



Philosophical analysis of educational paradigms and their relationship with Thomas Kuhn's notion of paradigm

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ABSTRACT

In the development of this essay was based on the thesis “Once it has reached the status of paradigm, a scientific theory is declared invalid only when an alternative candidate is available to take its place”, for two questions were raised: What would be the relationship between philosophy and pedagogy from the study of educational paradigms? and What is the scientific character of pedagogy? The main objective was to analyze from the philosophical point of view the educational paradigms and their relationship with the notion of Kuhn’s paradigm, reaching the following conclusions it can be said that at present several types of educational paradigms coexist simultaneously, because the paradigmatic changes in education They do not occur linearly as in the traditional (physical) sciences but in the form of networks, and therefore their principles are still valid.

INTRODUCTION

To begin this essay a conceptual analysis of the word pedagogy must be made, for Cossio Moreno, (2014, p.17) (Flórez, 1994, p.89) defines “Pedagogy is a discipline that studies and

proposes strategies to achieve the transition of people from the natural state to the human state” that is, it studies education as a sociocultural phenomenon at the same time explains the relationship with other sciences to understand its object of study.

When talking about pedagogy, we come to mind the very act of education, which aims to develop in individuals the intellectual, moral, and affective capacity by their culture and the rules of coexistence of the society to which they belong, therefore “education is a complex human and cultural process” (León, 2007, p.596), it contains its elements including the didactics that consists of the art of teaching and learning and other elements related to it such as evaluation.

Taking into consideration the elements raised, the following questions must be answered: What would be the relationship between philosophy and pedagogy from the study of educational paradigms? Until we get to define what is the scientific character of pedagogy? taking into account that pedagogy as a science is within the branches of the social sciences.

The thesis that arises and argues is based on analyzing the relationship of philosophy with education from the study of educational paradigms and its relationship with the notion of the paradigm of Thomas Kuhn and at the same time define the scientific character of pedagogy, starting from the following statement “once it has reached the status of paradigm, A scientific theory is declared invalid only when an alternative candidate is available to take its place.”(Kuhn, 2004, pág. 128)

The main objective of this essay is to analyze from the philosophical point of view the educational paradigms and their relationship with the notion of Kuhn’s paradigm, the methodology presented is divided into two parts, first, to present the evolution of educational paradigms taking into account the ideas of Kuhn, on the response to the crisis of paradigms from what is known as normal science until reaching the scientific revolution and second, analyze the scientific character of pedagogy.

DEVELOPMENT

The development of the thesis takes into account the expression “regarding how to learn a new perspective of the teaching process in which the teaching staff becomes a guide that guides learning, an aid for students in their task of establishing significant relationships between their previous knowledge and new contents”, (Aubert, et al. 2008), that is, in the new educational process the teacher is a guide in the student’s learning process.

Before going into the details of educational paradigms, it is convenient to explain the problem of scientificity of the social sciences and therefore at the same time of pedagogy as the science in charge of education. The historical context in which the problem of scientificity of the social sciences arises is given in the nineteenth century, its antecedents the French Revolution

and its ideals of freedom and equality, and on the other hand the Industrial Revolution (eighteenth century), due to the difficulty that was presented to the natural sciences to give answers and reliable explanations about the role that man should play in society, the relation between man and the State, the relation between the State and the economy, and finally to what extent the State should exercise power.

The problem was that many of the phenomena that existed within society could not be learned within the categories established in the natural sciences and therefore, the need arises to find answers in the social sciences because they study man in different contexts including education.

Now, it is convenient to understand that education is a process and as such the fact that it has evolved, how individuals acquire knowledge, must be conceived, this is called the educational process. This evolution is marked by paradigms that guide the educational task, transforming educational policies, the curriculum, the environment, the contents, and the subjects involved in this educational process.

The validity of the paradigms has depended on historical events and the need to improve the educational process, that is, to analyze what are the objectives or the competence to be achieved, what should be the role that each of the components, teacher, student, environment, resources, should play in this process, and the ability of the individual to solve specific problems in the environment in which he lives.

