



Procedia Social and Behavioral Sciences

Procedia - Social and Behavioral Sciences 00 (2011) 000-000

www.elsevier.com/locate/procedia

WCLTA 2012

Giving shape to teaching, from research to education

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Abstract

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This paper presents the connections between the research-training program for students and the action research they carry out in schools during the internships. Both experiences are aimed at defining and realizing learning contexts able to stimulate the construction and co-construction of knowledge, centered around meta-reflection.

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During this period, it is useful and fruitful to make connections between education and research, aimed at training students and their didactic experiences. In this sense, over the past two years a training-research program has been set up involving 102 students attending the university degree course in Education who enrolled in the Methodology and techniques of play and Art Education methodology courses and subsequently wrote a thesis at the University of Milan-Bicocca. The specific nature of these two courses required direct experience in real school settings, and informed the active-participatory teaching methods adopted based on question-stimuli, group work, constant discussion, analysis of video recordings, the presentation of the experiences in school and non-school settings.

This paper presents the connections between the research-training program for students and the action research they carry out in schools during the internships. Both experiences are aimed at defining and realizing learning contexts able to stimulate the construction and co-construction of knowledge, centered around meta-reflection.

2. Operational and theoretical contexts

This action-research was carried out in the Human Sciences Training Department, specifically as part of the Degree Course in Early Childhood Education, where the students engage in a final exam/dialogue which ranges

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from theory to practice tank to workshops and teaching practice internships in schools in Lombardy (Kanizsa, Gelati (Eds.), 2010). The action research question posed by each individual student was the center for the practical experience in a real class, singled out thanks to the Supervisor or the Tutor in the host school.

Paradigm of reference is the philosophy of participatory research (Mortari, 2007, 2009, 2010) in the sense of action-research. It is a mixture of approaches like grounded theory, narrative inquiry, case studies: each is taken into consideration singly. The aim is to maintain the connection between formal and experiential knowledge, aiming at the shared transformation between the researcher and the educator/teacher. John Dewey's words ring true "[...] the ultimate reality of the Science of Education is not found in books, nor in laboratories, nor in classrooms where teaching takes place, but in the minds of the individuals dedicated to directing educational activities" (Dewey, 1929). The inevitable comparison with the value of experience and "educational "practices" provide data, themes, which are aspects under investigation; they are the only real sources of the problems which we must look into. These practices represent the *ultimate proof of the value* attributed to the *result* of all research" (Dewey, 1929). The complexity of each educational event was affirmed, without cutting or simplifying them in order to observe them better, while maintaining rigor and scientific validity.

Action research is always starts from practice and returns to it, promoting change and improving the quality of life, and not only increasing knowledge, without underestimating this aspect. In this sense, those who share this research philosophy, be they professionals or researchers, aim to build "a research community within the community of practice" (Friedman, 2001, p.16). Action research, which deals with teachers, children, educators, inside and outside of school, is to be considered a meeting, moving towards narration in all its forms, a key element that can build new knowledge (Bruner, 1992).

The hypothesis is that teachers, researchers and professionals formulate the questions and conduct the research together, overcoming the alleged neutrality of the researcher, who serves as an agent of change, and pays attention to social and environmental dynamics (Lewin, 1951). "Participatory" or "collaborative" philosophy has the distinctive feature of being a research dialogue between all those taking part in the epistemological experience. This occurs when those involved in the research contribute to the first stage of the creative thought processes and then take an active part by making choices about the design, implementation and validation of the research" (Mortari, 2007, p.137). This stems from experience, observation, looking for clues, constantly going back to the experience in a fundamentally cyclical process. It is not a methodical, but rather a flexible process which embraces elements as they appear. Participatory, collaborative action research becomes a sort of research-training, which Damiano (1993) defines as "practical-prescriptive" in sense of knowing the practices in order to correct, integrate and develop them.

The choice of working on a research-training project with third and fourth year students was based on three aspects: each student chose a university course which will result in their becoming pre or primary school teachers; they each had good knowledge of at least 3 schools thanks to their 290-hour teaching practice internships; and they each had direct experience teaching, alternated with moments of reflection and observation, coordinated by the supervisors and the host school tutors. The wide-spread knowledge of the schools in Milan and Lombardy, the specific observation within individual schools, attention placed on active teaching methods and workshops, the correlation between the content of the courses and practical experience used directly in the individual activities proposed as well as in more articulated processes, together with the freshness of their own memories as pupils themselves at school, were all important characteristics.

3. Work methodology leading to the thesis

Starting from this approach, the thesis writing process was modified. In line with what we described above, in fact, the work methodology leading to the thesis, encompassing both the definition and realization of a class project and a thematic critical reflection of the experience and its results, required the fine-tuning and use of instruments and actions which called the research methodologies to mind.

With regard to this process, it is useful to point out how in the degree course referred to, the thesis stems from a connection between the student's idea for a project approved by the host teacher, the supervisor and the thesis advisor. Before the student implements his/her project, there is a preliminary observation phase and relative

documentation is produced. Thanks to this written or video material, the student can deepen knowledge about the class s/he will be working in, going beyond sporadic and naive impressions, in order to pose systematic questions and reflections connected to the project proposal and the management of individual activities or of a more complex process.

