

Developing Inquiry and Reflection Skills in Student-Teachers: The Use of Action Research

Vassilis Tsafos

University of Athens, Athens, Greece
Email Address: vtsafos@ecd.uoa.gr

Received: 04 Oct. 2012, Revised 19 Dec. 2012; Accepted 20 Dec. 2012

Abstract: In this paper, I present a study I conducted in the University of Athens on the reflective orientation of teacher education and the ways student teachers interpreted it. The paper consists of three parts. The first part presents the theoretical framework of the course: action research and the reflective model of teacher education. The second part attempts to roughly describe the course, focusing on the parameters governing its reflective perspective: it is an investigation of the student teachers' beliefs, tacit knowledge on teaching and awareness of their influence on their decisions in practice. The third part presents the results of the analysis of student teachers' journals, that confirmed the dynamics developed through the interaction of student teachers both in research groups and in the plenary meetings, where views could be exchanged and questions supported the development of a reflective practice. However, it also revealed the limitations and dysfunctions of this effort, mainly due to the dominant culture of technical rationality, which was only slightly changed by the way the course was organised.

Keywords: Reflective practice; student teachers; teaching action research; research community.

NURTURING A REFLECTIVE ATTITUDE IN STUDENT TEACHERS

The current trend in teacher educator (Jay & Johnson, 2002, Ross, 2002, Fox et al., 2011, Hart et al., 2006) focuses in developing reflection in the perspective of lifelong professional development. Sharing this belief, I organised the course "The teacher as a researcher", in the University of Athens, in order to help student teachers develop inquiry and reflective practices using educational action research. In the following section I present the theoretical framework based on which I set the pedagogical principles and organised the course. Two main axes, which are interrelated, are presented: on the one hand, the development of the reflective model in teacher education and the types of reflection that can be developed utilising action research in teacher education, so as to familiarise student teachers with reflective practice.

The Reflective Practice as an Alternative Approach in Teacher Education

Reflection as a process of inquiry and self-inquiry, is recently one of the most popular issues in teacher education (Copeland et al., 1993). An increasing number of teacher education programmes adopts this new teacher education approach, which uses reflection as a means of student teacher development, aiming at creating thoughtful teachers, who reflect in/on their practice, and focusing on the teachers' professional development in a lifelong learning perspective. Essentially, programmes aimed at action learning derived from reflections on actions by the acting persons.

This alternative approach to teacher education rejects the image of the thoughtless teacher, ruled by tradition, authority and circumstances (Zeicner, 1999) and the utilitarian perspective of teacher education. It originates from Dewey's ideas on a dynamic and continually growing professional teacher, who reflects on the class situation in order to understand it in a cyclical way from reflection to action and vice-versa (Hatton & Smith, 1995). Considering that the reflective teacher's characteristics are open-mindedness, responsibility

and enthusiasm, Dewey defined reflective action as a conscious professional action which couples with reflection to lead to modified action. According to Dewey, reflective action, opposed to routine action based on preconceptions and prejudice, is based on “*the active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it*” (Dewey, 1933).

This approach was mainly influenced by the contribution of Donald Schön’s account of professional learning as ‘reflective practice’ (1983) and of the reflective practitioner as one who can reflect while acting in a way that allows him/her to “*respond to the uncertainty, uniqueness and conflict involved in the situations in which professionals practice*” (Adler, 1991: 140). Schön viewed the teacher as a professional and teaching in a classroom situation with its multitude of complex and unexpected events as an also complex and sophisticated process, in which the teacher is actively engaged in order to contribute in shaping, interpreting and changing the educative situation (Griffiths, 2000). So, by focusing on concepts of “tacit knowledge”, that is the intuitive use of prior knowledge, based on experience, in order to understand the situation and act (Polanyi, 1967), and “reflection in/on action”, Schön proposed observation and reflection as ways to make tacit knowledge explicit. “*Tacit knowledge derives from the construction and reconstruction of professional experience in contrast to applying technical or scientific rationality*” (Hatton & Smith, 1995: 35) and is revealed by the teachers’ spontaneous and skillful performance (Schön, 1987). In this perspective, he introduced the reflective practicum as the main component of a teacher education programme, in order to promote proficiency in “reflection in/on action” through familiarisation with dialectic and reflective processes (Adler, 1991). Moreover, he viewed them as processes that could bridge the worlds of the University and the School, of the academic framework and the educative practice (Schön, 1987).

The work of Kenneth Zeichner contributed considerably to expanding this alternative perspective. He established that, since perspective critical reflection implies the social framework of teaching, its main axis is linking educational action with the broader social, political and cultural context, and its various parameters. Having accepted Van Manen’s (1977) classification, Zeichner posits three levels of reflection (Zeichner & Liston, 1987).

a) technical reflection, with emphasis on the efficient application of professional knowledge to given ends. The concern lies with the efficiency and effectiveness of the means used to attain ends, which themselves remain un-examined (Gore & Zeichner, 1991),

b) practical reflection, with focus on the situational and institutional analysis of teaching by the thoughtful examination of the ways institutional, social and historical contexts influence teaching and learning,

c) critical reflection, focusing on questioning that which is otherwise taken for granted (Adler, 1991), implies moral and ethical issues (Gore & Zeichner, 1991), projecting a more transformative role for the teacher, who examine the ways in/by which not only schooling but also one’s professional practice, when equitable, just and respectful of all students, contribute to a just and humane society. This kind of reflection locates the analysis of educational practice within the wider socio-cultural and politico-cultural context (Zeichner & Liston, 1987). In this way, it could contribute towards the elimination of inequalities and injustices in schooling and society (Gore & Zeichner, 1991).

