New perspectives on the initial training of Geography and History teachers: The Teaching Laboratory

Novas perspetivas na formação inicial de professores de Geografia e História: O laboratório de Ensino

Fátima Velez de Castro[1]

University of Coimbra-Department of Geography and Tourism-FLUC/CEGOT/RISCOS, Portugal

velezcastro@fl.uc.pt

0000-0003-3927-0748

Ana Isabel Ribeiro

University of Coimbra-Department of History, Archaeology, European Studies and Arts-FLUC/CEIS20, Portugal

anaribeiro74@gmail.com

0000-0002-7515-2696

Sara Dias-Trindade

University of Coimbra-Department of History, Archaeology, European Studies and Arts-FLUC/CEIS20, Portugal

trindade.sara@gmail.com

0000-0002-5927-3957

Carlos Barreira

University of Coimbra-FPCEUC, Portugal

cabarreira@fpce.uc.pt

0000-0001-6137-2842

Margarida Oliveira

University of Coimbra/CEGOT/Mira School Group, Portugal

margaridaoliveira@escolasdemira.pt

0000-0002-1475-8440

Abstract: This article intends to introduce a new approach on the initial training of Geography and History teachers, based on an immersion experience in a pedagogical-community context that consisted in a permanent residence of one week in a school group, in narrow cooperation with the surrounding social territory, which we named Teaching Laboratory.

We have identified the following formulation as a research starting point: Is the formal implementation of the Teaching Laboratory in the initial training of Geography and History teachers valid? Taking this questioning logic into account, we will work on both hypotheses: 1) Is the implementation in a formal assessment context valid? 2) Is it valid as a complement to the initial training? Therefore, we intend to embody three main goals: discuss the basic theoretical-method framework for the conception-implementation of the Teaching Laboratory; identify the experience's strengths and weaknesses; foresee the Teaching Laboratory model's future in the initial training of Geography and History teach-ers. In terms of methodology, we used the Reflexive Diary as a data collection instrument, and the result analysis was based on a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats).

Considering the initial issue of this research and the results achieved, we defend the formal implementation of the Teaching Laboratory as a valid model in the initial training of Geography and History

teachers, which already is a part of the academic year, though with an informal character.

Keywords: Geography; History; Teaching Laboratory.

Resumo: Este artigo pretende dar a conhecer uma nova abordagem na formação inicial de professores de Geografia e de História, baseada numa experiência de imersão em contexto pedagógico-comunitário, a qual consistiu numa residência permanente de uma semana num agrupamento escolar, em estreita relação com o território social envolvente, a que demos o nome de Laboratório de Ensino.

Neste sentido, identificámos como questão de partida da investigação a seguinte formulação: Será válida a implementação formal do Laboratório de Ensino na formação inicial de professores de Geografia e História? Nesta lógica de questionamento, trabalharemos sobre duas hipóteses, nomeadamente: 1) Será válida a implementação em contexto formal de avaliação 2) Será válida como complemento da formação inicial. Assim sendo, e para responder à questão de partida com a validação das hipóteses de trabalho, pretendemos consubstanciar três objetivos principais, a saber: discutir o quadro teórico-metodológico de base para a conceção-implementação do Laboratório de Ensino; identificar os pontos fortes e os pontos fracos da experiência; perspetivar o futuro do modelo do Laboratório de Ensino na formação inicial de professores de Geografia e História. Em termos de metodologia, foi utilizado o Diário Reflexivo como instrumento de recolha de dados, sendo que a análise de resultado se baseou na SWOT (Strengths, Weaknesses, Opportunities and Threats).

Considerando o objeto inicial desta pesquisa e os resultados obtidos, defendemos a implementação formal do Laboratório de Ensino como modelo válido na formação inicial de professores de Geografia e História, sendo que neste momento já faz parte do calendário académico, como atividade de caráter informal.

Palavras-chave: Geografia; História; Laboratório de Ensino.

Introduction

This article intends to introduce a new approach on the initial training of Geography and History teachers, based on an immersion experience in a pedagogical-community context that consisted in a permanent residence of one week in a school group, in narrow cooperation with the surrounding social territory, which we named Teaching Laboratory. There was a pilot test in the 2017/2018 school year involving a group of future teachers attending the master's in Geography Teaching for Secondary Education from the Faculty of Arts and Humanities of the University of Coimbra, which goal was to test forms of implementing this experience through observation and participation in the pedagogical practice among peers (Velez de Castro & Reis, 2018, p. 19).

