concept of body in the school context. In the final considerations, as a way of fostering reflections inside the school, we mention that there is a need to discuss the concept of “body” and "interdisciplinarity" and other relevant issues under debate in society, often missing within the school.

INTERDISCIPLINARITY IN SCHOOL

According to Catarino (2013), it is possible to think the teaching from three dimensions: philosophical, pedagogical and political. The political one involves the perspective that every teacher has ideologies, whether conscious of it or not, so as to conduct their teaching activity, which, as a consequence, produces and legitimizes varied political, economic and social interests through their practices (GIROUX, 1997); the pedagogical dimension can be thought of in teaching based on dialogism and on consequent democracy in the classroom with students' participation as a way to raise their awareness and empowerment (FREIRE, 1987). Finally, the philosophical one stems from as a criticism of mechanistic reductionism and a dialectic understanding of the relation simple-complex, as a starting point for the interdisciplinary knowledge in schools. Despite these dimensions are not independent and interfere with each other, in this study, we have decided to focus on the philosophical dimension.

We know that discussions about the dissociation between body and soul are not new and the desire to define them has been the focus of many studies for centuries. Discussing the notion of body in schools leads us to (re) consider the prevailing knowledge in the school space, the heritage of what has been called “Cartesian model”, anchored in one of its methodological principles, namely: “divide each of the difficulties under examination into as many parts as possible, and as might be necessary for its adequate solution”. (DESCARTES, 2007, p. 34).

Established on the principles: “disjunction”, “reduction” and “abstraction”, the aforementioned methodological precept leads us to think about the fragmentation of knowledge since it is not possible to understand the world completely due to its complexity. Based on Descartes' understanding, it is necessary to divide in order to analyze the parts. However, we know that it is greater than the sum of its parts. The mechanical explanation of the world by Descartes is also related to one's feelings, which are understood in the distinction made between the soul and the human body.

When we consider the space of the basic education, we observe that this philosophical position is evident, generally, in the hierarchy of subjects, which generates, to some extent, the fragmentation of knowledge, making them increasingly specialized. This isolation is reflected even in the language used in different areas of knowledge (POMBO, 1993). This relationship with the knowledge (areas of knowledge) plays a major role in the schools (school subjects). It is the principle of disjunction that becomes effective and is widened in time management, noticeable in the schedules of different subjects.

One of the possible ways to reconstruct how we understand the world is the interdisciplinarity. Undertanding interdisciplinarity from a philosophical dimension means considering that it is more than strategies for uniting subjects in schools, since it emerges as a need to comprehend complex knowledge. When we decentralize the complexity of knowledge to a simplified understanding of it, the principle of “reduction” becomes evident, considering that it is part of the mechanistic view of the world according to Descartes.

From Pombo's view, interdisciplinarity is not a new pedagogical proposal, since it arises at schools as an”emerging aspiration among teachers” (POMBO, 1993, p. 8). An aspiration for overcoming disciplinary barriers, in an institution marked by

excessive disciplinarity ends up in the level of superficiality, of motivation, often in contradictory ways. The meaning of the word interdisciplinarity is vague and imprecise. As stated by Pombo, its meaning is yet to be invented.

It is fundamental to mention that, according to Pombo (op. cit.), in the field of interdisciplinarity, there should be communication between two or among more subjects so that a phenomenon can be understood, aiming at preparing a synthesis of a common object. Thus, it is necessary to reorganize the teaching and learning process and the collective action of teachers.

