

Early Childhood Teachers' Learning and Professional Development

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Abstract

This investigation focuses on the construction and foundations of early childhood educators' personal practical theories, the transformation of these theories (in the first year after the initial training period and ten years after the end of initial training), and the identification of the factors that were involved in and influenced the construction and modification of these theories – in particular, training, supervision, and professional socialization. By means of a small scale qualitative study with a longitudinal perspective, we held two semi-structured interviews with each of the four participants in two stages of the investigation and a Stimulated Recall Interview (Meijer, Zanting, & Verloop, 2002) that was based on observed and recorded video lessons in the final practice of teacher training.

The study made it possible to know the contents of the teachers' practical theories at two different stages of professional development. We can say that the training program (2002–2006) significantly influenced the beliefs and the practical knowledge of educators about how they can organize the teaching learning process of children in a pre-school context.

The dimensions in which these influences were most visible were in the organization of the teaching-learning process centred on the child's learning perspective, recognizing his abilities, and giving stimuli to think, communicate, and act. These strategies have been expanded throughout the professional development period – from strategies focused on science education to various dimensions of the everyday life of children, as routines, and the organization of the educational environment (space, time, group organization) as a learning space.

Keywords: Personal practical theories, teacher professional knowledge, early childhood pedagogy, initial teacher education

Introduction

This research focuses on the personal practical theories of early childhood teachers and changes in their practical theories (in the final year of the initial training period and ten years after), identifying the intervening and influential factors in the construction and modification of these practical theories.

We conceive of the construction of professional knowledge in the field of epistemology of practice (Alarcão & Roldão, 2008; Schön, 1983) as a perspective that implies training based on practice that is reflective, critical, analytical and, thus, produces professional knowledge. This implies reinforcing the professionalism and adoption of a training logic focused on the construction of professional skills, from and within the teaching activity (Roldão, Hamido, & Galveias, 2004). The construction of professional knowledge is a fundamental condition for teachers' autonomy and professionalism (Hargreaves, 1998; Zeichner, 1993) that is sometimes resilient to the adverse characteristics of schools in which teachers begin their profession.

The construction of the object of study within a community of practice

We think that science education in is a key area in revealing the need and importance of the adult as a mediator in the learning process and knowledge construction by children (Pascal & Bertram, 1995). We share, with authors such as Bruner (1996) and Vygotsky (1978), a vision of the child as a constructor of his own knowledge in an interactive process with culture and other factors. Science education can emphasize the construction of knowledge in a social and communicational context by considering the child's perspective as a starting point in the process for learning, considering essential the child's participation in observation and world exploitation and the capacity to become involved in learning by adult mediation (Reis, 2008).

The study herein described started from the dynamic of a community of practice of (1) researchers/teachers from a training institution, (2) early childhood teachers who cooperate in supervising the professional practice, and (3) early childhood teacher trainees. They felt the need to reflect on some aspects of curricular development, in particular in the area of science education, in order to seek and develop good educational practices. The objective, initially centred on science education, was then amplified to new dimensions – analysis of the knowledge construction of children, supervisors, and teachers.

As previously stated, the construction of professional knowledge is a fundamental condition for teachers' autonomy and professionalism (Hargreaves, 1998; Zeichner, 1993).

Analysing the construction process and professional knowledge in a group of early childhood teacher trainees who participated in the community of practice is the focus of the present study. We describe and analyse the changes that occurred in the initial training, by accessing the teachers' practical theories and evaluating the possible impact of initial training and supervision.

Theoretical framework

With regard to teacher training and the necessary professional learning, it may be possible to focus on the possibility of integration of various types of knowledge (L. Shulman & J. Shulman, 2004) and the assumption of a reflective perspective as a basis for professional practice (Schön, 1983, 1992; Zeichner, 1993). The idea that knowledge can be built puts us in another paradigm and leads us to the question of what specific teachers' knowledge should lead the formative process (Roldão, 2005).

The analytical studies of teachers' knowledge by Lee Shulman (1986, 1987) and L. Shulman and J. Shulman (2004) constituted a relevant insight into the understanding of the research produced in the last three decades on teacher professionalism and teachers' knowledge (Roldão, 2007; Montero, 2001). An important aspect is the focus in the form of knowing and understanding the curriculum by teachers. This is different from disciplinary and content knowledge. Teaching another person (which can occur with students from different backgrounds and in different contexts) is not a simple formula. It is necessary to assess the interactions between different components – knowledge or content, teacher and the child, among other variables – in order to promote learning.

