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LATENT EPISTEMOLOGIES AND INCLUSION: ABOUT THE DIFFICULTY OF ANALYZING IMPLICIT ASSUMPTIONS

EPISTEMOLOGIE LATENTI E INCLUSIONE: RIGUARDO LA DIFFICOLTÀ DI ANALIZZARE ASSUNZIONI IMPLICITE

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Abstract

Personal epistemology represents an area of philosophy that deals with the nature of human knowledge and that turns its attention to investigating the personal beliefs and conceptions that individuals have about it and the way of knowing. These individual beliefs guide the way of understanding the world, solving problems and implementing learning processes. Starting from the constructs of personal epistemology and of epistemological belief, in recent years an important area of research has arisen in the international scientific literature, which investigated how personal epistemological perspectives are correlated and how these have implications for teaching. According to scientific literature, teachers today should learn to give space, in addition to the presentation of knowledge, also to problems and considerations of epistemic nature, regarding the ways in which such knowledge is acquired. The interest is often limited only to the content of knowledge rather than the process of their acquisition.
Promoting the development in our students of a sort of epistemic sensitivity, a mental habit that can then be activated even outside of school, represents an important condition for the development of various skills related to cognitive autonomy and the habit of critically evaluating the information received.

Abstract

L'epistemologia personale rappresenta un campo di studi che si occupa della natura della conoscenza umana e che rivolge la sua attenzione all'indagine delle credenze e delle concezioni personali che gli individui hanno sulla conoscenza e sul modo di conoscere. Queste convinzioni individuali guidano il modo di comprendere il mondo, risolvere problemi e implementare processi di apprendimento. Partendo dai costrutti di Epistemologia Personale e di Epistemological Belief, negli ultimi anni si è sviluppata nella letteratura scientifica internazionale un'importante area di ricerca, che ha indagato come le prospettive epistemologiche personali siano correlate e come abbiano implicazioni per l'insegnamento. Secondo la letteratura scientifica, gli insegnanti oggi dovrebbero dare spazio, oltre alla presentazione delle conoscenze, anche a problemi e considerazioni di natura epistemica, riguardo alle modalità di acquisizione di tali conoscenze.
Favorire lo sviluppo nei nostri studenti di una sorta di sensibilità epistemica, un'abitudine mentale che possa essere attivata anche al di fuori della scuola, rappresenta una condizione importante per lo

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sviluppo di diverse abilità legate all'autonomia cognitiva e all'abitudine a valutare criticamente le informazioni ricevute.

Key-words

Epistemological Beliefs, Inclusion, Latent Epistemologies.
Credenze Epistemologiche, Inclusione, Epistemologie Latenti.

Introduction

Personal epistemology represents an area of philosophy that deals with the nature of human knowledge and that turns its attention to investigating the personal beliefs and conceptions that individuals have about it and the way of knowing (Schraw, 2013). These individual beliefs guide the way of understanding the world, solving problems and implementing learning processes.
In recent years, a research area of growing interest has arisen regarding personal epistemological development and epistemological convictions, which aims answering some questions: how individuals gain knowledge, their beliefs about knowing and how those epistemological beliefs influence the cognitive processes of thinking and reasoning.
According to Hofer, it's possible to speak of personal epistemologies as systems of beliefs and metacognitive processes that lead to the definition of both epistemic theories and a multidimensional set of beliefs about knowledge and knowing (Hofer, 2004).
Hofer and Pintrich (1997) propose a construct of personal epistemology consisting of two dimensions: one refers to the nature of knowledge (what is knowledge) while the other refers to the process of knowledge (how it is possible to know). They, in particular, argue that beliefs about the nature of knowledge and its acquisition should be regarded as the core of people's individual theories.

Starting from the constructs of personal epistemology (Hofer, 2001) and of epistemological belief (Mason & Bromme, 2010), in recent years an important area of research has arisen in the international scientific literature, which has begun investigating how personal epistemological perspectives are correlated and how these have implications for teaching (Hofer, 2001).
Through these researches, the concept of epistemology and its different meanings become an object of interest in teaching and learning processes with particular reference to how a teacher develops his own personal epistemological concept. It's therefore possible to speak of an epistemological conception understood as a set of beliefs, knowledge and scientific knowledge, which tend to say what the knowledge of individuals or a group of people is, their functioning, the ways of acquiring them and therefore of teaching them (D' amore, Marazzani, Santi, Sbaragli & Pinilla, 2009).
Many studies concerning the representation of professional experiences that teachers have on their students' learning processes refer to different constructs to describe similar phenomena. In fact, constructs such as "informal knowledge", "implicit theories", "practical knowledge" and "beliefs" are different expressions, all referable to the context of epistemological concepts (Pajares 1992).
Epistemological conceptions around the mid-1970s became a specific area of investigation especially in Anglo-Saxon countries and then extended to other contexts (Borko & Putnam 1996; Calderhead 1996; Putnam & Borko 1997; Richardson 1996).

