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The Initial Training of Geography Teachers at the University of Porto: Model and Training, Practices and Representations

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Abstract

Since 2008, the initial training of Geography teachers in Portugal was combined with the initial training of History teachers. This forced union has led to implications in the practices and teaching of geography. This paper intends to explore the thoughts and actions of the student teachers at the Faculty of Arts and Humanities, University of Porto, (FLUP), with regard to the practices they follow, as well as understand their points of view about what they teach and how they teach Geography. We further intend to examine their opinion about what Geography and Geographical Education is. To this end, we gathered information from student teachers and cooperating supervisors based on questionnaires and classroom diaries, from 2008 to 2013. We found that students are concerned with their image as teachers, and are far from thinking they are educators with the ability to adopt an investigative attitude to their mode of teaching, as they are still centered on themselves. As such, we believe they lack the ability to think about the process of teaching geography. As a Bachelor of Arts, Geography is a comprehensive science that studies the natural and human aspects of the Earth's surface, the distribution of the phenomena and the relationships among them. The Bachelor in History with a minor in Geography encompasses a more traditional definition of geography than the geography major, but its students revealed a more accurate notion of what Geographical Education is than those enrolled in the Bachelor in Geography with a minor in History.

Keywords: Initial teacher training in Geography, Geography, Geographical Education

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Introduction

Since the 1980s, the Faculty of Arts and Humanities of the University of Porto (FLUP) has trained teachers of geography for basic (3rd cycle – 7th to 9th grades) and secondary education.

After 2008, with the Bologna Process, initial teacher training in geography in Portugal was combined with the training of history teachers. Thus, the training of these future teachers was merged into a single Master's course in Teaching History and Geography.

This Master's has the duration of two years. In the first year, students attend theoretical-practical classes at FLUP, with an emphasis on general educational training and specific educational training. In the second year, students begin their teacher training at basic and secondary schools. At the end of the Master's, students must submit a final report and sit open exams before an examination panel. The report should address an issue related with the teaching practice developed during the second year (Table 1).

Table 1.

Structure of the Master's Course in Teaching History and Geography

Areas	1 st Year		2 nd Year	
	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester
General Educational Training	Social Analysis of Education	Educational Research		
	Ethics and Codes of Conduct	Contemporary Pedagogical Perspectives		
	Psychology of Education			
General Educational Training	Geography Teaching Methodology I	Geography Teaching Methodology II		
	History Teaching Methodology I	History Teaching Methodology II		
		Teaching Resources Applied to History and Geography		
Introduction to Pedagogical Practice			Supervised Teaching Practice in History + Geography + Research Seminar + Final Report	
Specific Training			Issues in Geography	Issues in History

Students attending this Master's course have a diversity of academic backgrounds. Candidates must hold an undergraduate degree in Geography with a minor in History, or an undergraduate degree in History with a minor in Geography, i.e., an undergraduate degree in History or Geography, in a total of 120 ECTS credits, with at least 50 ECTS credits in each scientific area. The Master's also attracts candidates with degrees in the area of the Social Sciences, such as European Studies, Anthropology, or Archaeology.

Prior to higher education, the history students minoring in geography had been taught history since they were about 10 years old, which is not the case of the geography graduates minoring in history: compulsory geography education in Portugal starts at about 12-13 years of age and ends at 15-16, and it can be interrupted in the pre-university years.

This forced union of the training of geography and history teachers has been a major topic of discussion among teachers of this post-graduate course. We have monitored our students and therefore this paper aims to give an overall view of the teacher training course in geography and history at the Faculty of Arts and Humanities of the University of Porto.

The paper begins with a brief presentation of the structure of the Master's course in Teaching History and Geography and the work developed in terms of teacher training from the perspective of professional qualification. Next, the methodology employed to give voice to the student-teachers will be described, intended to understand their thoughts and actions in the practices they developed. The paper ends with the results obtained and final remarks.