The value of practice to construct professional knowledge through reflection was theorized by Schön (1983) and also applied to the teaching profession. Reflecting on practice and the ability to theorize (Shulman, 1986, 1987) can make the teacher more competent in the production of knowledge and the reorientation of his own practice.

Figueiredo (2013) reflects on the components of pedagogical content knowledge of early childhood teachers, referring to the "monopoly" of theories of child development as the basis of the professional knowledge of early childhood teachers. The knowledge that is mobilized and that sustains professional action in early childhood education will have specific issues, but also shares many issues in common with all professional teachers (Cardona, 2006; Katz & Goffin, 1990; Oliveira-Formosinho, 2000; Vasconcelos, 2009) that require further discussion. The value of content knowledge has been emphasized by the influence of sociocultural theories that recognize the importance of transmitting to new generations the heritage built from human activities in society and the possibility of the child actively participating and

becoming more relevant in that social integration (Dahlberg, Moss, & Pence, 2003; Pasqualini, 2006; Rogoff, 1990).

The importance of the relationship and emotional security (Luís, 1998; Oliveira-Formosinho, 2000; Portugal & Laevers, 2010) and attention to the emotional dimension of the child (Zabalza, 1998) as key elements, not only for healthy emotional development but also for learning about the world (Bowlby, 1969, 1973, 1980; Sroufe, Schork, Motti, Lawroski, & LaFreniere, 1985), are underlined by several investigators and by professionals (Galvão & Brasil, 2009). The idea that knowledge and human experience are not merely physical but also mental, emotional, and social (McCaughtry, 2005) causes us to emphasize not only content knowledge and learning situations, but also child knowledge and the learning process. Managing emotions (Siraj-Blatchford, 2010), attention to children's well-being, and emotional involvement (Portugal & Laevers, 2010) are also essential to the learning process.

Teachers' Practical Knowledge

In addition to the research on the components of the professional knowledge of teachers, two other categories of study on teachers' attitudes have been under development for the last four decades (Levin & He, 2008): a description of the content of teachers' thinking and studies on the actions and criteria analyses that teachers use. The research studies about personal and practical knowledge that originate from experience (implicitly or explicitly) through personal practical theories (PPTs) indicate that they can influence teachers' actions in the classroom and the opportunities that students have to learn.

Elbaz (1981) coined the term "practical knowledge" and defined five sources or origins for the practical theories of teachers: situational, personal, social, experiential, and theoretical. Buitink (2009, p. 119) refers to practical theories or practical knowledge of teachers (expressions used by several authors with the same sense) as containing all the terms, notions, perceptions, opinions, and beliefs that teachers use in curriculum development and when one thinks about the process of teaching and learning. One practical theory is the sum of experiential knowledge that has been accumulated with personal and academic experiences; one could say that a teacher with a well-developed theory and practice has achieved explicit educational intentionality in their actions and is not limited to everyday aspects of classroom routines.

Levin and Ye He (2008) developed a model where the relationship between the content of the PPT and the factors that influence them is visible. Theoretical and practical training in initial training was instrumental to the organization of this study.

Another study relevant to PPT was developed by Buitink (2009) with eight teachers – these were students within a specific training model in which there is immersion in a real professional context, with all the responsibilities of a teacher. In this study, Buitink sought to investigate what and how the students learn in the context of practice by analysing the changes that have taken place in their practical theories. Buitink (2009) considers that there are three characteristics that support the conclusion that a practical theory is well developed:

(1) Quality of content, which is related to the initial skills of the student or those that should be held at the end of their initial training. We do not expect that all the teachers at the beginning of their profession have exactly the same theories, but several studies (Fuller & Brown, 1975; Fessler & Christensen, 1992) point out that teachers' concerns in the beginning are more focused on themselves and their "survival" and classroom management. Only later in their professional development is the focus of their attention on students and their learning process. Teachers' personal practical theories that demonstrate at an early professional stage concern for students' perspectives meet the criteria of "well-developed" practical theories (Buitink, 2009);

(2) Richness or amplitude of application of the practical theory. The teachers with a strong and rich practical theory require less expertise to be effective. They often learn through mistakes or situations they did not experience directly as they integrate these situations in their theories or schemata (Berliner, 1994);

(3) Structure of the theory. Significant learning can occur if new information is incorporated into a conceptual framework that is associated with other concepts consistently (Novak, 1977; Borko as cited by Buitink, 2009). We can synthesize a theory which says that practice is much more developed the more clear, consistent, and structured it is. This process of professional development can occur in initial and continuing training of teachers.