Several researches have tried to deepen the relationship between the teacher's personal epistemologies and their teaching strategies and practices, allowing to better understand the complexity of the teaching-learning process. It also investigated how the beliefs that teachers have regarding their students' learning processes affect the educational practices.
It is therefore possible to investigate the relationships between teachers and learning by examining the beliefs that teachers develop in the course of their experience, constituting a fundamental component of their professional competence.

In a research conducted with a group of English nursery and primary school teachers, researchers found that each teacher had developed, on the basis of his own experience, a particular "informal theory" on how pupils learn. Some of the teachers stressed the importance of involving pupils in well-structured activities, others thought useful to make pupils face open problems that would lead them to carry out new explorations. Still others considered essential for pupils to find an emotionally safe environment in the classroom, where they could overcome any failure by learning to master new cognitive and relational skills (Anning, 1988).
This informal theory, which can be traced back to the framework of epistemological conceptions, was found to be consistent with the type of characteristics of the pupils that each teacher considered important to observe, with reference to the interpretations he gave and the type of interaction he intended to encourage. It can therefore be understood as a real epistemological conception of the teacher.
Strauss and his colleagues (1993) also conducted a series of semi-structured interviews with a group of high school teachers in which they set out to bring out their implicit theories about how students acquire new knowledge and skills. From their investigations, a common assumption emerged that was at the basis of their beliefs: knowledge exists regardless of the characteristics of the students as it can be traced in the teacher's mind or in other sources of knowledge. Therefore the main function of the teacher is to identify the best ways for students to acquire new knowledge, also taking into account their emotional and motivational states.
Other studies have been carried out by Dweck and his colleagues (1983) who analyzed the implicit theories of teachers regarding intelligence. According to these studies, teachers consider intelligence as a stable entity, therefore their task was to create favourable conditions to learn for all students, encouraging them to overcome any difficulty or failure.
Starting in the 1980s, teachers' beliefs begin to be studied in order to understand how teachers conceptualize their work, make decisions and adopt practices (Calderhead, 1996, Hoy, 2006).
A growing part of the research argues that teachers' beliefs should be studied considering the influence exerted by the culture they belong to, while other studies aim to understand if beliefs can change, and how (Olson, 1988; Mansour, 2008).
Numerous authors also argue that beliefs represent the best indicators of individual decisions in consideration of the close correlation that exists between the beliefs of teachers and the way they act in the classroom (Nespor, 1987).
Teachers' beliefs in education play a central role in ways of acquiring and interpreting knowledge by influencing one's behavior in the classroom. Therefore, beliefs, rather than knowledge, would determine how individuals organize and define tasks and problems.

In this regard, a wide debate has developed on the distinction between the two constructs, Knowledge and Beliefs.
Knowledge is analysed in terms of propositions that can be considered true as they are verifiable on the basis of objective modalities, that are epistemologically founded and are often shared by a community of experts.

Beliefs, on the other hand, are considered as often episodic propositions, experienced as subjectively true by one or more people without verify. Beliefs have cognitive, affective and evaluative components and can be used to give meaning to events, make decisions and guide action.
Due to the personal, practical and often implicit nature of both knowledge and beliefs it is difficult to identify the boundaries between the two constructs.