The Master's Course in Teaching History and Geography at Faculty of Arts and Humanities, University of Porto

The Master's course in Teaching History and Geography is a post-graduate course consisting of two academic years. In its current organization², the two semesters of the 1st year include course units in general education and specific education units. Among the latter, we highlight Geography Teaching Methodology I and II, History Teaching Methodology I and II, and Applied Teaching of History and Geography. The course unit, Introduction to Professional Practice (IPP), is taught in the 2nd year and takes up most of the school year. It consists of Supervised Teaching Practice (STP) at the basic and secondary schools involved and an Integrated Seminar at FLUP, alternating every week between History and Geography. The course ends with a final in-service training report, which serves to link the work done during the teaching practice and is submitted to open discussion before an examination panel.

According to the course curriculum, the first contact with teaching the subject in basic and secondary education is through Geography Teaching Methodology and Teaching Resources Applied to History and Geography (1st year). The main aim of these course units is to prepare students to be active participants in the design and management of the curriculum, so that they can understand and work with different curriculum conceptions, always maximizing the educational potential of geography. Also, they aim to familiarize students with the geographical and educational discourse, so that they can process the curricular and educational information properly in order to better interpret the subject's Official Curriculum and Program Guidelines. Students are required to master correctly and (if possible) in an original manner the pedagogical and

²The Course was slightly changed in 2012, when the subject History and Citizenship was substituted by the History Teaching Methodology II.

didactical materials in order to become better geography teachers. Students can expect not only didactic preparation for managing the current curriculum design, but also a conceptual framework and procedural tools that will enable them in the future to cope with the work related to teaching using their know-how and skills.

Rather than presenting structured and prescriptive lessons, we have fostered a number of debates and discussions that help our students reflect on and question the importance of teaching geography to young Portuguese students. We want our student-teachers to take a position on this matter, since they will have to manage a flexible curriculum in basic education, in accordance with the educational and curricular projects of each school³. Many of these students have studied history for about 15 years (basic, secondary and higher education) and only have 9 ECTS corresponding to 120 hours in the undergraduate degree in geography. There is therefore a need to raise awareness about this subject, its importance in the education of young citizens, and how it is taught.

Following this process of reflection and discussion, students then analyze and interpret the Curriculum Guidelines for basic and secondary education, and become familiarized with the official documents issued by the Portuguese government, using them to develop their planning. By this we mean a plan that will allow them to manage the course unit over the cycle of studies (basic or secondary), a plan for the academic year, a plan for a didactical unit and a plan for a class. The future geography teachers will also have to deal with the pedagogical-didactical materials they will need to identify and use in their future classes. Finally, in Geography Teaching Methodology, students address issues such as learning assessment, and learn how to build different assessment tools.

In Introduction to Professional Practice (2nd year), more specifically in STP, students-teachers will come into contact with the school context. The main aim of this unit is to deepen and consolidate knowledge, skills and specific attitudes of the teaching-learning process, thus constructing a professional identity to develop the scientific and pedagogical-didactical skills of the postgraduates, their capacities and attitudes, leading to a reflective professional performance, which is analytical and critical and in permanent refinement. Thus, after completing the first year of the Masters course, students begin their on-the-job training in schools and manage the curriculum in a real-life context according to the years and academic level assigned to them. This is a complex task for such young individuals, who see themselves acting as teachers for the first time, and who sometimes face very disruptive classes, often lacking knowledge in geography.

As part of the in-service training groups, they are monitored by two supervisors, one in history and one in geography. Although they are not assigned classes, they practice in their supervisors' classes, teaching at least 900 minutes in history and 900 in geography, in two levels of schooling, one in basic education and the other in secondary education.

³At the beginning of the 2014/2015 academic year, the national curriculum lost flexibility and is now a prescriptive curriculum.