Action Research and the Reflective Teacher Education Model

Because action research involves a high level of reflexivity (Somekh, 2006, Carr & Kemmis, 1986), it has been used as a strategy for promoting reflection in student teachers and encouraging reflection and inquiry and thus influence student teachers’ practice (Gore & Zeichner, 1991). As Jacobs and Murray (2010) report :

“Teaching action research means teaching an epistemology in which knowledge is situated, plural and contested; and a methodology that makes use of a variety of methods and that is reflexive in nature” (p. 332)

The action research approach, promoting self-inquiry as a research quality, not only allows but also supports reflection, initially on the underlying assumptions that govern practice (McIntosh, 2010). This

action research context, urging the unconscious to come into consciousness, views student teachers as learners who must realise and express their unconscious and tacit knowledge in order to reconstruct it as a result of an ongoing reflective process. So, teacher education programmes which use action research attempt to educate student teachers in ways that could transform them into reflective practitioners, who not only perceive and define problems in order to generate and apply solutions, but also investigate and reconstruct their understanding of professional practice.

An action research teacher education programme aims to involve student teachers in an ongoing conversation of practice, by giving them the opportunity and encouraging them to dialogue with themselves and others (students, educators, critical friends, teachers), so as to question, explore, describe, explain and mostly challenge (Valli, 1992). By giving voice to student teachers' ideas and beliefs on the one hand, and by familiarising them with listening, understanding what the others say and appreciating their point of view on the other hand, this dialectic process provides a useful basis for collective reflection. This kind of reflection does not automatically lead to harmony or consensus; more importantly, this climate of collective research creates *"an environment for negotiating differences and tolerance"* (McIntosh, 2010: 37).

Moreover, it is particularly important that student teachers establish habits of self-monitoring during teacher education. Since action research views teaching as an ongoing process that can be enhanced through research, it could allow student teachers to develop skills that would enable them to continue learning from their experiences as teachers and form and reform their practical wisdom (Rudduck, 1985).

However, these dialectic, reflective and reflexive practices don't automatically result in an action research interactive environment. They depend on how one organises the student teachers' familiarisation with action research processes, as well as the ways used for developing and (re)structuring their dialectic and reflective practices. After all, it is very difficult to develop such a reflective approach, since it requires student teachers to overcome the dominant view of teaching, which calls for technical rationality and individualism, and move on to an interactive and reflective practice that takes into account not only individual responsibility but also the wider social and political nature of schooling.

TEACHING ACTION RESEARCH AT THE UNIVERSITY

In this context, I attempted to organise the University course of the "teacher as researcher", a process of introducing student teachers to action research, by investigating how to ensure the development of these practices. These students had started their Practicum, that is they had developed in four discrete stages during the last three years of their studies: observation, participant observation, pedagogical or teaching intervention, projects. The Practicum's main aim is to educate student teachers in a way that they can link theoretical knowledge (sciences of education, psychology, sociology, subject matters) to educational practice by a process that can help them engage in processes of investigation, narration and reflection, aiming to: challenge the perception that pedagogy is the learning of successful techniques, and create connections between theory and practice through field-based education.

The "Teacher as Researcher" Course

The main aim of the course is to promote inquiry, reflection and cooperation skills in student-teachers. That is, I aim to create reflective practitioners, able to examine the context of the classroom, think about a classroom situation and see it from different perspectives, attempt a solution in problems diagnosed and seriously question the goals or values embedded in the chosen solution... In this course, I try to use educational action research as a means that could help student-teachers engender reflective practice and critical analysis of educational practice. In this perspective, I try to engage student teachers in educational action research projects in ways that develop inquiry, reflection, problem solving and collaboration skills, urging them to take responsibility for their own professional development.

The main objective of the course is to involve student teachers in an ongoing process that could

familiarise them with the open-ended, reflective and collaborative orientation of action research. I believe that in this way they can realise the importance of reflective attitude towards educational practice, as well as the ways they intervene in it. Student teachers are to focus not only on the research process but also on the reflection that accompanied it.

Moreover, special attention is paid to helping student teachers rationally analyse the educational practice either by diagnosing the situation either by reflecting on the practices developed during their action research, in order to become aware of their 'tacit' knowledge and intuitive behaviour. By observing, criticising, and evaluating, student teachers build up a new practical theory for the purposes of their everyday classroom situations and practice.

