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ACTION RESEARCH AND TEACHER TRAINING CHALLENGES IN POLYTECHNIC HIGHER EDUCATION

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Abstract

Action research is a methodological approach often used in initial and continuous teacher training courses in Portugal, namely at polytechnic schools. For this reason we try to inquire: "To what extent is action research a useful methodology in training teachers in polytechnic higher education?".

The analysis of one's own experience of training in two training courses in the Viseu Higher School of Education, which took place between 2001 and 2006, as well as the analysis of the final research work developed allow us to conclude, among other aspects, that this methodology has showed to be attractive to many teachers and represents a contribution to a greater openness to change and educational innovation.

Not intending to generalize these data beyond the context under analysis, we consider they suggest the usefulness of action research in teacher training at the level of higher education and thus recommend the use of this methodological strategy.

Keywords: action research; teacher training; polytechnic higher education

Introduction

Teacher training has been one of the priorities of education systems, emerging as a strategy to address the issues of improvement and transformation of education (Cardoso, 2008). In an environment characterized by increasingly complex and shifting situations, the models of teacher training oriented by research have been asserting themselves increasingly, inasmuch as they promote the teacher's ability to analyse and question the professional situations in the various contexts in which (s)he operates (Zeichner, 2001; Baumfield, Hall & Wall, 2008).

Action research is a methodological approach that has been gaining more and more supporters in teacher education (Noffke, 2002). As it is a form of research that occurs in the place of the action, it is directed towards improving the educational practice, and directly involves participants, linking research to the teaching practice (Liston & Zeichner, 1991; Kemmis, 2007). A classic definition of action research is presented by Ledoux (1983, p. 623): "the production of knowledge related to modification of a given social reality, with the active participation of the persons concerned". This definition highlights the collaborative nature of research, and also sets out the three main objectives of this research: the production of knowledge, the modification of reality and the transformation of actors (Simões, 1990).

The introduction of the investigative dimension in teacher training should start at the undergraduate level, in response to the demands of innovative teaching practices (UNESCO, 1996), deepening further throughout the programmes of continuous education, so that teachers are not mere critical consumers of research undertaken by others (Zeichner, 1993), but also capable of "participating in a methodically oriented way, in the construction of professional

knowledge, towards a more grounded action in class and school and therefore society" (Estrela, 2002, p.25).

Various empirical studies show the importance of action research in the initial training of future teachers, particularly towards the increment of reflective practices and openness to change (Moreira, 2001; Price, 2001; Oliveira, 2003; Price & Valli 2005; Warren, Doorn & Green, 2008). There are also several empirical studies at the level of continuous teacher training that corroborate the usefulness of this methodology in the development of the reflexive and critical capacity of teachers, leading to a greater openness to change and educational innovation (Gomes, 1997; Caetano, 2004; Filipe, 2004; Sanches, 2005; Cardoso, Amaral & Oliveira, 2006; Warrican, 2006; Cardoso & Pereira, 2007; Garcia & Roblin, 2008).

For this reason it has been acknowledged as an important contribution to innovation and teacher training, which is why it has been carried out both in initial and continuous teacher training courses, particularly at the polytechnic higher education level. Within this context we were urged to ask the question: "To what extent is action research a useful methodology in training teachers in polytechnic higher education?"

Methodology

To address this issue we resorted to a methodology of a descriptive nature, based on the analysis of one's own experience of training in course curricular units such as Methodology Research, Seminar and Project, as well as on the analysis of the final research work developed in two teacher training courses, which took place between 2001 and 2006, at the Higher School of Education of the Viseu Polytechnic Institute.

These are courses leading to a bachelor's degree (or equivalent), in which I participated, namely: "Pedagogical Supervision and Training of Trainers" and "Complementary Training Course for Early Childhood Educators". The final research studies/monographs are kept in the library of the Higher School of Education of Viseu.

The course "Pedagogical Supervision and Training of Trainers", with a study plan covering four semesters, was held between the school years 2000-01 and 2003-04. I taught the students who enrolled in the course for the first time on the second and third years the course was running. On an individual basis, I taught two curricular units: Research Methodology and Conception of Projects in Supervision; in collaboration, I taught two other curricular units: Project Seminar and Project Development.

The first curricular unit, both of a theoretical and practical nature, aimed at providing the indispensable theoretical and methodological framework regarding the process of scientific research, as well as at developing some basic skills of research; the second one was designed to supply theoretical elements necessary for devising a research project and supporting its development; the last two curricular units were designed to monitor the implementation of the research work up to its final writing version.

The "Complementary Training Course for Early Childhood Educators", whose study plan develops over four semesters, was held for some years in the Higher School of Education. In the school years 2004-05 and 2005-06 I taught the curricular unit Project Seminar. This curricular unit aimed, on the one hand, to provide some theoretical knowledge about the methodology of scientific research, and, on the other, to monitor the development of a research project. Mostly, a seminar action research model was adopted, as proposed by Gomes (2003), the course coordinator with a wide experience in the training of early childhood educators.

According to the assessment regulation prevalent at the Higher School of Education at the time, the final research works displaying the highest scientific quality, whose trainees wished to obtain a grade higher than sixteen had to be subject to evaluation (public defence) by a jury appointed for that purpose. One of its elements could be a professor from another institution of higher education who, at the invitation of the Viseu Higher School of Education, would interrogate the

candidate (in one of the cases, we had the collaboration of a professor from the University of Aveiro). In these two courses there were six research works submitted to public defence, the minutes of which are in the School academic services.