In this sense, we have identified the following formulation as a research starting point: Is the formal implementation of the Teaching Laboratory in the initial training of Geography and History teachers valid? Taking this questioning logic into account, we will work on both hypotheses, namely: 1) Is the implementation in a formal assessment context valid? 2) Is it valid as a complement to the initial training?

Therefore, and to answer the starting issue with the validation of work hypotheses, we intend to embody three main goals, as follows: discuss the basic theoretical-method framework for the conception-implementation of the Teaching Laboratory; identify the experience's strengths and weaknesses; foresee the Teaching Laboratory model's future in the initial training of Geography and History teachers.

The experience took place between January 28th and February 1st 2019 in the Arronches School Group and in the Mira School Group, with the voluntary participation of 19 students attending the master's in Geography Teaching for Secondary Education (four elements in Arronches and five elements in Mira) and the master's in History Teaching for Secondary Education (three elements in Arronches and

seven elements in Mira) from the Faculty of Arts and Humanities of the University of Coimbra, under the supervision of two teaching elements of the first master's and two teaching elements of the latter.

We started this study with a theoretical reflection around the state of the art on initial training of teachers and pedagogical supervision practices. It was followed by data collection, treatment, and analysis' method framework, as well as supported and presented the geographical option of the school groups in question. After the presentation and discussion of the results, along with the answer to the initial question and validation of work hypotheses, we will conclude with a perspective of what can be improved in the Teaching Laboratory and if the experience with the initial training of Geography and History teachers is to be continued.

Theoretical Framework

The need for implementing the Teaching Laboratory comes from the fact that in times characterized by great social complexity and growing strategic importance of equity and inclusion in the lifelong development of citizens, as well as by the diversity of audience in schools, teachers take a more and more multi-layered role (Hargreaves, 1998). The nature of pedagogical work demands that teachers have a continuous involvement in their professional development, inherent to their personal and professional lives, and in the policy and school settings in which they work (Day, 2001, p. 15). Professional development, more than acquiring teaching, content and teaching subjects' knowledge, focuses on all experiences and activities, before and during training, engaged by everyone involved in the school that can contribute towards quality in education. It is the process by which, alone and with others, teachers review, renew, and extend their commitment as change agents to the moral purposes of

teaching; and by which, through each phase of their teaching lives, they acquire and critically develop the knowledge, skills, and emotional intelligence essential to good professional thinking, planning and practice with children, young people, and colleagues (Day, 2001, p. 21).

Effectively, professional development is a complex process, yet of great importance, given that teachers professionally evolve by participating in several practices, processes, and contexts that, planned or not, help to improve the quality of teaching. The teacher is required a continuous dedication, considering psychological and social settings, which can encourage or discourage learning, such as the teachers' own personal life histories, their professional learning experiences, expertise, and school professional learning cultures which provide the day-to-day contexts for their work (Day, 2001, p. 87). For Oliveira-Formosinho (2009) the professional development is a continuous process of improving teaching practices, centred in the teacher, or in a group of interacting teachers, including formal and non-formal moments, with the concern of promoting educational changes in the benefit of students, families, and communities (p. 226). In this sense, professional development must aim at the knowledge and enrichment of the teacher, during its whole training process, also having as outcome the academic and social results of the students and the schools' organization development.

The professional recognition of teaching as craft knowledge (Grimmett & Mackinnon, 1992) results from articulating the knowledge of a social and experience nature on students with classroom dynamics, values, and culture of the educational community, which, among others, must be developed within the initial training. This articulation is mostly done through individual and group reflection on the professional experience, in a cooperative manner, aiming to find the best solutions to the problems that arise regarding pedagogical practices and different situations experienced in schools. In this context, pedagogical supervision can emerge as an activity that

envisages the development and learning of professionals (Alarcão & Tavares, 2003; Alarcão & Roldão, 2010) and that also contributes to the qualitative development of the school, in a context of interactions, stimulating the potential of each one towards a collective development of the school as an organization (Gaspar, Seabra & Neves, 2012, pp. 33-34).

In this sense, the supervision process must be seen in terms of peer cooperation, focused on schools and their specificities, with the involvement of teachers in a learning community where the intentional reflection on the practice itself and on the others' takes a central role. The supervision sustained on a reflective practice (Oliveira & Serrazina, 2001) and research consists of a process oriented by a continuous effort to understand and improve the teaching practices, aiming for the interpretation through theoretical references achieved in monitoring actions in which training and trainer assessment are present (Pinto, 2016). That is, an assessment supported on each teacher's necessities, through cooperative activities and self-evaluation processes that can help to perfect pedagogical practices with effects on students' learning.