Student-teachers must prepare classes in advance, under the guidance of their supervisors, and identify and prepare educational-resource materials to be used in class. Students must also prepare assessments of the teaching-learning process and of the product, and examine the learning developed by students. Thus, it is intended that the student-teachers fulfil one of the aims of STP, that is, they must analyze, in a reflective manner, the experiences implemented in each internship, establishing the coherent articulation between theory and practice, between general education training, specific didactics and teaching practice. Each class taught by the student-teachers is supervised, discussed and reflected upon by the participants, focusing on the activities developed during the classes. Room is thus created to discuss collaboratively the educational work methods employed by the young teachers. This work is also monitored by the Faculty supervisors, both of history and geography, who visit the schools to guide the students in their teaching practice. We can say that the focus of STP falls on the organization, management and achievement of the teaching-learning process in the field of planning, intervention and assessment (educational, teaching resource and scientific dimensions), and also on the introduction to professional development and a sense of ethical accountability.

The teacher guidance provided is intended to equip student-teachers with the ability to systematically question their own teaching as the basis for their development (Stenhouse, 1987). By adopting an investigative attitude, teachers think about their actions and become aware of how educational work is done or will be done, by seriously reflecting on them. Thus, "by reflecting on their own practice, [teachers] transform it into an object of inquiry with a view to improve their educational qualities" (Martins, 2011, p.128), allowing them to break free from a teaching activity that automatically accepts the daily reality of schools. This is to equip young teachers with the ability to know "how to think, to be stimulating and challenging, to seek solutions through multiple ways, the one or ones that best meet the challenges, on a constant and recurring basis, and to ask if there is an answer to: what caused these conditions" (Sá-Chaves, 1997, p.11).

It is true that this reflection "also means recognizing that the process of learning to teach extends throughout the career of the teacher" (Zeichner, 1993, p. 17), but we believe that this is only the point of departure for the training and we can only prepare student-teachers to begin to teach. But we think we have an obligation to help these future teachers to internalize how they teach and improve over time, taking responsibility for their own professional development.

Thus, in the teacher training model that has been applied, it is believed that teacher education should aim to "develop a training model that is capable of encouraging attitudes of permanent reflection and analysis, and a critical awareness of the teachers' own practice" (Garcia, 1999, p.131), bearing in mind however that the supervision provided is only the beginning of training and that students can only be prepared to start teaching. In short, the aim of this Master's is to develop the initial training of geography teachers so that they are able to adopt a reflective stance and (re)build knowledge in a sound and sustainable manner.

Methodology

The Master's course in Teaching of History and Geography is now in its seventh edition. Over these years, we have given voice to the students. First, we aimed to identify the profiles of the students and to analyze their perceptions, expectations, experiences, satisfaction and their representations. We intended to optimize curriculum organization and development, the training experiences and limited teaching resources available, as well as contribute to the improvement of the students' knowledge of education science and teaching practices, as future teachers of geography and history. Later, it became important for us to examine what these student-teachers thought about how to teach and how they taught geography. We heard the voices of the teacher trainees and their school supervisors about the importance of the reflective process taking place in STP. Finally, we wanted to understand the young teachers' representations of what Geography and Geographical Education is and how this subject should be taught at school.

We conducted a survey with students who attended the Master between 2008 and 2011. We wanted to position, contextualize and understand the model of geography (and history) teacher training from the experiences developed with/by early generations of the students trained, or in training, in light of the Bologna process. The surveys were applied in June 2010 and 2011 to the students of the first three editions (2008/2009, 2009/2010 and 2010/2011) of the Master in Teaching History and Geography. From 2008 to 2011, 94 students were enrolled in the course, from which we obtained 53 respondents to the survey.

Because we had begun to perceive the fundamental concerns of the trainees during STP, we wanted to understand what these student-teachers thought about the geography curriculum guidelines and how they interpreted them, as well as understand how student-teachers thought about what they taught and how they taught geography. To this end, we asked the students who were attending the 2nd year of the course in the 2011/2012 academic year to keep dairies of two class of their choice. All students who attended the Master's responded to the request by keeping class dairies regarding their thoughts about preparing and conducting the classes. Each student was free to choose their dairies. Only the period to accomplish them was stipulated, between January and March 2012 (the beginning and end of the 2nd semester).