While every teacher can work with some level of interdisciplinarity, they can also strengthen the gaps between knowledge, generating more departures than intersections, both by the content chosen and the strategies used in the activities. In this sense, it is necessary that the teacher works towards the convergence of the areas of knowledge, and builds bridges among those different areas, from a critical attitude towards their own subject (POMBO, op. cit.), and remaining open to other forms of knowledge. In order to achieve this task, it is important to think about confluence zones among the areas of knowledge. We have chosen the term confluence to define the intersection among the areas, as well as to set the point where this can occur. Thus, the confluence refers both to the point of intersection and the knowledge that emerges from it, which is new, for the teacher and, consequently, to the teaching process. Therefore:

> Reflecting upon your subject is not just considering it in its specificity, in the issues it encompasses, but also considering the shadowy areas that it leaves behind, what it hides or excludes as the rest, precisely as it is configured and developed, areas in which most likely other subjects are constructed, becoming areas of tension made of distance and proximity. (POMBO, op. cit., p. 27).

We can infer interdisciplinarity as an intersection point among the knowledge of different subjects. We understand that the areas of tension, which are constituted of distance and proximity among the subjects, provide a cognitive leap that cannot be characterized as the sum of disciplinary approaches. The cognitive leap or new knowledge that emerges from the shadowy zones or from the areas of tension, in a movement of distancing, coming closer and understanding the differences rather than nulling them, enhances and takes them to a higher level. It is the transformation of insecurity in thinking activity, in a knowledge-building exercise. Thus, it is from this collective construction that we can think of the possibilities of collaborative interdisciplinary actions, being essential to enhance dialogue and openness to new knowledge.

INTERDISCIPLINARITY IN THE SCHOOL CONTEXT: A DISCUSSION ON THE CONCEPTION OF BODY

We bring into this discussion the total of five conceptions of body, expressed in extracts of two physical education teachers and three math teachers.

By considering interdisciplinarity as a cognitive leap, we have chosen to dialog with the conceptions provided by two physical education teachers. This choice aims at promoting the dialog between our formation area, which is math, with the area of this congress, physical education. This dialog has been made possible to the extent that we have incorporated into our practice, into our experience, discussions that place us in permanent tension with other areas of knowledge, in this sense we have interdisciplinarity.

It is important to highlight that we have understood from the teachers' extracts not only knowledge related to their area of formation, but also, above all, knowledge built upon the relationship with other teachers. In this sense, we understand that the conception of body can be related to personal views, built over a lifetime. As Tardif (2014) mentions, teachers knowledges are built along their professional life are part of their daily lives. Bondía (2002) points out that:

This is the knowledge from the experience: what is acquired in the way someone responds to what happens to them throughout their lives and how we give meanings to what happens to us. In the knowledge from the experience it is not about the truth of the things, but about the meanings or lack of meanings of what happens to us. (BONDÍA, 2002, p. 27).

We understand, as Bondía does, that the knowledge from the experience enhances the process of formation from the meanings or lack of them, and other attributes that make self-reflection possible. The experiences are based on time, human beings, action and context. The fact that we, teachers, work with human beings in a given time, places and activities, leads us also to understand the ongoing process of formation and transformation, since it concerns the dynamic involving lives and stories.

This is how the PET1 (Physical education teacher 1) introduces their conception of body:

There is, in my view, a confusion of what people understand to be the body, because the work with the body historically has been viewed as something inferior to that of the mind, while in fact earlier, just in theory we can separate body and mind to better understand each part, specifying details, but since they are inseparable, body and mind are just one thing, they are the individual. This conception of body and soul stood out in the Middle Age. (PET1).

The statement “this conception of body and soul stood out in the Middle Age” leads us back to a historical time in which we can locate their utterance, indicating the Middle Age. Certainly, inspired by St. Thomas Aquinas, who conceived the soul of man as unique; however, with various powers which act directly attached to the body, as the case of nutritional and sensory functions, while other powers, such as intellectual functions, are independent of the body to act (RUBANO and MOROZ, 2012).

The same teacher adds that “just in theory we can separate body and mind to better understand each part”. Here we can, once again, point out the discussion on the fragmentation of knowledge: “divide each of the difficulties under examination into as many parts as possible, and as might be necessary for its adequate solution” (DESCARTES, 2007, p. 34). It is what we call the principle of disjunction and principle of abstraction, in which, through the theory, it is possible to think of the body, but in practice “body and mind are just one thing.”