According to Oliveira-Formosinho (2009), the teacher's professional development, based on the pedagogical supervision process supported on class observation, has as central resources the analysis, feedback, and reflection, which can benefit both involved parties, not only the observed teacher but also the observing teacher (Queiroga, Barreira & Oliveira, 2019). The behaviour of all the involved teachers can be positively influenced, mostly if the context in which the supervision process occurs is favourable, with opening to shared practices, or if the observation is made by someone of trust who promotes a cooperative dialogue (Oliveira-Formosinho, 2009).

With the organization of the courses depending on the structure oriented by the Bologna Process, and the current Portuguese legal system, the initial training of teachers has, once again, been developed as a two-stage model (Mouraz, Leite & Fernandes, 2012)

concerning the training within school context to the final year of the master's course, through a supervised teaching practice. Thus, it is key to provide future teachers with varied pedagogical experiences of proximity to schools/groups, as well as to achieve cooperative pedagogical supervision models and strategies, proper and oriented by basic theoretical references, enabling them to start their educational practices under the guidance of advisers who can create learning communities between teaching institutions and within schools (Mesquita & Roldão, 2017).

With this theoretical context in mind and articulating with the students of the master's in Geography Teaching for Secondary Education and in History Teaching for Secondary Education, both from the Faculty of Arts and Humanities of the University of Coimbra, we organized the Teaching Laboratory for one week (last week of January 2019). It was based on four pillars, as indicated in Image 1: teaching practice; cooperation; training; community.
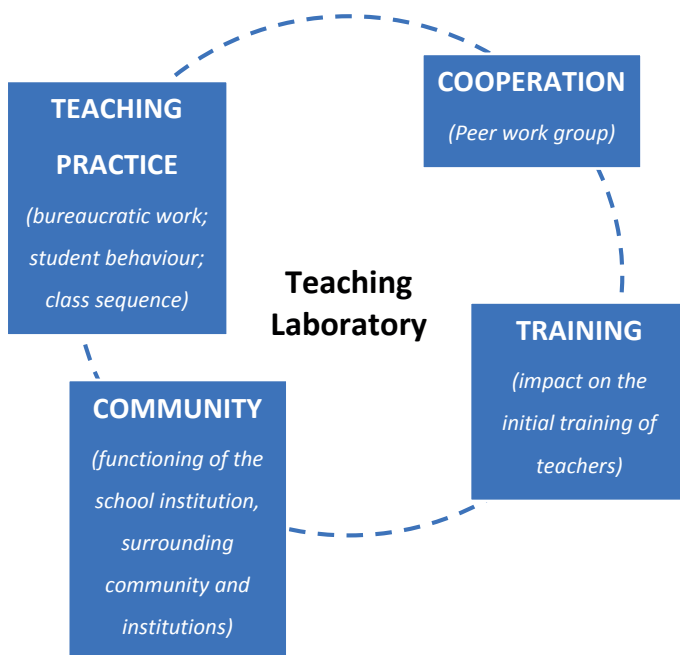

Image 1. Structure of the Teaching Laboratory

A schedule of activities was agreed with the involved schools, during which the participants could observe the classes, from both a pedagogical and educational point of view, as well as work in peer groups, knowing the surrounding community as far as institutions directly and indirectly related to the school context. The assessment of the Teaching Laboratory as a possibility of pedagogical practice of the initial teacher training was based on a set of method assumptions, which we will handle as follows.

Methodology and Methods

At this point of the research, we will focus on the methodology used in data collection, treatment and organization of information, and result analysis.

The Reflexive Diary was the data collection instrument chosen, considering its potential for a study of this nature. The choice is supported by the validity of this strategic instrument, with Silva claiming (2014, p. 544) that its writing allows a greater freedom of speech by the self-observer, comparatively to what it could occur in an oral context. This happens because the practices are assessed without fear of being scrutinized, judged, and exposed to third parties. Besides, it enables to critically look and assess the involved processes (André & Pontin, 2010, p. 17). Miranda & Felici (2012, p. 135) defend that the reflexive diary considers the participant to have the opportunity to become an active element of the research itself in a learning context, given it is understood how the information apprehension is processed. Alexandrache (2014, p. 24) agrees with these ideas, adding that the person making the records ends up realizing its evolution in progress, as well as stressing and replicating the good practices. From another point of view, it is a stress releasing instrument, by venting. To Trif and Popescu, (2013, p. 1071)

the reflexive diary works as a form of exercise, by crossing the individuality of who describes it (regarding judgement, values, feelings) with the collective of others who also write (regarding sharing). Moreover, it is also a strategic instrument in terms of continuous and systematic reflexion of self-observing, from an external context analysis. Silva, Ferragini & Tognato (2018, p. 2011) add that it is a form of the individual to be aware of himself, it is self-perception, understanding and action.