We opted for the class dairy as a tool for data collection, because as advocated by Zabalza (2004, p.13), class dairies "are documents in which teachers wrote down their impressions of what is happening in their classes." We further argue, in line with Clark and Yinger (1985, p.6), that the class dairy functions as "thinking aloud written on paper." Writing, by its very nature, presupposes personal involvement. So "when writing there is a cognitive development that is relevant and constructive thinking, as that implies a structure, an organization, to reread what you wrote, and modify it to reflect what you wrote. And this is something personal" (Martins, 2011, p. 165). Thus, we consider that "every class diary is a personal document that can be used as a source of data, allowing us to obtain written information about what teachers think during the process of planning their classes and what they think about what happens during the lessons they conduct" (*Ibidem*). At the end of the 2nd semester, 32 class dairies were

submitted related to 32 geography classes in basic and secondary education, that is, all the students answered the challenge launched.

To examine the importance student-teachers attributed to the reflexive process in their teaching practice as a privileged moment of their early career, we asked student-teachers in the 2012/2013 academic year to answer a survey with semi-open questions. We also wanted to understand how geography school supervisors mentoring the student-teachers in schools interpreted the reflective process within the STP. We also asked them to participate in an interview with semi-open questions but it was carried out electronically. In the first case, the survey was addressed to all those who were in teacher training at basic and secondary schools, i.e., 25 students, from which 18 responded. In the case of the latter, the interview was conducted online with 5 school supervisors with whom we worked. All responded to the interview. It should be noted that the survey and the interview were conducted in March 2013.

Finally, because we wanted to understand the student's representations of Geography and Geographical Education and understand their conceptions on how geography should be taught, we applied a survey with semi-open questions to 2nd-year Master's students in 2013/2014. This survey was conducted in October 2013 and all the student-teachers respond to it, i.e., we had 26 respondents.

As with any qualitative study, we obtained a data set that needed to be organized and systematized in order to extract meanings related to the research. The data were subject to content analysis, a tool which serves to methodically process numerous and extensive information and testimonies, according to certain rules, and consequently extract inferences and interpretations, giving voice to the student-teachers' opinions. The key ideas and relevant data relating to the study's main objectives were then extensively recorded and analyzed.

The Voices of the Student-Teachers Regarding the Master's, The Science of Geography and Geographical Education

As mentioned previously, the Master's in Teaching History and Geography in the 3rd Cycle of Basic and Secondary Education had its beginnings at the Faculty in the 2008/2009 academic year. Also as we said before, our aim was to obtain an overall view of the teacher training course in geography and history and listen to the voices of the student-teachers and local supervisors.

Survey Applied To Master's Students of the First Editions (2008-2011)

First we listened to the voices of the student-teachers from the first three editions of the Master's. We aimed to position, contextualize and understand the model of geography (and history) teacher training based on the experiences developed with the earlier generations of students trained, or in training, in light of the Bologna Process. From the 53 respondents of the three first courses, we learnt they had prior interest in the Master's based on their applications: appropriateness to personal features and projects, scientific and professional motivation for teaching, and professional stability.

The views expressed by students reveal some patterns in opinion. The students were concerned about the validity of their scientific training (in the minor) to intervene at the

level of their teaching of the subject in the 3rd cycle of basic education and secondary education. Hence, it is possible to understand the greater sensitivity of the respondents, particularly the history graduates regarding their training in the minor in geography, and the need to deepen their scientific training in history and geography during the 1st year of the Master's. The students' opinions on the relevance of the course units for their training denoted an attitude that can be considered as "back to basics". That is, faced with the dual training from a scientific point of view, they were interested in deepening their training equally in the specific didactics of geography and history.

Here we emphasize the need for focused training in disciplinary knowledge, especially in the specific area of the minor. Although we identified a significant advancement in their teaching skills, the students were still unable to realize that their training had to be broader, and were not aware that they could be educators with the ability to adopt an investigative attitude to their way of teaching (Stenhouse, 1987), or to reflect on their practice (Schön, 1998; Zeichner, 1993). Given the stage of development of these students' scientific knowledge, they were not able to realize that the training of teachers they were experiencing had to go further than focusing exclusively on disciplinary knowledge or specific didactics.