Strategies for Developing Reflective Practice

Diagnosing the Situation

Initially, after four introductory sessions on the main features of educational action research, student teachers formed research groups and were called to go to kindergartens and diagnose the situation. That is, students were to record the educational framework, the specific pupils and their particular socio-cultural characteristics, and the educational practices developed by the practitioner, and pinpoint fields and specific issues in need of further investigation, study and intervention aiming at improvement. Student teachers were familiar with the observation process. During the first stage of their Practicum, they had observed the educational process according the main parameters: the classroom as a learning environment, verbal and non-verbal communication, working in the classroom, developing activities. Afterwards they had tried and discussed with their educators a first analysis and understanding of the classroom's framework. So they could seek dysfunctions, omissions and failures, so as to understand them, investigate the reasons for any problematic situations, and decide on the intervention by which they would attempt to cover it.

The main aim of this first diagnostic step was for the student teachers to realise that educational interventions cannot be designed in vacuum but must relate to the specific educational context in which they intervene and the parameters that form and influence it. In this way, student teachers could realise that educational action is more than implementing specific educational techniques and developing specific class management skills. They could understand that no one would give the "correct" solution to their problem. It is a professional activity that presupposes skills of inquiry, reflection, problem solving, and collaboration. This process familiarises student teachers with identifying a problem and defining it in a conscious way, what Schön calls "problem framing" (Copeland et al., 1993: 350).

The diagnosis of the situation was based on a key observation, a technical rationality choice, as I wanted the student teachers to be involved, even guided, in the reflective process. Technical reflection is suggested as an essential aspect of initial student teacher development and a precursor of other kinds of reflection (Gore & Zeichner, 1991), a step to go beyond the technique and immediate situations.

Collective Reflection Meetings

The seminar was then organised as follows:

1. Meetings of research groups for discussion on the parameters affecting the specific educational context, the selection of the area of educative intervention and formation/reformation of the intervention plan. In this way, I aimed to encourage student teachers to cooperate in a dialectical and reflective framework, so as to actively begin creating a code and consequently try to construct collective knowledge.

2. Supervision meetings, where I had the role of the facilitator. During these meetings, I tried to pose open questions on the problematic situation they had diagnosed and the reasons they believed had caused it. I aimed to remove the focus from a single issue and how to resolve it, guiding their thinking towards the broader institutional and social context of schooling so as to move from technical to practical reflection.

3. Plenary meeting presentations by each group, on the area of intervention, the plan they had designed for the intervention, and the criteria for the evaluation based on their aims, providing the reasons for their choices. The meetings included discussion and alternative proposals from other groups.

This collective research could contribute to the creation of discourse communities, which could serve to model democratic pedagogy, the pedagogy of the question and the problem-posing education (Parkison, 2009). The educator isn't the transmitter of knowledge but a collaborator and constructor of knowledge along with student teachers (Moran, 2007).

Questions and Key Reflection (Evaluation Sheets)

In an attempt to develop scaffolded interaction (Palinscar, 1986) as a means for modelling self monitoring skills, essential to critical reflection (Hatton & Smith, 1995), I utilised the technique of evaluation questions and self-evaluation. In every seminar session, student teachers, individually or in groups, were called to hand in a report with their answers to concrete questions I had posed. More specifically, after the student teachers had chosen their area of intervention, they were called to answer the following questions in writing: *Why did I suggest this particular research choice? To which extent was I influenced by the diagnosis of the situation? by the curriculum and the teaching guidelines? by my prior beliefs or preoccupations on educational practice in kindergartens?* In this way, I tried to guide students towards reflecting on their choices and entering an internal dialogue, which could start them thinking on the parameters that can influence one's teaching choices. Although their answers moved in a politically correct framework, they were involved in a process of providing reasons for their choices, a process that permitted them to gradually develop practical and critical reflection. The aims of this choice were to help them understand how important is the knowledge, built on prior experiences everyone has as their point of departure (Postholm, 2008) and also realise their tacit knowledge.

Moreover, each group was given the following evaluation and reflection sheet, to form the basis for discussion in both supervision meetings and plenary presentations:

1. Teaching evaluation (taking into account the data collected, in respect to the aims initially set / the problematic situation identified, and the evaluation criteria set).

- *What do we think was successful? How is this success proved? Which aspects of the problematic situation were covered/improved? Which framework parameters contributed to this success?*
- *What do we think was unsuccessful? Why do we think it was unsuccessful? Which framework parameters limited its potential?*
- *What needs improvement? How should it be improved? What are our specific proposals for improvement?*

2. Reflection questions: This includes questions to be answered by the group and also by individuals on their own as explained in the bullets below:

- *Reflecting as a group: What have we learned from this process (teaching and research) so far? What have we gained in general? What did we change? In which direction? Which were our original views and what do we think now? How much did our initiatives advance, in our opinion? To which extent was this process our initiative and to which extent did we work in a predetermined action framework (teaching and research)?*
- *Reflecting as an individual: What have I learned? What have I gained? How did I change as a person and as a prospective teacher? What contributed to these changes? What did this process lack, in my opinion? What would I add?*

Regarding the first part of the evaluation sheet, my aim was for the student teachers to see their intervention as an ongoing process, guiding them towards researching the various factors that influence their teaching. I aimed at providing their reflection with a critical dimension.