Considering the above, it is noted that the reflexive diary is an instrument revealing the individual understanding of who writes it, based in a report of the practical experience, i.e., of the experience of immersion. Following this logic, the students of the 1st year of the two masters, in Geography Teaching and in History Teaching (Secondary Education), with no practice as teachers, but who had shown interest in having an experience of this nature, were invited to participate in it, for two main reasons: in the following year, they would start their training practice as trainee teachers; in the subsequent years, they intended to work as teachers. The universe in question were the students enrolled in the curricular units of Didactic of Geography (14 students) and Construction of Teaching-Learning in History (13 students), having partaken 9 students of the master's in Geography Teaching (4 students in Arronches; 5 in Mira) and 13 students of the master's in History Teaching (3 students in Arronches, 7 in Mira). The non-participating students' absence was due to work (full-time or part-time working student) or health reasons (medical procedures or third-party healthcare).

Concerning the form of data collection, and through the reflexive diary, the indications on type provided by Trif & Popescu (2013, p. 1072) and Ukrop, Svabensky & Nehyba (2019, p. 2) were considered. The Structured Diary option was followed, given the existence of directed and objectified issues, as well as the proposal to reflect

on the duly identified and time and space limited subject. Anyhow, the students were invited to record observations in a free form, whenever they were deemed necessary, which also advocated for the Open Diary principle.

Apart from that, it has been taken as a diary with the "practical reflection" side, through the suggestion of questioning the observed processes, associated with "technical reflection", and having into account the description of the pedagogical and technical dynamics observed by Silva (2014, p. 545). Still on the issue of data collection, Silva, Ferragini & Tognato (2018, p. 2011) were also considered, having been established two categories, namely "knowledge from training" (theoretical and methodological aspects), crossed with the "personal knowledge" (from individual experiences in school as students, from social and cultural knowledge, from family surrounding). In this sense, it has been asked to the participants of the Teaching Laboratory to organize their Diary records, taking into account the following aspects: brief description of the observed daily activities; identification of the strengths/positive aspects of the observed activities; identification of the weaknesses/negative aspects of the observed activities; potential transposition into the personal teaching practice; other aspects to be recorded.

Considering the indications given by Almeida & Freire (2008, p. 143) and Stake (2016, p. 89), these analysis items were the basis for the constitution of subsequent analysis' categories, which embodied the information treatment and organization stage. In this sense, it was agreed that a systematization grid with seven entries would be built, representing the analysis' categories: group work among peers; bureaucratic work; students' behaviour; functioning of the school community; class sequence; local institutions and community; suggestions to teacher training.

This option had been validated both by Lessard-Hébert, Goyette & Boutin (2005, p. 149) and Freixo (2009, p. 214), considering it

worked with descriptive and narrative observation records, based on the individual perception of the participants.

Moreover, the nature of the research led us to consider an important approach such as the Design Based Research (DBR), which is based on the design experiments' concept. According to Wang & Hannafin (2005), it is a method that seeks to research educational problems in real contexts of pedagogical acting to solve significant and practical problems, conciliating theory and practice through a cooperative connection between researchers and professionals who try to understand, document, interpret and improve the educational practice.

The content analysis was the research technique used to obtain the study's data (Bardin, 1977; Vala, 1986). This analysis was completed via a fluctuant reading of all answers to the inquiry, aiming to align common subjects and verify particularities regarding the individuality of the cases. All answers were considered towards the categorization and comparison of contents, hence all record units in the corpus were separated by paragraphs and sequentially numbered according to the answers.

The result analysis was based on a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats). Gürel and Tat (2017, p. 995) defend that the SWOT analysis is an effective form of identifying structural and circumstantial factors of the processes, being composed of four dimensions, organized in two areas: Strengths and Weaknesses are internal factors and characteristics of the phenomenon; Opportunities and Threats are external factors and determinants of the environment. It must be also held into account the position of Sammut-Bonnici & Galea (2014, p. 8), since they draw attention to the fact that the SWOT analysis was constituted as a very descriptive instrument, not so much of explanatory character. Therefore, we consider this logic as an aid in information systematization, within a perspective of understanding-acting in the studied territories.