And this raises complex problems because students generally positioned themselves as mere (and unsafe) receptors of knowledge, leading to a technical training design rather than a holistic view and investigating the processes of training, which should overcome the disciplinary perspective, developing a critical attitude which should also be multidisciplinary.

The Voices of the 2nd-Year Master's Students (2011-2012)

The awareness that the Master's students were very interested in deepening their scientific knowledge in either history or geography, led us to investigate how the students-teachers thought about what they teach and how they teach geography. To this end we asked them to complete two class dairies.

From the first reading of the 32 diaries to explore the narratives they contained, we became immediately aware that, for these student-teachers, they were dominated by their insecurity, anxieties and fears. In some cases, the state of mind was panic. More than thinking about teaching, how to teach and reflecting on their teaching action, the students' thoughts were focused on their state of mind and emotions.

This does not mean that when thinking of their classes they forgot about the work they would have to do. Quite on the contrary, they planned their lessons with the students in mind, showing an enormous need to please them, as they ultimately felt it was absolutely essential to motivate them in geography classes. They assumed that they should design the lessons such that the students would build their knowledge, often drawing on their prior conceptions. However, they also assumed that they would be using the subject's textbook in class, since their students expected this, especially those with higher marks. At this point, we were able to understand the dilemmas facing the student-teacher. If, on the one hand, they intend to encourage the students to build their

own knowledge, based on research methodologies, they are nonetheless required to follow the textbook's programme, because this is what the students demand.

Proceeding with the analysis, a notion stands out that the student-teachers approach their lessons in terms of the major programme topics, such as, for example the population, mobility, and the climate. However, they rarely mentioned the thematic and procedural geographical contents of each lesson. When they did mention them, they did so generically, as lines of reference, and did not specify the geographical vocabulary in a precise manner, such as parallels, meridians, equator, or the Earth's axis. It is clear they were departing from what they thought about the characteristics of the class they were going to teach and focused their discourse on the attitudes they intended to develop, disregarding to some extent geographical knowledge and procedure.

The student-teachers also prepared pedagogical-didactic materials, but they were essentially worksheets for students to work on in class and power point presentations. Although the worksheets contained texts and statistical data accompanied by questions, they were basically intended to consolidate knowledge for the purposes of student assessment and grading. The power point presentations, in their turn, contained texts and images, but the student-teachers did not explain how they intended to use them in class. They were, thus, classical working documents, repeated in almost all the classes, leaving little room to prepare materials aimed at developing the students' collaborative learning processes. Only very rarely did the teachers adventure into designing educational situations and moments involving role playing, debates or even didactical games and, above all, research that could actively engage the students in building their geographical knowledge. Only a few student-teachers proposed educational situations aimed at preparing graphs and interpreting maps, thus fostering geographical procedures and literacy.

It is interesting to realize from the student-teachers' narratives that they were convinced that they had prepared their lessons with the intention of leading the students to build their own knowledge. They assumed that they would be drawing on the students' prior knowledge and that the teachers, would act as supervisors. But they ended up preparing their lessons as classroom maestros, in which the students should comply with the tasks initially thought out by the teachers in a perfectly regulated and orderly manner. Indeed, we were confronted with a few cases, even if rare, where the teachers reported that the students' more active participation disturbed and distracted them. And we do not mean here misbehaving or lack of discipline, but the effective participation of the students in the classroom.

In terms of actually giving the classes, once more, it was the student-teachers' anxiety that stands out. Again, we were confronted not only with the importance they gave to teaching the classes, but also their insecurity, their fears and concerns regarding approval from the class. Rather than thinking about their teaching action, they described the lesson and hardly reflected on their acts. These feelings and actions were further heightened by the fact that they assumed a lack of scientific knowledge. In fact, this realization of the lack of geographical knowledge was much more acute in history graduates minoring in geography or other graduates from the social sciences, than in the

geography graduates with a minor in history. But even the latter mentioned certain failings in their knowledge of the field. And the deepest fear for these student-teachers was not being able to answer the students' questions. They took note of uncertainties regarding the modes of the pedagogical work developed, but did not question their teaching practice, as though their performance had been positive overall and there was not much to improve. They described a sense of happiness and gratification, because by the end of the class, they were accepted by the students, since in their mind, they kept them participative and cooperative.