PET2 (Physical education teacher 2), share the following conception of body:

> “The body talks”, through gestures, expressions, etc... The body is the most perfect machine that has already been made. It gives structure to live each moment, using and abusing of this life! Regardless of size, weight, color, our body is perfect and so will always be! (PET2).

PET2 provides us with another view: “The body talks”. This term is placed between quotation marks, showing some value on gestures, expressions, and other ways to identify the body. “The body is the most perfect machine [...] using and abusing of this life”. It seems to us that the teacher speaks of the human body in an abstract way, apart from their own body, referring to the body as inanimate matter, in other words, similar to a perfect machine. Still as a principle of reduction and disjunction, the teacher blurs the complexity of the human body and life towards a simplified understanding of the body as being able to use and abuse of life, as it is seen in the mechanistic view of Descartes.

The same teacher adds that we need to be aware of the forms of the body, since, “regardless of size, weight, color, our body is perfect and so will always be!”. This sentence helps us think about the cultural influences and technological advancement,

throughout the 20th century that allowed new reflections on the body. It has gained evidence, mainly, through the marketing of products and lifestyles. The stimulus to a diversified view of the body as a perfect machine carries in itself the idea of perfection, the self-satisfaction. In this perspective, in many ways, the body is reduced to the condition of usage and disposal as machinery or commodity.

In relation to MT1 and MT2 (math teachers 1 and 2), we share the following conceptions of body:

A universe of elements that, in a specific way, relate to each other. (PM1)
The body is a commutative ring where every element has a multiplicative inverse. (PM2)

The aforementioned conceptions (MT1 and MT2) are given from a specific mathematical perspective, it is not about human body, is a specialized knowledge, closed in the borders of a subject, isolated, which according to Pombo (1993) is reflected in the own language used in the area of knowledge, in this case, math. We can say that the answers belong to a specific discursive genre, the genre of math. These genres gather a set of statements, in other words, for each sphere of activity, the specificities involved lead to the employment of a typical set of utterances.

That is, this specific genre indicates, in the analysis of our work, an explicit language isolation characteristic of the area of knowledge in question, as stressed by Pombo (op. Cit.). It is necessary to announce here the importance of thinking about the language as a fundamental aspect of the teaching and learning process.

At the same time, when MP1 says “A universe of elements that, in a specific way, relate to each other”, we can think about overcoming isolation, this “relationship” can occur from the interpersonal relationships in the socio-cultural context, regarding the dynamic involving lives and life-stories. This way, the conception goes beyond the genre of math to approach human relations.

The third math teacher comments:

The body is a spatial form, where we keep life and our memories. (MT3).

The ideas proposed by MT3 are related to the conception of body present in official documents: the body full of meanings expressed in our attitudes, gestures, in the way we look.

Being the body, at the same time, manner and means of integration of the individual in the reality of the world, it is necessarily full of meanings. We have always known that the behavior, attitudes, gestures, and especially the way we look communicate better than words the tendencies as well as emotions and feelings of someone who lives in a given situation, in a given context. (BRASIL, 2000, p. 38).

The sentence: "The body is a spatial form, where we keep life and our memories", brings us to consider the border with history, geography, politics, psychology, biology, among other areas of knowledge, while relating the body to the possibility to “keep” the complexity of life as well as our memories. This way, understanding the body characterizes the nature of human identity which, despite the time, shows with clarity its identity from childhood to old age. The body is not thought of as “a thing”, it is part of the entire human being. Through the body, we can engage into a reality in many possible ways, such as work, art, love, sex, the action in general. We can point out here a view of the world and knowledge that leads to an interdisciplinary perspective, highlighting several areas of knowledge and defining a conception that could be specific to the area of math from a more holistic thinking.

FINAL CONSIDERATIONS

The conceptions of body present in the extracts of the physical education and math teachers show a fragmented idea of body that cannot necessarily be related to its formation area.