Furthermore, personal epistemologies, understood as beliefs of individuals about the nature of knowledge and learning processes, can affect motivation as well as the learning process itself (Pintrich, 2002).
The epistemological beliefs of students have also been studied with regard, for example, to the beliefs they have about the nature of knowledge and learning processes and how the assessment of knowledge can affect motivation for learning. In fact, a relationship has been identified between personal epistemology and some cognitive and motivational processes of students, linked to the influence of the way teachers hire and carry out their work. These researches refer to a research area still being defined, which could provide a significant contribution in understanding and improving educational processes.
As these issues are addressed in research, there will be more knowledge about the nature of epistemological theories and their relationship with cognition, motivation and learning.
Referring to the relationship between teachers' beliefs and their teaching practices, various scholars have then underlined how teaching practices are strongly influenced by teachers' personal beliefs. However, there still appears to be little empirical information available regarding how personal beliefs relate to teachers' epistemological beliefs and thus to their beliefs about teaching and learning practice.
Brousseau (2006) was the first to introduce the notion of "scholastic epistemology" by defining the set of explicit or implicit beliefs that affect methods, objects and purposes of knowledge and learning.
Scholastic epistemology would influence teaching and programming activities, profoundly affecting the choice of knowledge to be taught, the methodologies to be adopted and the learning models to organize learning.
In addition, other studies have tried to identify the influence that epistemological beliefs have on academic performance and success. (Schommer et al., 1997).
A study by Mason (1999) has shown that beliefs regarding the problematic nature of knowledge and the modifiability of the ability to learn play a positive role in academic achievement.
For Paulsen and Feldman (2005) the most sophisticated beliefs are linked to the adoption of more effective motivational strategies, which leverage the intrinsic aspects of student learning.

A further development in this area of research on teachers' beliefs is that concerning the possibility that through the training of teachers it is possible to arrive at their conceptual change on beliefs (Mason, 2003).
There are some teachers who have an idea of intelligence as a static capacity, thus adhering to a traditional teaching model, while there are those teachers who conceive intelligence as an incremental capacity and therefore do not prefer a traditional teaching model, but they consider more appropriate to use activities that promote critical thinking.
Beliefs and their influences, however, often tend not to be examined by teachers since they are often implicit, unexpressed or unaware. Failure to examine and take them into consideration could have negative consequences as they guide teacher's practice and influence their decisions.

Beliefs and Knowledge

Van Manen (1990) reflection proposes to critically reconsider the form of knowledge that is often tacit but whose dynamic character cannot and should not be underestimated since it is closely related to the educational actions promoted in the classroom.
Furthermore, Hofer and Pintrich (1997) and Hofer (2001) argue that beliefs about the nature of knowledge and its acquisition should be considered as the core of individual theories that give rise to other more specific beliefs, such as those related to teaching and learning. In particular they believe that such pedagogical beliefs can be considered a derivation of the epistemological beliefs of teachers. Epistemological beliefs would therefore be linked to behaviors in educational practices.
Aikins and Duell (2013) affirm that the influence of epistemological beliefs on learning is also mediated by other aspects of cognitive and affective processes.
Teachers tend to develop integrated systems of practical knowledge and beliefs especially in the course of their professional experience, in order to be able to orient themselves in the complex world of the classroom and school, give meaning to the many problems they have to face and develop effective methods of intervention.
Several studies also highlight how personal experience of a teacher, interpretations relating to the events of his life, attitudes and social values contribute to the elaboration of a particular vision of learning (Eraut, 1994; Leinhardt, 1995; McIntyre, 1993).
Research by Brown and Rose (1995) showed that most of the teachers they interviewed had developed the belief that pupils learn passively, reacting to stimuli from the teacher's explanations or textbooks. Almost none of the teachers had taken into consideration the hypothesis that the learning could be seen by students as an active process of building new knowledge.
In the psychological field, the research work on epistemological beliefs can be traced back to some studies started by William Perry in the early 1950s at the Harvard Bureau of Study Counsel. He created an evolutionary scheme concerning the “structural aspects of knowing and of evaluating” of the students. This scheme has allowed us to understand how students give meaning to their educational experiences (Perry, 1970). This scheme, validated through a longitudinal study with a randomly selected group of 109 students, includes nine different positions and three transaction steps. A continuous qualitative reorganization of the meanings of knowing has been postulated, also taking up some aspects of Piagetian-type evolutionary schemes.
By interacting with the surrounding environment, individuals learn to respond to new experiences by assimilating existing cognitive structures and also adapting to new changes resulting from cognitive and relational imbalances. From the Piagetian perspective the triggering of change would be determined by some form of cognitive imbalance that leads to assimilation and accommodation.

Schommer in his initial studies criticized the fact that epistemological beliefs are considered as one-dimensional and placed in a sequence by stages. He proposes to consider them as a system of several dimensions, mostly independent of each other. Subsequently he proposed an evolution of his initial approach, emphasizing that the beliefs about knowledge and ways of knowing, as well as the same beliefs about learning, are located within broad cultural perspectives. In particular, he hypothesizes that beliefs about the nature of knowledge interact with beliefs about the way of knowing, which, in turn, interact with beliefs about learning (Schommer, 1997).