It should be noted, however, that there were young teachers who did think about moments in class, about the actions they developed, who described what they had learned from the classroom context, and actually pointed out solutions for similar situations in the future. But regardless of whether they described the classes taught or whether they occasionally put forward a few considerations, there was a generalized lack of reference to the geographical contents to be taught or which were taught.

The Voices of the 2nd-Year Master's Students (2012-2013)

Based on the findings described above, it became important for us to explore how these student-teachers thought about the process of reflection developed in the STP in geography. It was with curiosity and an open mind that we heard the student-teachers. As part of the supervisory process we knew we would express opinions that would help us to reflect on the work developed in this course.

First, for these student-teachers, the main ideas were taken in the sense that the reflection process is a complex one. Complex, *because thinking about the work requires a lot from the teacher*, it depends on each one and requires attitudes and qualities such as *humility, modesty and good sense*, the practice culminates in an interpersonal relationship. It seems to be clear that the student-teachers were aware of the attitudes that are necessary for the process of reflection, namely what Dewey (1989) and Garcia (1992) call open-mindedness. In addition to being complex, it is an introspective process, considered as a moment of silence with oneself at the end of the teaching-learning process, to think about the lessons taught, the best strategies to apply in the classes and the building required, among other issues. This is a difficult process, because it is always very difficult for us to think about ourselves. Thinking about the whole is the hardest task in the whole process of Supervised Teaching Practice. A student told us:

"Visiting" or "revisiting" my class is a bit difficult. This is because I have to go back to the teaching moments that I decided to pursue and I'm not always prepared. First, because I am emotionally present in the classroom always be as critically and objectively distanced as I should be and subsequently it is hard to materialize in the classroom. Second, because I sometimes think I didn't perform effectively in the classroom, which I do not think is negative. It means I'm in development, reformulation.

It is a difficult but positive process because it allows teachers to evolve and grow as professionals. It is positive, because each group in school participates in a collaborative

process, and everyone can usually identify areas for improvement as teachers. The sharing of opinions becomes very valid and serves to address different performances and also reset to develop positively. We heard that the *moments of reflection are the most important part of STP*.

However, not all opinions indicated that these students considered the reflection process developed in this initial training as important in helping them to grow as professionals. In fact, there were students who expressed this training process as a summary of the lesson, what went less well and what went smoothly, emphasizing the role of the teacher and the class. They expressed that their greatest concern was to be well prepared scientifically and from there, build compelling lessons for students in order to increase their involvement and participation in them. These words led us to think we were dealing with a more technical view of the supervision and moments of the reflection process.

All the student-teachers demonstrated awareness of the importance of the reflection process and the feedback from everyone involved in the supervisory process. They did indicate that the feedback received from colleagues and local supervisors was considered essential and crucial. They felt they were thus alerted to issues that, as actors, they had no perception actually happened. They further said that they tried to integrate the suggestions, both in terms of lesson preparation, as well as during class. The students' objective consisted in trying to follow the suggestions expressed by everyone involved in the process, trying to perfect their work to improve their educational performance and develop their professional teaching, and considered the reflection process as a constructive one.

They also indicated the areas in which the suggestions were more focused, namely: curriculum management, particularly in terms of scientific content, time management in the context of the classroom and at the level of teacher-student interactions. In this context, there were a number of students who thought that the supervision process is a time for reflection and sharing among the different elements involved. They see it as *a process that contributes to the progression and development of teachers in initial training and that is to help [...] to reflect on the [...] lessons and help students find their teaching profile [...] by engaging in the evolutionary process, a positive construction process*.