We believe that the body treated as “a thing” and “an object” at schools invalidates the discussions about the different ways to experience the body, to understand its experiences, desires, feelings and the ways of learning or building knowledge.

We understand and stress the complexity of teaching action since it is necessary to be aware of the various forms of demonstration of knowledge, considering necessary to use teaching dimensions as a way of intellectual autonomy, and students' dimension to construct their own knowledge.

We have realized that the conception of body is linked to personal views, built over a lifetime. As Tardif (2014) mentions, teachers knowledges are built along their professional life are part of their daily lives.

In addition to that, we can infer that interdisciplinarity is needed and possible since some of the answers analyzed treat the conception of body more interdisciplinarily than based on their subjects. We hope that through this initial research we have been able to discuss our survey question: what are the teachers' conceptions of body in the basic education? We have a new path now: analyze the answers of all teachers in order to understand how these conceptions relate to their practices from an interdisciplinary perspective.

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AN INTERDISCIPLINARY DISCUSSION: TEACHERS' CONCEPTIONS OF BODY IN THE BASIC EDUCATION

ABSTRACT

Discussing the conceptions of body in the discourse of basic school teachers as well as their possible consequences for teaching is the aim of this paper, which stems from a wider research entitled “Body: teachers' conceptions of the basic education”. The empirical field of research is formed by two schools of basic education located in Teresópolis, Rio de Janeiro State (Brazil); the participants are twenty-two teachers of the basic education, from different areas of knowledge, and the data were collected through the WhatsApp application. We bring into this discussion the total of five conceptions, expressed in the extracts of two physical education teachers and three math teachers. The study is justified by the growing social and cultural demands of thinking knowledge from an interdisciplinary perspective. Thus, our research question can be presented as it follows: what are the teachers' conceptions of body in the basic education? Our discussions, focusing on the basic education sector, are based upon the philosophical dimension as highlighted by Catarino (2013). The results underscore the complexity of teaching action, since it is necessary to be aware of the various forms of demonstration of knowledge, considering necessary to use teaching dimensions as a way of intellectual autonomy, and students' dimension to construct their own knowledge. Our conclusion shows that the way we understand knowledge undergoes various influences throughout the construction of the identity of the teacher, and it is not necessarily related to their formation in specific areas.

Keywords: Body. Interdisciplinarity. Basic Education.

UNE DISCUSSION INTERDISCIPLINAIRE SUR BODY : CONCEPTS DES ENSEIGNANTS DE L'ÉDUCATION DE BASE

RÉSUMÉ

Problématiser la conception de ce corps dans le discours des enseignants de l'école primaire et de ses conséquences possibles pour l'enseignement est le but de cette discussion, découpée dans une étude plus vaste intitulé «Corps: profesores conceptions de l'éducation de base." La recherche empirique sur le terrain se compose de deux écoles de l'éducation de base situé à Teresopolis, Rio de Janeiro (Brésil), les sujets sont vingt et deux enseignants de l'éducation de base dans divers domaines de la connaissance et des données ont été recueillies dans le cadre de l'application WathsApp. Nous apportons à cette discussion un total de cinq concepts exprimés dans les fragments des discours de deux professeurs d'éducation physique et de trois professeurs de mathématiques. L'étude est justifiée par les exigences sociales et culturelles de plus en plus de penser la connaissance dans une perspective interdisciplinaire. De cette façon, notre question de recherche peut donc être présenté: ce que la conception du corps des enseignants de l'éducation de base? Nos discussions, en mettant l'accent sur l'enseignement de l'éducation de base, est basée sur la dimension philosophique comme l'a souligné Catarino (2013). Les résultats mettent en évidence la complexité de l'enseignement après l'action que nous devons être attentifs aux différentes formes de manifestation de la connaissance, être nécessaire d'utiliser des dimensions de l'éducation comme le moyen de leur autonomie intellectuelle et les étudiants à construire leurs propres connaissances. Notre découverte montre que la façon de penser la connaissance subit diverses influences sur la construction de l'identité de l'enseignant, est pas nécessairement lié à leur formation dans des domaines spécifiques.