In the second part of the evaluation sheet, I asked students to function reflectively, viewing their development on two levels: Collective: The aim was to reinforce collective reflection and the dynamics of the developing groups and Individual: Student teachers were to enter deeply in an internal dialogue. Through this process, I wanted to encourage student teachers to work with themselves and with others in order to question, investigate, understand and finally frame the situation.

After the student teachers' teaching and research was over, in their final report the students had to answer individually to the following questions: *How did I start the research? What were my views on my job and the kindergarten? Where did I end up? How did I change? What problems did I face in this process? Which questions remain unanswered? What did this process lack, in my opinion? What would I add?*

My choice to utilise various strategies indicates my intention to import gradually the students in reflective and reflexive practices. The transition from the technical reflection of the key observation in the practical dimension of the self-research and self-evaluation and the critical one of the interactive dialogue in the small research team or in the supervising and plenary meetings could acquaint student teachers with progressively more demanding forms of reflection.

STUDYING THE REPORTS

This part of the paper describes the results of my analysis of the written reports on the action research projects conducted by 64 student teachers, divided in 17 groups of three or four students, which I supervised in regular supervision meetings every two weeks, over two semesters, one in the academic year 2008-2009 and the other in the academic year 2009-1010. Through this analysis, I try to explore the extent to which action research seemed to contribute to the development of cooperation and reflective practices and of reflective teaching practice, as defined in the first part of this paper.

It is beyond doubt that a great part of their claims reflects their attempts to construct a reality that would live up to my expectations. However, it is important to note the points they make and the way in which they support their views. In this context, fully aware of the possible or even obvious alterations of reality, I will now present their coded answers, providing excerpts from their reports.

The categories of the coding were not predetermined. On the contrary, according to the principles of qualitative content analysis (Mayring, 2000; Mayring 2003), specifically the research steps proposed by Mayring (2003), looking at our material from the selected theoretical perspective, the categories resulted by reading the reports of the student teachers and the diary extracts from their journals. Thus after carefully studying the reports and extracts in a deductive/inductive fashion (LeCompte & Preissle, 1993), on the basis not only of the documents under study (Strauss & Corbin, 1998), but also on the reflection literature mentioned above, I compiled the following categories on which the analysis was based: *the value of reflective practice; practice as application vs practice as research and reflection; tacit vs explicit knowledge; cooperation in group and collective reflection; the role of questions on the development of the reflective practice; type of reflection developed; the intervention areas and the interventions proposed; and attitude towards the institutional educational and social framework.*

The Value of Reflective Practice

Based on the reports student teachers handed in, quoting from their journals, one can see that almost all student teachers claim to have benefited from the process in various ways.

An important point is that the students seem to realise they have reflected, as they learned to research and reflect on educational action but their assumptions on it. And this is obvious in the way they view educational practice, neither as the construction of a teaching repertoire nor as the development of concrete skills, but as the product of a reflective process and their professional development.

More specifically student teachers claim that this reflective process they believe promotes their personal professional development and enhances the teaching process in various ways:

“I personally feel that the process in which I participated made me realise what I expect of myself as a teacher and of the children, and how I stipulate it” Lydia-Christina

“[Teaching] is a job that keeps changing, evolving, and this process improves and helps develop not only children but also the teacher, who by experimenting succeeds in viewing things from different perspectives, free from the classroom limitations, able to link theory and practice” Kyriaki

It's more significant that in the same perspective, they seem to view this reflective research practice as a never ending cyclical process that is repeated, providing action with feedback, as can be seen in the following collective evaluation excerpt:

“Every time, after having visited the kindergarten, we all felt that we had gained something and that we were becoming better at what we had chosen to do. This doesn't mean that our plans had been successful or accepted by the children. But we definitely reflected on our every move and attempted to learn from our mistakes. After all, this is the point of this course, in our opinion. The whole process takes you one step forward each time” Holargos Group

From Practice as Application to Practice as Research and Reflection

In such a reflective framework student teachers seem to approach practice not as application but as research and reflection. It is no more a linear process that the teacher could completely control, so as to use concrete pedagogical theory. It is rather a dynamic process that could be developed in a context of interaction in the classroom. So most of them seem to overcome the dominant view of teaching as a set process, an application of a theoretical construction.