That is why Kuhn (1971, p.129) "To reject a paradigm without replacing it with another, is to reject science itself" That is, the transformation of the same has been subject to the improvement or transformation of the same, and not simply in the disuse of them, but the paradigms have been transformed according to the new educational needs.

In the educational process, in the formation of individuals at different educational levels, students must be provided with conceptual, procedural, and attitudinal theoretical elements, states Delors (1996, p.1).

Education must be structured based on four learning fundamental that in the course of life will be for each person in A certain sense The pillars of knowledge: learning to know, that is, acquire the instruments of understanding, learning to do, to be able to influence about their environment, learning to live together to participate and cooperate with others in all human activities and learning to be: a Fundamental process that includes elements of the previous three.

In this sense the need for educational training is relevant for all States, however, it has gone through different scenarios where it has been evolving, existing within the same different

educational paradigms, they have been transformed according to the dynamics and educational needs, in the first place appears the productivist paradigm, then cognitivist, and finally the constructivist of each of them will then try to relate it explaining how according to Kuhn's theory, they can enter into crises and grow anomalies in them and end up with a new paradigm that as I mentioned before Kuhn calls it as the scientific revolution.

The first of the paradigms to be analyzed in this essay is the behaviorist, where teaching was based on the result, the student as such had to demonstrate the theoretical acquisition of the knowledge acquired, without going into detail about the process, in that sense, Sarmiento Santana (2007) establishes that it "starts from an empiricist conception of knowledge, Its central mechanism of learning is associationism, it is based on the studies of learning through conditioning (the basic sequence is that of stimulus-response) and considers the study of higher mental processes unnecessary for the understanding of human behavior.

It must be taken into account the way a paradigm is conceived, as the way of conceiving reality, as long as it does not change, it is considered a normal science, understanding change as a crisis that becomes an anomaly, it consists of questioning and at the same time the creation of a new paradigm Kuhn, (1971, p.129) "The decision to reject one paradigm is always, simultaneously, the decision to accept another, and the judgment that leads to that decision involves the comparison of both paradigms with nature and the comparison between them."

That is, when a paradigm enters into crisis, it is because another was being developed to maintain hegemony and tranquility in the scientific community, Kuhn's theory is that the existence of paradigms and normal science occurs linearly in traditional sciences while in social sciences such as pedagogy paradigms are in the form of a network, This means that although a new paradigm emerges in terms of education, the previous one continues to subsist as with the behaviorist or cognitive paradigm, in this sense this paradigmatic conception had its benefits and strong defenders who maintain their positions today, a real learning, which lasted for life.

Part of the teaching staff in the classrooms, remain under this paradigm, although modern teaching implies that behaviorism has lost relevance compared to other paradigms, it has not been extinguished, teachers are still seen in classrooms with traditional teachings, however, it cannot be denied that it still helps in different educational processes, For example, "behaviorism is still in force, such as in working with mentally handicapped children."(Bazan López, 2011)

Given the ineffectiveness in the classroom and educational institutions of the behavioral paradigm, numerous pedagogues and psychologists, especially in the seventies, dedicated themselves to the research and search for an alternative paradigm. The cognitive paradigm emerges, whose main representatives are Piaget (Theory of intellectual development by stages),

Ausubel (Meaningful learning), Bruner (Learning by discovery) and Gagné (Levels of knowledge), Gardner (Multiple intelligences), Vygotsky (Cognitive development through social interaction) and Erickson (Society shapes the development of the human being), this replaces the behaviorist perspective, focuses on the study of representations The subject's mental needs, where learning arises from experience, the student is an active person, with the ability to process information and the teacher promotes reflection and the development of skills.