Considering the moments in which all the students, teachers, school supervisors, and Faculty supervisors gathered to share opinions and suggestions on the practices developed, these periods should be longer and in greater number, in order to develop and carry out future actions arising from the reflection conducted.

The Voices of Local School Supervisors

Enthusiastic with the opinions gathered from giving voice to these students, we were curious to find out what the school supervisors had to say about the process of reflection undertaken in STP. It should be noted that the local supervisors were cooperating teachers with professional experience and supervisory responsibilities for at least two years.

All the local teachers indicated they enjoyed playing the role and function of cooperating supervisors and there were several reasons pointed out. The fact that they can contribute to the training of young teachers, supporting them to gain experience and knowledge related to the teaching function were the aspects most referred to. Furthermore, by being mentors and monitoring these students-teachers, they enjoy a constant update from both the scientific and the didactical point of view, allowing them to share and apply their ideas about the teaching of geography. Daily collaborative interaction with these students allowed them to also overcome the lack of sharing of knowledge many colleagues felt regarding different disciplinary groups. Also, importantly, it represents an opportunity to reflect on the didactical and pedagogical practice. Indeed, the guiding principle for the supervisors was to develop their role in assisting the trainees to follow their own paths, discovering their potential as future teachers and thereby support their professional development. The collaboration with these young people, particularly in the preparation and classroom observation process, the joint production of didactical resources, and above all sharing either with them or with the supervisors allowed them to be constantly updated regarding methodology and teaching.

The reflection process for these professionals is the essence of the STP. It is crucial for young teachers with whom they share the act of teaching in their courses, but also for them as teachers. For the former, because without the reflection process, *there could hardly be the necessary evolution that, as a rule, the trainees register throughout their internship year*. Thus there is room for reflection in action and reflection on reflection in action and incorporation with great naturalness of opinions and suggestions by exploiting the potential of each. For the latter, because there is a rethinking in action as a teacher and seeking constant improvement as a professional, as the process unfolds through sharing, frank and open discussion, experimentation and discovery.

The Voices of the Students about: What Is Geography and Geographical Education (2013-2014)

Finally, we also wanted to understand the student's representations about what Geography and Geographical Education is. For the students with a Bachelor of Arts in Geography with a minor in History, geography is an encompassing science that teaches to think about phenomena at different scales, involves distinct elements with the ability to interconnect and solve problems that arise in the Human-Environment relationship. Geography studies the planet's dynamics and their interrelations with mankind. It is also a complex science that "meddles" in everything. For the students with a Bachelor of Arts in History with a minor in Geography, geography is a science that studies the Earth and the physical and human phenomena that occur, as well as their interrelationships. It is the Science of the Territory. For those same students, Geographical Education is a set of essential subject-matters that students have to know to acquire geographical knowledge that is important to citizens in the 21st century, a set of topics associated with specific procedures and associated values. It is also the application of geography in basic and secondary education and the competencies to be taught to students so as to ensure that individuals are able to observe, reflect on and, if possible, act in the environment and reflect on the world they live in. In turn, for students with a Bachelor

of Arts in Geography, Geographical Education is a field in which students learn to deal with problems, preparing them for their resolution and application in everyday life, a field in which students develop comprehensive competencies which are essential to understanding the evolution of mankind. Geographical Education is the geography taught to students and a small sample of what geography symbolizes. When we asked the students of the Bachelor of Arts in Geography what they thought about how geography should be taught they highlighted the link with the students' reality and their daily lives, so as to encourage them to understand the world in which they live, distance them from teaching based on textbooks, and using fieldwork. They highlighted the role of the teacher and their teaching methods, in an appealing, dynamic and interactive manner, drawing on prior conceptions. Finally, for the students from the Bachelor of Arts in History, they also highlighted the link with the students' reality and daily lives, based on the territory, teaching them to see the world through different geographical lenses and being able to act consciously and actively, and also highlighted the role of the teacher and their teaching methods using didactical resources to develop knowledge and leading students to discovery, distancing them from a memorized learning.