That's why several student teachers started to view the educational act as unique, as an issue to be investigated, as a process or a problem to be solved:

“I realised the value of present in the classroom, its unique character, and the feeling that one cannot effectively apply general rules and recipes everywhere” Georgia

“What was new to me was speculating and focusing on a specific problem, thinking up possible ways to resolve it” Stella

In this context, a great number of them seem to realise that problem solving isn't an attempt to arrive at a single correct solution but as Schön says it is *“a creative process in which capable practitioners attempt to make sense of [...] challenging phenomena, identify areas of practice that bear scrutiny, define particular goals for improvement...”* Schön (1990 in Copeland et al., 1993, p. 348):

“Regarding the teaching process, we learned to think critically about an issue, study all its aspects, seek the reasons for its appearance, and analyse behaviours and indications. Also, we realised that any problem situation has many solutions, because action research is an open process that allows the expression of different views” Athina

Since they view the educational act as an open process, they consider no teaching intervention to be final, or completely successful or unsuccessful. Nor do they view knowledge about teaching as permanent and definitive, but in a tentative and incomplete state (Smyth 1993). Therefore, students hold both concepts to be continuously modified as a consequence of reflection and practice.

“I realised that there is no completely successful activity, and that there are many ways of improving it. I had never engaged in re-planning, and I came to understand how important it is. It gives you the opportunity to check what you really did, to reflect on the problem you faced, to see what went well, what kept the children's interest. You have to think, reflect, judge, to seek alternative options and new perspectives” Maria

The Awareness of Tacit Knowledge

Viewing the educational practice in this way broadens the scope of research and reflection. So several student teachers also state that involving in reflection processes they realised that concrete assumptions lie beyond every educational decision and every practice and initially they tried to research them. And that is quite an important step.

“Behind our actions there are various views and latent beliefs, which we realise to a greater or lesser extent. It is very important to identify them, because this is the only way to improve the process and achieve a deeper understanding of everything encountered during teaching. In this way, we restructure the meaning of our actions and can make the necessary changes by means of evaluation. It is very important for this process to be included in the educational act” Marina

Moreover a great number of them claims to have realised many of their unconscious and tacit theories, which they could review, or even challenge. In fact, they consider that this is the result of the ongoing reflective process in which they were involved throughout the course.

“I realised how much I needed to fully control the process, and how this didn’t allow children to express their interests and desires. This made me change my design, but also reflect on my future attitude as a teacher” Margarita

The Contribution of Cooperation and Collective Reflection

According to the student teachers’ diaries, the participation in the groups and plenary meetings not only familiarised them with dialogical and communicative practices but also enhanced their critical and reflective perspective. So a great number of them recognised the value of the climate of collective dialogue and reflection that gradually developed in the groups and the plenary meetings. As they state, their little group provided them with security and support:

“In the group, there was the need for mutual understanding of the views, values and practices each student adopts” Niki

“By discussing we started to think, we wondered about our reasons for choosing these specific activities and conducting them as we did. Also about the factors that influenced how our educational theory was formed, like our experiences as pupils and students, our beliefs, etc.” Sotiria

While plenary meetings expanded their reflection turning them “into a critical group” (Sofia) and gave birth to new ideas:

“The open communication climate of the plenary meetings, with the critical comments on teaching design, helped us develop a systematic way of thinking and a complete critical approach to design” Panagiota

“Every proposal was a cause for negotiation, search for arguments and critical investigation” Stamatina

In fact, all student teachers without exception refer to the contribution of the plenary discussions, where they realised the value of disagreement, confrontation and exchange of ideas and views.

“The fact that I had the opportunity to share my speculations and views with my fellow students, to agree and disagree with them, that’s what made me get out of my own little world” Ioanna.

“This view changed, by working in the group and interacting with other groups in plenary meetings. This contributes to having all the views heard, and understanding the different aspects and multiple perspectives of reality. Also, working in groups promotes the interaction between the people in the group with other groups and the facilitator. This interaction comes to challenge the traditional teaching (lecture) that takes place in secondary and often in tertiary education” Stella

The Role of Questions on the Development of Reflective Practice

A smaller, but still significant, number of students seems to link this reflective practice with the questions they were called to answer in the supervision meetings with the educator-facilitator or in the self-evaluation sheets:

“I think that the written individual and group evaluations were very important, because they allowed me to distance myself to a certain extent, and actually learn from my action and how I experienced it” Sofia

But regarding the questions they were called to answer, most of them seem to focus on the first part of the questions, addressing the success or failure of the action (*What do we think was successful? How is this success proved? What do we think was unsuccessful? Why do we think it was unsuccessful?*). They focus less, if at all, on the questions that ask them to see deeper into the parameters of the broader context (*Which framework parameters contributed to this success? Which framework parameters limited its potential?*).

The student teachers' choice of focus demonstrates that they keep focusing on technique, and remain attached to a mentality of technical rationality in teaching, instead of reflecting on the general parameters that influence teaching. This dominant practice was perhaps reinforced by the way the evaluation sheet was organised, permitting them to focus more on technical reflection and ignore the parts that required more demanding reflective practices .

However, their journals don't always verify this reflective orientation. Based on their reports, not when self-evaluating but when they describe their actions, they don't seem to realise the complicated and multidimensional character of the educational act, focusing on more technical points instead.

Choosing the Intervention Area

Almost all student teachers claim to have been mainly influenced by their view of the situation. However, they did not view the situation in its broader social context; they focused mainly on teaching practice without important references to the broader context. They don't seem to realise that education is a social activity or that both their actions and their reflections on it develop in a social setting, with which they constantly interact.