Mots-clés: Corps.Interdisciplinaridade.Éducation de Base.

UNA DISCUSIÓN INTERDISCIPLINAR DE LO QUE ÉS CUERPO: CONCEPCIONES DE LOS MAESTROS DE EDUCACIÓN BÁSICA

RESUMEN

El objetivo de la presente discusión és: Entender el significado de lo que es el cuerpo en el discurso de los maestros da la escuela básica y sus posibles consecuencias para el enseño al alumno. El campo de pesquisa son dos escuelas de Educación Básica hubicadas en la ciudad de Teresópolis, Rio de Janeiro (Brasil), de los cuales participaron veintidos maestros de educación básica de diversas áreas de conocimiento. Los datos fueron colectados a través del aplicativo WhatsApp. Traemos a esta discusión un total de cinco conceptos expresados en los fragmentos de los discursos de los dos profesores de Educación Física y tres profesores de Matemáticas.El estudio se justifica por las crescientes demandas sociales y culturales de pensar el conocimiento a partir de un perspectiva interdisciplinar. De esa manera, nuestro punto de pesquisa puede ser así presentada: ¿Cuáles son las concepciones de cuerpo de los maestros de Educación Básica? Nuestras discusiones, se centra en la enseñanza en la Educación Básica, están baseadas en una dimensión filosófica como se destaca en Catarino (2013).Los resultados ponen de relieve la complejidad de la acción docente puesto que debemos estar atentos a las diversas formas de manifestación de conocimiento, siendo necesario el uso de dimensiones de la educación como la forma de su autonomía intelectual y los estudiantes a construir su propio conocimiento. Nuestra conclusión evidencia que la forma de pensar sobre el conocimiento sufre diversas influencias a lo largo de la construcción de la identidad del maestro, no estando necesariamente relacionada a su formación inicial en áreas específicas.

Palabras clave: Cuerpo. Interdisciplinariedad. Educación Básica.

UMA DISCUSSÃO INTERDISCIPLINAR SOBRE CORPO: CONCEPÇÕES DE PROFESSORES DA EDUCAÇÃO BÁSICA

RESUMO

Problematizar a concepção de corpo presente no discurso dos professores da escola básica e suas possíveis consequências para o ensino é o objetivo da presente discussão, recorte de uma pesquisa mais ampla intitulada “Corpo: concepções de professores da educação básica”. O campo empírico da pesquisa é formado por duas escolas da Educação Básica situadas em Teresópolis, Rio de Janeiro (Brasil), os sujeitos são vinte e dois professores da educação básica das diversas áreas do conhecimento e os dados foram coletados através do aplicativo WhatssApp. Trazemos para a presente discussão o total de cinco concepções, expressas nos fragmentos das falas de dois professores de Educação Física e três professores de Matemática. O estudo se justifica pelas crescentes demandas sociais e culturais de pensar o conhecimento a partir de uma perspectiva interdisciplinar. Dessa maneira, nossa questão de pesquisa pode ser assim apresentada: Quais as concepções de corpo dos professores da educação básica? Nossas discussões, tendo como foco o ensino na Educação Básica, tem como fundamento a dimensão filosófica tal como destacada por Catarino (2013). Os resultados ressaltam a complexidade da ação docente, posto que é preciso estar atento às diversas formas de manifestação do conhecimento, sendo necessário utilizar dimensões do ensino como caminho de sua autonomia intelectual, e do aluno para construção de seu próprio conhecimento. Nossa conclusão evidencia que a forma de se pensar o conhecimento sofre diversas influências ao longo da construção da identidade do professor, não está necessariamente relacionada à sua formação em áreas específicas.

Palavras-chaves: Corpo. Interdisciplinaridade. Educação Básica.