The thesis advisor's work with the student is intended to be an example and proposal of a possible relational-operational way of working, centered on the task of teaching-learning and the development of the student in preparation for his/her future profession, linked to the role that the latter plays within the school.

In this sense, starting the project consists in focusing on and defining a good research question, in line with the cultural curiosity of the student, his/her vision of teaching and the innovative proposals s/he had been struck by during the previous years. During this phase, the thesis advisor poses a few questions meant to stimulate or promote reflection, in order to gradually focus on a particular area of interest and single out a theme, to arrive at the construction of a central initial question which will give direction to the student's personal research.

Contact with the school context and the implicit and explicit questions of children and teachers leads to focusing on questions that can be explored in that specific situation. This observation phase, far from being a formality, allows for lingering on initial hypotheses and gradually arriving at a more specific definition of one's study and research objects.

The writing of the project by the student is based on a few generative questions aimed at maintaining an open vision and observations that foster listening to the context, orienting the initial hypotheses without denying the possibility of discovering new possible areas for investigation.

The documentation produced allows for the gathering of data in the field in a qualitative and respectful way regarding the complexity of school settings, where the specific individual interests and curiosities of children and teachers are summed with those of the person external to the context. This documentation is not only aimed at photographing what happens, but it also questions the setting as well as gives value to reflexive elements, adding further questions to the already existing ones.

Simultaneously, as in any research project, the students were invited to investigate the themes raised in greater depth, especially by reading national and international literature and singling out and reflecting on the most appropriate and coherent methodologies from pedagogical and didactic points of view.

The group dimension of the work carried out was also a crucial aspect: the group of students, with their advisors, took on the function that a group of colleagues carries out once they officially become teachers. This way of working is preparatory for their new profession. It is also an invitation to notice the most useful aspects of working in a group. The group, posing common questions, deepens and multiplies points of view which stimulate further individual questions that characterize each project.

To this end, the preparation and care of the advisors regarding spaces and times for discussion and exchange regarding individual research and on the documentation produced are a crucial aspect regarding the quality of the process in terms of its heuristic nature. The containers identified were both physical, achieved through working in large and small groups, and virtual, promoted in particular through the establishment of e-learning platforms aimed at enhancing teaching and research through the use of online tools. The latter were in constant evolution, aimed at supporting the sharing of individual research processes and the documentation produced, also through the realization of cooperative reflexive texts. The final draft of the thesis required reinterpreting the processes carried out searching for recurrences, in order to single out the most significant and critical themes.

Upon conclusion of the research projects, the students were encouraged to write brief summaries or extracts of the work produced, which were then submitted for publication to journals for teachers and educators, to stimulate further comparison with the outside.

4. Initial conclusions

A preliminary exploratory study involving a focus group of 8 newly graduated students investigated the most interesting and critical aspects, and the impact of the thesis writing process on their subsequent professional activities.

The following points emerged:

- the thesis advisor's way "of never living a straight answer but, through the formulation of further questions, leads the student towards the answer independently: this process developed critical thinking";
- the choice of combining theory with workshops which "supplied useful stimuli for the thesis process and created clarity regarding the workshops which characterized the subsequent work with the children";
- the possibility "to experiment with planning, not in a rigid way, which prepared for the possibility of changing or modifying the process, to adapt it for and with the children: this approach in research is not simple, but it develops open-mindedness, shifting the focus from micro-objectives to the larger ones which can be reached in many different ways"; "the opportunity to listen and be listened to, to 'make attempts', making mistakes at times, are currently integrated into my way of being with adults and children in my workplace";
- "the work methods proposed were extremely interesting and allowed us to experience a thesis process characterized by growth within the schools, keeping alive the value of exchange and comparison with other people living the same university experience"; the possibility "to share the experience within a work group made up of other students who dealt with the same theme from different points of view"; "to be able to exchange and compare ideas, opinions, doubts and reflections helps and stimulates to try and try again when it seems like the process is going in the wrong direction"; "the simultaneous presence of individual meetings with each student and the shared situations for verbal comparison and experiences which demanded out active participation allowed for the construction of thesis writing processes that were both personal and aware, thanks to contaminations which came from in the group";
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The work methods proposed seems to have been useful in their first professional experiences because "it allowed them to never take anything for granted, to look at all the activities proposed to the children with a critical eye, to always start from the interests, curiosities and needs of the children"; "I have become more thoughtful and aware, paying more attention to what happens, trying to notice and react to the ideas the children express throughout the day"; "the possibility to share the experiences with the research group was preparation for meetings with colleagues bringing proposals and the desire to exchange points of view"; finally, "documentation has become a prerequisite for my work. Rigid planning is still strongly rooted in schools, but it did not stop me from carrying out small projects, with excellent results and the piquing of my colleagues' curiosity"; "singling out strong and weak points in each educational choice made during the practice teaching internship provided concrete awareness linked to a planning approach which can be applied to many areas in educational research. In my opinion, this was and still is essential for building meaningful educational experiences for the children and adults involved in them".

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