The following excerpt from the Holargos Group demonstrates how most groups approached the educational framework: as a setting that is only influenced by the educator's intervention and implementation of techniques.

“After an honest discussion with the kindergarten teacher, she revealed that she had neglected music. This happened because the process would be tiring, with a tension she would rather avoid. Another thing we thought provided some space for a new classroom activity was the absence of a natural environment corner” Holargos Group

Among the 64 student teachers, only 2 refer to the link between the classroom and the social and political context in which it is embedded:

“A problem can be influenced by many parameters, social and political, and teachers should be sharp enough to realise them” Marina

“We realised that our visit to the kindergarten was not enough for us to diagnose the situation. We needed more information on the children's social background, their parents' expectations from the school, and even the neighbourhood and the local culture...” Natassa

Student Teachers' Attitude Towards the Institutional Framework.

Student teachers don't seem to challenge the institutional framework. Most refer to the Curriculum and the teaching guidelines without expressing any hesitation or reference to the generalising context it shapes. For them it was an actual guide of model action, not an open framework of action to be studied, a

perspective that revealed how reflective action is developed in education. The following excerpts are indicative of this tendency:

“We decided on our choice criteria collectively, based on our view of the situation, by critically reflecting on the data, in association with contemporary educational theories of learning, like the theories described in the Curriculum and the teaching guidelines” Paleo Faliro Group

“We were glad to notice that the Kindergarten Teacher generally stuck to the Preschool Education Curriculum, giving emphasis to discussion, which is an important part of Language Arts...” Glyfada Group

This attitude is also revealed by the fact that no group expressed any reservations on the Curriculum recommendations, after studying the educational context and identifying the situation or evaluating the intervention.

The Interventions Proposed

Although student teachers claimed that they started to view educational action as a unique process, as an issue to be investigated, the majority of topics and solutions under research were in fact teaching techniques, that the student teachers believe that could motivate shy or foreign students, encouraging them to participate in writing work-shops...

“[We were influenced by] an article quoted by the Curriculum. The article mentions an activity in which children can learn and memorise tongue twisters [...] This article gave my fellow students and me the idea to integrate tongue twisters in our second activity” Dafni Group

The teaching practices they chose indicate a tendency towards technical rationality. That is, although the main objective of the course was to distance the student teachers from the technocratic logic of implementation, they seem to believe that they can motivate their pupils by implementing techniques.

Only three research groups tried to reflect on the process itself, on how they approached children, on what kind of questions they posed, on how flexible their action was...

“We thought it was very interesting to try to create an open framework of linguistic interaction, placing emphasis on communication in plenary meetings, working in groups, as well as individual creativity and the production of personal creations, which would be the result not of our guidance, but of the free expression of children, who would have the chance to utilise stimuli in order to develop their imagination and creativity” Neapoli Group

“We realised that the children were simply implementing, efficiently of course, what the teacher had told them. We believed we should provide motivation for them. Initially, we would use a subject that came up, to ask them to speak of their experiences. It would have to be a subject they had all experienced. We also wanted them to work in groups...” Ilioupoli Group

“The Kindergarten had many foreign children, some of which could not communicate at all. The first questions we had were: How can we make them feel safe? How can we help them integrate in the group? How can we work with children that are so different?” Kallithea Group

The Type of Reflection Developed

Having categorised the student teachers' descriptions according to the classification of types of writing proposed by Smith and Hatton (1993), it seems that most descriptions move between descriptive writing and descriptive reflection. Most excerpts on choosing the area and subject of the intervention are simple descriptions without deeper analysis.

For instance, the Holargos Group focuses on shortcomings of a totally technical nature, that did not really relate to researching the specific educational framework and pupil population:

“After an honest discussion with the kindergarten teacher, she revealed that she had neglected music in her class, although she had all necessary props (musical instruments). This happened because the process would be tiring, with a tension she would rather avoid. Another thing we thought provided some space for a new classroom activity was the absence of a natural environment corner. We believed that such a corner

would be particularly important for children who live in an unnatural environment, growing up in the city. We therefore decided to work on the environment, along with some musical activity. The two fields do not cancel each other out, on the contrary they implement each other, and it is easy for the children to get stimuli from either of the two fields” Holargos Group

Few reports fall under dialogic reflection. For instance, in the following excerpt Maria seems to realise that the synthesis of various different perspectives provides her with the opportunity of redefining the problems, developing new, perhaps more complicated, interpretive categories, so as to produce new narrations in the context of successive planning-acting-reflecting cycles.

“I understood that groups always result in change in some way, sometimes through disagreement. Personally, I interpreted change as a sign to work with my students towards a better planning. I later learned that research results can be interpreted in various ways, so they shouldn’t be viewed in absolute terms” Maria

Lastly, the narration of the Glyfada Group reveals the value of reflecting on action and engaging in dialogue with practice:

“All the activities we had chosen dealt with communication, so that we could check in practice what we had observed. We concluded that there was no problem with gender relationships, as we had previously thought [...] We therefore found it necessary to change our field of action and be flexible during our intervention [...] We observed that when playing charades, the children found it hard to recognise their name or the names of their peers. Was that because of the lack of written stimuli in the class?” Glyfada Group

In fact, most teams failed to display a clear concern for moral and political issues of teaching (critical reflection). They failed to connect their specific focus to broader context.