Two final research papers were published, one in an international publication (Cardoso, Amaral & Oliveira, 2006) and the other in a national magazine (Cardoso & Pereira, 2007).

Results

The analysis allowed us to find out some data regarding teacher training in higher education. The action research has showed to be attractive to many teachers, as confirmed by the proportionately higher number of works that followed this approach, when compared to others, in both courses.

In the first course, "Pedagogical Supervision and Training of Trainers", both the classes I taught were comprised of primary teachers and early childhood educators, making up a total of twenty eight undergraduate students. In the first class, six action research projects were carried out and, in the second, eighteen projects were developed, which corresponded to about two thirds of the total number of students attending the class.

In the second course, "Complementary Training Course for Early Childhood Educators", among the twenty four educators who were included in each of the two classes, only a small part did not carry out their final study according to the proposed manner (six educators in class 1 and one attending class 2).

This preference for action research is largely justified by the interest that derives from the teachers being able to investigate a problem that emerges from their everyday school life, with implications upon their own professional development. As one of the teachers concluded:

The analysis and reflection undertaken throughout this action research study resulted mainly in a better awareness of the need to keep constantly alert, aware and therefore well informed to provide more appropriate responses to the problems stemming daily from my educational practice (Cardoso, 2003, p. 58).

Our monitoring of the action research process of these works, as well as the opinion of the teachers involved, allow us to state, in general, that this methodology represents a contribution to a greater openness to change and educational innovation, based on the recognition of gaps in the action itself and on the discovery of renewed forms of teaching/learning. As stated by one of the teachers:

I think this study was, for me, extremely fruitful (...) because I was a research teacher, I was innovative, dynamic and one of the "fruits" harvested and immediately displayed was the enthusiasm shown by students (2nd grade of Basic School Education) while writing their journals by using the computer (Oliveira, 2004, p. 34).

Also worth adding is the importance of the training provided with the appropriation of knowledge, both at the scientific level, with the deepening of areas related to the issues under review, and at the methodological level, with the acquisition of investigative techniques. In the words of one of the teachers:

The contact we had with the theories of several authors we studied and the shared reflection we made about them, allowed us to integrate this knowledge into our private theories (...). Thus, the theoretical knowledge that led us to develop an investigative attitude, allowed us to apply these theories (know how) in the classroom environment, taking into account the contexts and the individual and unique characteristics of learners (Costa, 2004, p. 161).

Also noticeable was the development of attitudes of distancing and questioning concerning pedagogical teaching practices, as well as the search for their theoretical basis. According to one of the educators, "the action research carried out is a major contribution to a more conscious and therefore more appropriate approach to the tales for children" (Mata, 2005, p. 83).

The involvement of external elements, namely more experienced researchers, has proved to be an advantage regarding the development of the research process, while, at the same time, it gave teachers greater security for them to face problematic situations.

As one of the educators concluded, "we develop capacities of self-analysis, the confront of our personal practice with that of other professionals also becoming important, towards a shared, constructive enrichment and growth" (Faria, 2006, p. 95).

Noteworthy, too, as a recurrent finding encountered while teaching these courses, was the demystification of the idea that the research activity is something inaccessible to the teacher. This was evident, especially with regard to teachers who had taught for more years, generally without training at this level, for whom the research world was something distant that only "experienced scientists" could accomplish.

In the words of one of the participants, the researching teacher is one who is "able to find adequate answers to the problems he faces, thus endowing his students with similar characteristics to his/her own" (Cardoso, 2003, p. 59).

However, we can't forget that any scientific work presupposes a set of logistic conditions and compatible methodological training that are difficult to bring together/provide for in a short period of time. If we consider the three purposes of action research, we easily conclude that the objective of "knowledge production" was, at times, less successful, due to the demands inherent to the research process and the practical constraints that emerged during its fulfilment. One of the difficulties found, most notably in the "Complementary Training Course for Early Childhood Educators", is precisely related to the need for a deeper understanding of research methodologies.

We must also acknowledge that, generally, the research focused on teachers' problems confined them, as a rule, to classroom environments (and the study of very small samples), not involving the school or educational community. Few studies are exceptions, such as Cardoso (2003), involving parents and the Parish Council itself, which culminated with the mobilization of the community to create a space for leisure activities for children who did not have any kind of support outside the school, not even from family.

Conclusion

Action research has an important contribution to make at the teacher training level. Through it, teachers become protagonists in the investigation of their practices and have the opportunity to acquire essential methodological tools for systematic research of the educational reality.

As we have seen, it is an attractive approach for teachers, which contributes to a greater openness to change and innovation in education and also to the development, on the part of teachers, of an ability to investigate problems that they come across in their everyday practice. However, investment is needed in the teaching of research methodologies, both at the initial and continuous training levels, because the methodological training is a prerequisite for carrying out rigorous and credible scientific research.

Not intending to generalize these data beyond the context under analysis, we consider that they suggest the usefulness of action research in teacher training at the level of higher education and recommend the use of this methodological strategy as a way to increase both the personal and professional development of teachers in response to the challenges and innovative requirements of the present.

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