The research results of the Buitink study (2009) are relevant because they challenge the training process and underline how structuring the learning environment can be. These future teachers were trained in practical contexts in which all supervisors (school and university) shared the same theoretical principles and the idea of a well-developed practical theory that would impact on the training of students (Buitink, 2009, p. 126). Brouwer and Korthagen (2005) also concluded, after conducting a longitudinal study, that what is learned in initial training later persists, though there is a "relapse" in the beginning of the profession in which classroom management is so important that the focus is again more on the teacher than on the student.

The role of practice in real work contexts, with cooperating teacher supervisors, has also been underlined in research, focusing on the development of practical theories of teachers. Meijer, Zanting, and Verloop (2002) developed a study that presented some relevant instruments for the elicitation of these practical theories, including a Stimulated Recall Interview that we use in our study. They state that "gaining insight into teachers' practical knowledge is just one element in the process of learning to teach" (Meijer, Zanting, & Verloop, 2002, p. 417).

We can synthesize this by saying that a practical theory is much more developed the clearer, more consistent and more structured it is. This process of professional development will occur both in initial and continuing training of teachers.

It is also necessary to combine the role of supervision in this process. We recognize supervision as the basic support for the construction of personal and professional knowledge, in which there is an intervention of all involved (students, teachers, and supervisors) in a collaborative process. Supervision has a systematic nature and the interaction between its actors needs to be careful (Chaves, 2000). This view of the supervision process seeks to enhance the opportunities of relationship with children and consequently improving their learning by proposing sufficiently challenging situations (Oliveira-Formosinho, 2002). We also recognize the nature of "inquisitive, analytical, interpretative and reflective supervision" (Alarcão and Roland, 2008, p. 54).

We can state that the main objective of supervision is to create a device for teachers to improve their practice and understanding of the process of teaching and learning. Teachers should be considered active participants in this process of knowledge construction and professional supervisors and cooperating teachers in the understanding of the problems, issues, and dilemmas inherent in the process of learning and teaching (Nolan & Francis, 1982). The construction process of professional knowledge and the role of supervision can find an equivalent in the metaphor of "scaffolding" or the concept of the zone of proximal development (Vygotsky, 1933/1978) in which knowledge can be extended to higher levels (Wood, Bruner, & Ross, 1976; Wood, 1989).

Methodology

The present study focuses on the processes of learning and professional development. It addresses the way in which early childhood teachers develop and modify their theories and practices and build their professional knowledge, which translates into described skills. By means of a qualitative and small-scale study, we intended to answer the following research questions:

- Do teacher-students construct a practical theory at the end of the initial training?

- Are there changes in early childhood educators' practical theories (the first year after the initial training period and after nine years has passed since the end of professional training)?

- What are the factors involved and which of these can be identified by early childhood teachers in the construction or modification of these theories and practices?

The research was developed in two phases:

Phase 1 (2005–2006 school year) corresponding to the fourth and final year of the degree, with the completion of practice in a kindergarten and the production of research work. At the beginning of the school year, we held an initial interview with participants (four early childhood teacher trainees at the end of the theoretical years of training) on what we consider the first phase of our research. In the first phase of the research we also highlighted two moments for a more focused approach:

- The planning and implementation of a practical activity in science education;

- A second practical activity planned by early childhood teachers and trainees in the final phase of their training and considered by them as a good practice in science education.

Both activities were video-recorded but only one of these was recorded in Phase 2, as chosen by the participants.