Hofer and Pintrich (1997) retracing Schommer's theses, propose a distinction between beliefs about knowledge and ways of knowing, epistemological beliefs in the strict sense and finally beliefs about learning. The beliefs about ways of knowing would relate the beliefs about knowledge and those about learning.
Furthermore, epistemological conceptions lead teachers, even unconsciously, to implement inadequate teaching practices that generate in the most fragile students, cognitive and relational difficulties. The various epistemological conceptions manifest themselves through a series of behaviors and beliefs such as:

- the teacher believes he should teach everything that, in his opinion, should be known;
- the teacher believes that the student should remember everything he said;
- the teacher believes that when you understand what has been explained, you know, and therefore there is no need to study (D'amore, Marazzani, Santi, Sbaragli & Pinilla, 2009).
Assessment can be strongly influenced by the epistemological conceptions of teachers.

When teachers make certain decisions in the classroom, they explicitly or implicitly use different types of knowledge, methods and beliefs about how to find, learn and organize knowledge. This epistemological baggage is essentially empirically constructed to respond to the various teaching needs. The set of beliefs of teachers, students or parents about what needs to be done to teach, learn and understand knowledge can constitute a practical epistemology. The complexity of the teacher's epistemology, therefore, cannot be reduced to a purely cognitive or epistemological dimension precisely because it involves the very complexity of the teaching and learning processes that teachers must learn to manage. The teacher's epistemology, which can therefore be defined as a system of beliefs, continuously influences the learning processes by interacting with all the variables of the teaching system.

From the analysis of the contributions examined so far, it was possible to identify different areas of investigation:

1. epistemological beliefs to be considered as a system of relatively independent dimensions;
2. importance of an empirical investigation on the different dimensions of epistemological beliefs;
3. importance of adopting a line of research that connects epistemological beliefs to issues relating to learning and academic performance in the classroom;
4. the way in which epistemological beliefs can be related to other aspects of cognitive development;
5. mechanisms by which individuals acquire and change their perspectives on knowledge.

It is certainly possible to assume that there are a number of important conceptual and methodological issues to be explored in future research. One of the most important concerns the definition of the construct of beliefs and epistemological thinking that will need future discussion and research.

Conclusions

According to scientific literature, it is necessary to investigate the relationship between educational and teaching strategies and practices and the system of beliefs and convictions of teachers with respect to the idea they have of inclusion and disability.

Referring to the research by Murdaca, Oliva and Panarello (2016), a positive attitude towards inclusion can favour the use of teaching strategies and educational practices that are functional to all students.
As evidenced by numerous researches (Murdaca, Curatola & Oliva, 2014), it is necessary to organize the classroom context with structures and functions, values and norms that support the skills of people with disabilities and their life project, making sure that skills are transformed into real functionality.
A motivated teacher encourages improvement, gives confidence to their students by motivating them, stimulates experimentation and curiosity, gives the possibility of choice, critically examines behavior without providing a priori judgment, supporting and encouraging in students an intrinsic regulation (Elliot & McGregor, 2001).
Teachers today should learn to give space, in addition to the presentation of knowledge, also to problems and considerations of epistemic nature, regarding the ways in which such knowledge is acquired (Petter, 2011). The interest is often limited only to the content of knowledge rather than the process of their acquisition.
It is certainly necessary to promote the development in our students of a sort of epistemic sensitivity, a mental habit that can then be activated even outside of school. It represents an important condition for the development of various skills related to cognitive autonomy and the habit of critically evaluating the information received.
Recent studies have shown, in particular, that the selection of effective teaching practices, especially inclusive contexts, largely depends on the teacher's views on the nature of the disability and on the role it attributes to students with special educational needs. internal class group (Jordan et al., 2010).
We understood how the perspective through which each of us observes reality is not harmless, as the way we consider a given reality gives it a shape. Taking on a certain perspective rather than another causes the same objects of knowledge to take on a different meaning and value. “In this sense, looking in a certain way is already acting in a certain way” (Palmieri, 2011, p.41).
Reflecting on the different views that affect knowledge, the ideas related to learning can be useful to understand the effects on educational practices promoted in the classroom, aimed in particular at subjects with greater frailty.

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