CONCLUSION

The analysis of the student teachers’ reports indicates a reflective approach, or at least a claim to one. The student teachers viewed self-inquiry as a teacher quality. They were not transformed in reflective practitioners, after all this would be particularly hard for student teachers. Yet they did realise what they should aim for, if they want to enhance the educational process and change schools by understanding their educational practice.

They also engaged in a dialogue, on the one hand with practice, though technocratically (technical reflection), and on the other hand with others, and even with themselves (practical reflection). In this way, several students came to realise the value of the dialogue process. Lastly, they understood that such a reflective practice transforms them into lifelong learners.

Moreover educational action research could be a means that could help student-teachers engender reflective practice and critical analysis of educational practice. The security offered by the research group, the opportunity for discussion and collective research, even the confrontation and the search for arguments to support their views, all these led to the development of reflective dialogue, which revealed difficulties and posed questions. The research and experimental also character of the process, which was the result of their collective intervention, allowed them to distance themselves from their practices, even from their beliefs.

An important role is played by both plenary meetings, where views can be exchanged, and supervision meetings, where the educator acts as a critical facilitator. It should be noted that all students consider this strategy important, effectively supporting them in developing their reflective practice. It seems that student teachers started to develop a collaborative culture that involves challenging and questioning each other’s practice, sharing responsibility for collective problem solving and learning by implementing and utilising new ideas. They appear to gradually realize that reflection should be a collective and collaborative process in terms of teaching.

Apparently, questions actually help student teachers initiate a personal research, which on the one hand allows them to initiate an internal dialogue on their personal educational theory, while on the other hand helps them analyse some, mostly technical, of the parameters that influence it. However, it is quite interesting to study the type of questions they found particularly supportive in facilitating their reflection, as student teachers seem to focus on the first part of the questions, addressing the success or failure of the action to focus mainly on the evaluation. Moreover they don't discuss the criteria they had created in advance. As a result, they failed to engage in deeper analysis or modify their criteria according to how their action evolved.

Their reports don't indicate challenging deeply held attitudes and preconceptions. Even if they claim it, this is not confirmed neither in their reports, nor in their evaluation sheets. They claim that they view the educational act as unique, as an issue to be investigated, but they seem to look for the one best way of managing the situation. So student teachers find it hard to overcome the person-centred approach, the technical rationality, and the individualism and instrumentalism that dominate educational thinking.

They don't seem to incorporate the critique of the institutional contexts in which they are called to work, but rather they take it for granted. They fail to establish the social and political nature of teaching. It is obvious that most students hold a non-politicised view of schooling, and are therefore not engaged in critical reflection. Most likely, this reflects the University orientation towards training students in approved curriculum content and teaching techniques. This could explain the cause of the students' failure to perform as intended, while illustrating that what is implied as a student failure is actually a cultural constraint of the institutional context. But it is obvious too that reflection should not be restricted only to examining technical skills. As educators, we have to examine ways to persuade student teachers to be equally concerned with the ethical, social and political context within which teaching occurs. Provided that we too can escape the personal and institutional constraints on our thinking and practice.

And it is obvious that in this way they could turn into a school-based student-teacher learning community, where they would work collaboratively, reflecting on their practice, connecting their practice with the pupils' achievement by examining selected evidence, and making changes that focus on the particular pupils in the classes where they work (McLaughlin & Talbert, 2006).

Lastly it becomes obvious that the complexity of reflection makes it difficult to teach. However in spite of the difficulties, student resistance, and the restricted focus on school context, the study demonstrated that an action research project could be both challenging and empowering for student teachers. The issue now is to inquire ways to modify or enrich the evaluation approach, when student teachers evaluate their practicum experience, so as to permit them to include complex judgements within the social and political environment. Moreover participatory action research is a social activity (Gins et al., 2008: 116), as "*it deliberately explores the relationship between the realms of the individual and the social*" (Kemmis & Wilkinson, 1998: 23).

REFERENCES

- [1]. Adler, S. (1991). The reflective practitioner and the curriculum of teacher education. *Journal of Education for Teaching*, 17(2), 139-150.
- [2]. Carr, W. & Kemmis, S. (1986). *Becoming critical: education, knowledge and action research*. London: Falmer Press.
- [3]. Copeland, W., Birmingham, C., Cruz E., & Lewin, B. (1993). The reflective practitioner in teaching: towards a research agenda. *Teaching and Teacher Education*, 9(4), 347-359.
- [4]. Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston: D.C. Heath .
- [5]. Fox, K.R., Campbell, M., & Hargrove, T. (2011). Examining reflective practice: Insights from pre-service teachers, in-service teachers and faculty. *Journal of Research in Education*, 21(2), 37-54 .
- [6]. Ginns, I., Heirdsfield, A., Atweh, B., & Watters, J. (2008). Beginning teachers becoming professionals through action research. *Educational Action Research*, 9(1), 111-133.

