Chapter 14
Subject Matter Analysis in Physical Education

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ABSTRACT

Educational research grounded in the theoretical perspective of developmental teaching can provide some ideas, challenges, and proposals to be discussed. From a developmental perspective, the fundamental content of teaching and learning covers the theoretical concepts of each school subject. Through the area of physical education, the author discusses the process for identifying and systematizing the theoretical concepts that organize school subjects. This discussion is proposed from the point of view of its philosophical foundations in dialectical materialism and from concrete possibilities and challenges in educational research. Through analysis and systematization of the essential and necessary relations that organize physical education and by an attempt at making these relations concrete, the author highlights the value and challenges that arise during a process of a subject matter analysis in educational research.

INTRODUCTION

A developmental teaching tradition in educational practice conceptualizes and proposes theoretical concepts as the main content of teaching and learning aiming at students’ development of theoretical thinking (Davydov, 1990). In this tradition, a theoretical concept means a system of the essential and necessary relations that constitute and organize a phenomenon, which differs from a definition or from an empirical concept. A general orientation for working with theoretical concepts in teaching and learning is present both in Davydov’s ideas (1990; 1983) of developmental teaching and in Vygotsky’s ideas (2009) of scientific concepts. For instance, Davydov (1990, p. 299) synthesizes that a theoretical concept is a means for “mentally reproducing or constructing an object’s essence. Having a concept of an object means mastering a general method of constructing it, a knowledge of its origin”. To act with the ideas of developmental teaching in current teaching and learning processes it is important to understand the theoretical and philosophical principles that support the perspective. However, it is equally important to produce and discuss concrete examples that people use in their attempts at dealing with those ideas. One can find some of these concrete examples in Davydov
Nevertheless, the specific task of identifying the conceptual relations in a given subject matter and designing learning tasks through them seems to be an exception rather than a focus in educational research within a cultural historical tradition. The task of identifying and systematizing the essential relations of a school subject is different from accomplishing a developmental teaching. Nonetheless, this action is the very and substantial basis for it. In this chapter I defend the idea that one of the general objectives in educational research grounded in a developmental teaching tradition relates to the identification and systematization of the essential and necessary relations that organize a school subject. The purpose of this chapter is to discuss educational research by means of a concrete attempt at working with subject matter analysis in physical education. I introduce some general problems related to the process of analyzing physical education as a pedagogical practice. For doing this analysis I highlight the value of the concept of activity. Through the exposition of the process for identifying the essential relations in physical education and through the concrete challenges that arise during this analysis, I discuss the idea of subject matter analysis as a general objective in educational research directed to contribute to a developmental teaching approach in teaching and learning processes.

BACKGROUND

Physical education is a school discipline that traditionally deals with a particular set of human activity whether it is named Physical Culture activities, Sport activities or Athletic activities. Besides the matter about which term would be best suited for referring to those phenomena, a theoretical use of the term activity in those expressions can contribute to an understanding of the educational role of the respective discipline. To concentrate on the discussion of the theoretical meaning of the term activity, I will use the expression physical education activities, as a general reference to the different manifestations related to a voluntary and non-utilitarian bodily action like Game, Dance, Gymnastic, Combat Games, Athletics and Swimming. From a theoretical perspective physical education activities must be understood, first and foremost, as a product of societal practice. These activities embody societal needs, objects and goals, historically produced in a field of voluntary and non-utilitarian bodily actions. In this sense, physical education activities can be understood as being connected to and arising from other kinds of human activities, namely: play and art. On this topic, Elkonin (1998) outlines the developmental process of bodily actions.

It seems to us that the most likely course of development progresses from dramatic play to athletic play, rather than vice versa. The rules of human interaction leading to real world success, reinforced an infinite number of times through real group activities, are gradually isolated. Their representations outside actual utilitarian situations become the content of athletic games. (p.19)

With this understanding in mind, one can say that the methodological key for identifying and systematizing the essential and necessary relations that constitute and organize physical education activities is the analysis of the human relations embodied in these activities. Through the analysis of these relations one can identify the objects of physical education activities. The term “object” has an everyday meaning related to a physical, sensorial and material object, a thing. However, for a cultural historical tradition (Marx, 2004; 2007; 1996 and Leontiev, 1983; 1979) the term object refers mainly to the relations that motivate and organize one’s action, representing the general content of a person’s action. Leontiev (1983, p. 68) says: “a constituting characteristic of an activity is its object-relatedness. Properly,
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