In Phase 2, at the end of the school year 2014–2015, we conducted a "Stimulated Recall Interview" (Meijer, Zanting, & Verloop, 2002) in which participants revisited the videotaped activities in the probationary period and selected one in order to gain access to their personal practical theories. We also carried out (after a period of nine years after completion of training) a second interview in which we addressed the content and process of development of the participants with particular regard to their personal practical theories and the factors that have influenced change or maintenance of these theories.

The instruments of data collection related to the nature of the studies and methodological options. The data obtained are of a qualitative nature and refer to beliefs, perceptions, descriptions of situations and experiences, thoughts, etc., that constitute the practical theories of early childhood teachers and also to the curricular dimensions developed in the context of kindergarten.

Results and Conclusions

The present study allowed us to know the contents of the theories and practices in two distinct phases of professional development – at the end of

the initial training and nine years after they received their degree in childhood education (corresponding to five to nine years of exercising the profession).

Generally speaking, we can say that the programme significantly influenced the beliefs and practical knowledge of educators on how you can organize the teaching-learning process of children in a preschool context.

The dimensions in which these influences were most visible were in teaching and learning organization, focusing on the child's perspective, recognizing his/her capacities, and giving the child encouragement to think, communicate, and act. These strategies have been expanded over the professional development period – from strategies focused on science education to the various dimensions of everyday day life, such as routines and the organization of the educational environment (space, time, ways to organize the group) – as learning opportunities.

The possibility of doing projects with children and sharing with them the "power" of planning is also something that is present in the theories and practices of the teachers, which was shared with concrete examples. This is also a dimension in which the influence of the training process was recognized by participants. The evaluation and documentation of child learning evidence and communication with families were also results of the initial training, mainly attained through supervision. Some participants revealed that they still develop the practices even in adverse conditions, just as they did in the first years of the profession.

When working in a more stable context, or in the professional stability phase, early childhood teachers revealed the ability to develop the curriculum in line with their practical theories. The ability to share and negotiate with parents and educational teams was developed over the socialization process and we could not determine, after this investigation, if the dynamics of supervision, planning, and development of collaborative research in their initial training also contributed to this situation.

We consider practice as the top professional socialization context for teacher trainees to apply and develop the curriculum in line with the training school framework. But we also had concerns that immersion in practice could lead to a mediocre everyday pedagogy, centred on "showing and telling" (Buitink, 2009). We also observed, in our previous experience, that trainees often tend to perpetuate the same kind of strategies as those they observe and some educational contexts "assimilate" new professionals into their usual practices and routines without major questioning of the associated theoretical foundations. We assume that this did not happen for all the participants in our study and the supervision process, organized in partnership with early childhood cooperating teachers, which carries out research projects and curriculum development in the community of practice

might be one of the reasons. The involvement of teachers from the training institution was also associated with theoretical knowledge and contributed to strengthening this coherence.

The first year of work constituted a "clash with reality" (Huberman, 1989). On the one hand, this comprises of confronting new situations (such as crèche work) and especially insertion into a professional context in which the relationship with parents, educational equipment, and leaders has to be balanced and framed. The autonomous idealization of the perfect job as "me and my children" is abandoned and gives way to compliance practices or to dialogue and negotiation.

In this initial working period, there was a more general submission to the policies of the institution, often ruled by the market and the idea that early introduction to academic learning was more valued by parents. However, in subsequent professional development phases, such as the stability period (Huberman, 1989), we note that the idea of the role of the early childhood teacher constitutes more than simply a set of routines and rituals or the result of a hierarchically imposed programme. Some participants produced arguments in the sense of being able to implement their curricular decisions. This seems to reveal a solid and well-structured practical theory. We think that the path towards a certain profession implies the need to make informed decisions in complex situations. At the end of this process of professional development, professionals should demonstrate relationship "agency" (Edwards, 2005; Taylor, 1977; Vasconcelos, 2009).

We conclude this study with the pedagogical implications for training, stressing the importance of the teachers' practical theories and knowledge and the need for effective cooperation between early childhood teachers and supervisors and teachers from the training institution. They should all cooperate in real educational settings.

Professional learning cannot be reduced to the induction of established practices, but should also contemplate the possibility of addressing problems, making interpretations, assessing the environment (a certain "ethnographic practice"), looking for local resources, and negotiating meanings. Learning to learn comes together in practice and learning becomes both personal and organizational (Vasconcelos, 2009, p. 131).

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