Final Considerations

What conclusions can we draw from giving voice to these student-teachers and the cooperating supervisors?

First, we can say that the adhesion to the Master's seems acquired at the entrance of the same, if we take into account to the criteria appointed, i.e., appropriateness to the feature and personal projects, scientific and professional motivation for teaching and professional stability.

Students are concerned with the validity of the scientific training offered in the *minor* (Geography and History). They are more interested in deepening their training in the scientific teaching of geography and history than in a dual scientific training.

It was clear to us that more than thinking about the geographical contents they were going to teach and how to teach, these student-teachers showed great concern with their acceptance by the students. They were concerned with themselves and their image as teachers. Along with this view, they also focused their concerns on the students and how they were going to teach, even if only in rather generic terms, and had not yet achieved the state of mind required to reflect on teaching.

At this stage of initial professional practice, the student-teachers were also learning and, in real-life situations, they were confronted with states of inner conflict derived from subjective experiences, whether as students or as teachers, giving rise to dilemmas. In fact, they were at a stage of "survival" and "discovery" in their lives, as characterized by Huberman (1992). Survival, because they were suffering from the shock of reality by focusing on themselves, and discovery, because they were also excited and enthusiastic about the task and profession they have just begun (*ibidem*). These student-teachers were far from thinking of themselves as young teachers with the ability to adopt an investigative attitude in relation to their own mode of teaching (Stenhouse, 1987), or of reflecting on their teaching practice (Shön, 1998; Zeichner, 1993).

This study intended to understand what student-teachers think about what to teach and how to teach geography, and based on our findings, it seems they are more concerned with what to teach in detriment of how to teach. They rarely mentioned the thematic and procedural geographical contents and assumed that they wanted to teach by leading the students to actively build their knowledge, but they planned their lessons based on the pedagogical modes of the transmission type. These students concerns were still centered on themselves, which leads us to deduce that they were far from thinking about the process of teaching geography, with a view to promoting geographical education in young students in Portuguese schools.

About the reflective process during STP, they all assumed that is a crucial moment. For both student-teachers and school supervisors, the moments of reflection, where all the participants collaboratively shared opinions and suggestions on the pedagogical actions developed, are critical to the professional development of teachers. And this process of reflection in action, reflection on action and reflection on reflection in action contributes to the actions of student- teachers and school supervisors.

It is a complex and difficult process because thinking about the work requires a lot from each individual and depends on others and the context in which it is developed. This leads us to believe that the act of thinking and ways of reviving pedagogical work in the context of the classroom and school were not part of students' preconceptions about the actions of the teachers. Hence, we believe that when they commenced their training, they were unaware of the need and the importance of thinking about the pedagogical act. Moreover, the low number of lessons that these students are involved in initial training does not give them sufficient security to feel comfortable in this reflection process. It is therefore difficult for them to develop this permanent questioning, this going back and reviewing events and practices.

Even knowing that not all share the same conception of reflection, they do acknowledge all these moments of reflection are positive and that they can reap the benefits that will come from, contributing to a keener awareness of their pedagogical action. This is especially relevant when these moments occur in groups, as they represent a process of sharing that allows them to evolve and grow as professionals. In these moments, they deal with different actions and performances and redefine others, to become more aware of problems and issues during their action, of which they did not have any perception had happened.

There is thus an assumption of the importance of the process of reflection, reflection in action, on action and reflection on reflection in action for their educational performance and development of their teaching profession.

With regard to the student-teachers' representations of "What is Geography", for the students from both Bachelors in Arts, it is a comprehensive science that studies the natural and human aspects of the Earth's surface, the distribution of the phenomena and the relationships among them. The Bachelor in History with a minor in Geography encompassed a more traditional definition of geography than the geography major, but its same students revealed a more accurate notion of what Geographical Education is than the students from the Bachelor in Arts in Geography with a minor in History.

Concerning their thoughts about how geography should be taught, all the students considered it was necessary to highlight the link with the students' reality and daily lives and the role of the teachers and their teaching methods.

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Biographical Statement

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