- [7]. Gore, J., & Zeichner, K. (1991). Action research and reflective teaching in preservice teacher education: A case study from the United States. *Teaching and Teacher Education*, 7(1), 119 - 136.
- [8]. Griffiths, V. (2000). The reflective dimension in teacher education. *International Journal of Educational Research*, 33(5), 539-555 .
- [9]. Hatton, N., & Smith, D. (1995). Reflection in teacher education: Towards definition and implementation. *Teaching and Teacher Education*, 11(1), 33-49.
- [10]. Hart, P., Robottom, I., Posch, P., & Kyburz-Graber, R. (Eds). (2006). *Reflective practice in teacher education. Learning from case studies in environmental education*. Bern: Peter Lang AG.
- [11]. Jacobs, G., & Murray, M. (2010). Developing critical understanding by teaching action research to undergraduate psychology students. *Educational Action Research*, 18(3), 319-335.
- [12]. Jay, J.K., & Johnson, K.L. (2002). Capturing complexity: a typology of reflective practice for teacher education. *Teaching and Teacher Education*, 18, 73-85.
- [13]. Kemmis, S., & Wilkinson, M. (1998). Participatory action research and the study of practice. In B. Atweh, S. Kemmis & P. Weeks (Eds), *Action research in practice: partnerships for social justice in education* (pp. 21-36). London: Routledge.
- [14]. LeCompte, M. D., & Preissle, J. (1993). *Ethnography and qualitative design in educational research*. San Diego: Academic Press, Inc.
- [15]. Mayring, P. (2000). Qualitative content analysis. *Forum: Qualitative Social Research*, 1(2). Retrieved from <http://www.qualitative-research.net>
- [16]. Mayring, P. (2003). *Qualitative Inhaltsanalyse*. Weinheim: Beltz .
- [17]. McLaughlin, M.W., & Talbert, J.E. (2006). *Building school-based teacher learning communities. Professional strategies to improve student achievement*. New York & London: Teacher College Press.
- [18]. McIntosh, P. (2010). *Action research and reflective practice. Creative and visual methods to facilitate reflection and learning*. New York: Routledge .
- [19]. Moran, M.J. (2007). Collaborative action research and project work: Promising practices for developing collaborative inquiry among early childhood preservice teachers. *Teaching and Teacher Education*, 23(3), 418-431.
- [20]. Palinscar, A. (1986). The role of dialogue in providing scaffolded instruction. *Educational Psychology*, 21, 73-98.
- [21]. Parkison, P.T. (2009). Field-based preservice teacher research: Facilitating reflective professional practice. *Teaching and Teacher Education*, 25(6), 798-804.
- [22]. Polanyi, M. (1967). *The tacit dimension*. New York: Anchor Books .
- [23]. Postholm, M.B. (2008). Teachers developing practice: reflection as key activity. *Teaching and Teacher Education*, 24(7), 1717-1728.
- [24]. Ross, D.L. (2002). Cooperating teachers facilitating reflective practice for student teachers in a professional development school. *Education*, 122, 4, 682-688 .
- [25]. Rudduck, J. (1985). Teacher research and research-based education. *Journal of Education for Teaching*, 11(3), 281-289.
- [26]. Schön, D. (1983). *The reflective practitioner. How professionals think in action*. New York: Basic Books.
- [27]. Schön, D. (1987). *Educating the reflective practitioner. Toward a new design for teaching and learning in the professions*. San Francisco: Jossey Bass.
- [28]. Smyth, J. (1993). Reflective practice in teacher education. *Australian Journal of Teacher Education*, 18, 1, 35-52.
- [29]. Somekh, B. (2006). *Action research: a methodology for change and development*. Buckingham: Open University Press .
- [30]. Strauss, A., & Corbin, J. (1998). *Basics of qualitative research. Techniques and procedures for developing grounded theory*. London: SAGE Publications .
- [31]. Valli, L. (1992). *Reflective teacher education: cases and critiques*. Albany: State University of New York Press .
- [32]. Van Manen, M. (1977). *Linking ways of knowing with ways of being practical*. *Curriculum Inquiry*, 6, 205-228.
- [33]. Zeichner, K., & Liston, D. (1987). Teaching student teachers to reflect. *Harvard Educational Review*, 57, 23-48.
- [34]. Zeichner, K., & Liston, D. (1990). *Traditions of reform and reflective teaching in US teacher education*. Michigan: National Centre for Research in Teacher Education, Michigan State University.
- [35]. Zeichner, K. (1999). The new scholarship in teacher education. *Educational Researcher*, 28(4), 4-15.

NOTES

ⁱ Descriptive writing: merely reports events, b) Descriptive reflection: attempts to give reasons, often based on personal judgments or on the students' reading of literature, c) Dialogic reflection: a form of discourse with one's self, an exploration of possible reasons, d) Critical reflection: involves providing reasons for decisions or events, taking into account the broader historical, social or political context.