In this paradigm, the teacher must propose the use of didactic strategies that promote the development of the cognitive abilities of students, so that they know think, and apply. As observed, not only the class is carried out vertically, but the experience of the subject is taken into account (previous knowledge) and the subject's ability to process information, from the philosophical point of view here it is important to handle that not only the importance of learning lies in knowing that it is learned but also why one learns, epistemological elements are taken with greater force, conceiving epistemology as the branch of philosophy that studies the definition of knowledge and the production of knowledge" (Castañeda, 2008, p. 36). Cited by this corresponds to analyzing the knowledge that will be delivered to humanity.(Impuz Montoya, Trilleros Duarte, & Ureña Pérez, 2015, pág. 48)

This means that in the face of the crisis of an educational paradigm, in this case, the conductive, a new paradigm emerges that responds to the demands of the moment in the educational area, establishes Kuhn, (2004, p. 152) "All crises begin with the blurring of a paradigm and the consequent relaxation of the norms of normal research." It means that even in educational paradigms new demands are required that imply the birth of a new paradigm"

In the case of education, the birth of the constructivist paradigm arises as a shared position to contribute and improve the cognitive paradigm (I would say that it is a variant of it), which is still valid and many of its precepts are applicable together with this new paradigm, its main representatives are Piaget, Vygotsky, Ausubel, Bruner, this paradigm gives importance to the previous knowledge of the students, (cognitive gave importance to experience), learning is active, creates its mental structures, the student builds his knowledge and is responsible for his learning.

The most important conception of this paradigm is that it ensures that the student takes what he has learned into practice, which is why the teaching function is to be a guide in the teaching-learning process, which promotes the development and autonomy of students.

The theory of Kuhn (1971), distinguishes the following steps for the elaboration of science for educational theory and its practice, first of all, the existence of a paradigm, a model of action accepted by a scientific community, normal science, which consists of the application of a current paradigm, the crisis, which arises when there are anomalies that affect the paradigm, As

with the behaviorist paradigm (which still refuses to disappear), but which experiences a deep crisis because it is based on the measurable and verifiable, many of its valid principles at the time have fallen into disuse and have come to be replaced with the cognitive and constructivist paradigms both in force today.

And finally, the scientific revolution, which before the eminent crisis of a paradigm arises a new one, here it should be clarified as mentioned before that in education this occurs not in a linear way as in the traditional sciences (physical) but, in the form of networks, that is, although the paradigm is falling, its usefulness some of its principles remain valid.

The second part of this essay tries to explain the scientific character of pedagogy from the study of paradigms, it should be taken into consideration that pedagogy through educational research has its object of study, for example, learning problems, didactic strategies, the learning environment, learning styles, use of new technologies in education, forms of evaluation, on the one hand, but also the study of the curriculum and the student's environment.

The educational paradigms suppose a close relationship between the epistemological currents and the scientific paradigms, there is the scientific character of education that manifests itself in a historical vision of the educational field, in the case of the educational philosophy supposes that education like the other sciences must be supported in an epistemology and in a paradigm that affects its development, educational reforms in all formative stages, the curriculum that is based from the psychological, pedagogical, sociological, anthropological, historical and social point of view.

The scientific nature of education as such implies that it must be transformed along with the evolution of society itself and adapt to new environments, for example, the use of technology, which has become common in the classroom, the use and access to the internet, Information and Communication Technologies (ICT), Learning and Knowledge Technologies (TAC), virtual learning environments.

For each of them, it is necessary to make transformations in educational policies, before a diagnosis in research on the feasibility of its application, that is why, like the other branches of the social sciences, pedagogy has its object and method of study as is the entire educational field.

The new educational trends are framed to solve specific situations that occur in the environment, so new trends have emerged such as innovation and entrepreneurship that add to the educational pillars (knowledge, know-how, living together) and now also know how to innovate or undertake, which implies a new educational transformation.

Therefore, the scientific nature of pedagogy should not be doubted, as such it has its paradigms, principles that govern it, its study object, and of course its research method which is the very act of education at its different levels.

CONCLUSIONS

In conclusion, it can be said that at present several types of educational paradigms coexist simultaneously, which have in common to make students an active subject in learning, responsible for their learning, critical, committed, supportive, humanistic, and capable of solving the problems of their environment.

According to Kuhn's notion of paradigm scientific research is subject to rules derived from a paradigm this is a prerequisite for the elaboration of normal science. Unlike in the case of educational paradigms, it indicates a question of mentality about scientific research in the educational field.

The paradigmatic changes in education do not occur linearly as in the traditional (physical) sciences but in the form of networks in such a way that some of their principles are still valid.

Pedagogy has a scientific character because it has its paradigms that govern it, its principles, its object of study education, and its research method.

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