Study Area

The Mira School Group (Map 1) is located in the municipality of Mira (Gândara region) in the central Portuguese district of Coimbra and comprehends four parishes with a population predominantly linked to services.

It has 16 public teaching institutions distributed throughout various teaching levels. In the public system, there are six collective teaching equipments with pre-school education, as well as primary education. Regarding secondary education, there is only one public teaching school, with a similar situation concerning lower secondary and higher secondary educations, both functioning in the same school.

The school year which this Teaching Laboratory experience refers to was attended by 1228 students organized into 60 groups/classes. Apart from the regular education, the School Group also offered a course in Education and Training as Computer Operator – Type II (Lower Secondary Education), courses in Science and Technology and Languages and Humanities, and Professional Courses in Computer Equipment Management, Management of Computers, Sports Technician and Childhood Support. It had as well two Structured Education Units for Students with Autism, according to the Teacch method, implemented for the first time in the 2004/2005 school year as an educational intervention model for children with autism spectrum disorders, and integrated, at the time, 12 students. In its whole, the students with special educational needs (NEE) were around 10% of the school population. Affiliated to the N.E.E. students, the school had 12 Special Education teachers – four teaching in the two Units for the Autism Spectrum (U.E.E.A.) and eight for the remaining cases. The Group still had two Psychologists, two Speech Therapists (one in part-time) and one Occupational Therapist.

Concerning the students financially supported by the "School Social Action" program, the Mira School Group presented rates varying between 37% and 41% in the several years and teaching cycles, with the economic aids comprehending almost a third of the students' total.

Regarding the body of teachers, 116 belonged to the school or group's staff (80%) and 21 were from the Pedagogical Area Staff (QZP). Only eight were hired teachers (6%). In terms of seniority, 41% of the teachers had more than 30 years of service, with the percentage increasing to 77% when one accounted for the teachers with more than 20 years of service. Only 4% had less than 10 years of service time. There were 96 teachers (66%) with more than 50 years old and 94% with more than 40 years old.

Concerning the non-teaching staff, the group had 63 operational assistants (95% with public position contract with indefinite term and 5% with fixed-term contract). There were 23 technical assistants (belonging either to the Portuguese Ministry of Education or to the Municipality of Mira). Regarding seniority, 63% had more than 10 years of service and 69% more than 40 years old.

The Arronches School Group (Map 1) is in the Alentejo region, more exactly in the sub region of Alto Alentejo, in the municipality of Arronches and comprehends three parishes with a population predominantly linked to services (local government and private social solidarity institutions). It serves a population of 2.921 inhabitants (INE, 2017), with the youth (up to 15 years old) being 7.9% of the total.

Map 1. Location of the School groups where there were
Teaching Laboratories.
Source: Adapted from Marktest (2019)

It has two public education establishments distributed across several teaching levels. It was attended by 242 students organized into 14 classes, with 30 students in pre-school, 85 in primary education, 41 in middle education, and 69 in lower secondary education. Apart from the regular teaching, it also accounted for LIJE – Home for children at risk (18 students), the professional technical course of support to sports management (8 students), and PIEF (10 students). As a whole, the students with special educational needs were 43 out of 241 (17.7%) of the school population. Affiliated to the special needs' students, the school had three teachers.

Regarding the body of teachers, 22 of them belonged to the school or group's staff, five belonged to the Pedagogical Area Staff (QZP), and 12 were hired teachers. Concerning the non-teaching staff, the Group had 20 employees.

Results and discussion

Even if there was a certain separation between the group of History students and the group of Geography students, the perceptions presented in the participants' logbooks are manifestly similar and evenly distributed among the seven dimensions defined for this research work.

a) Cooperation

The first category, with eleven (11) records, concerns "cooperation", a dimension referring to "group work between peers", which aimed at analysing the way students who took part of the Teaching Laboratory worked and cooperated among themselves.

In this concrete dimension, a key idea is stressed: the participants demonstrated diminutive competences regarding interdisciplinary work, not attributing much relevance to peer work and reflecting a compartmentalized culture of knowledge which would tend to prevail during both initial and continued training.

Throughout the work week, it was proposed to a group of participants to prepare a small presentation, working collaboratively to organize and present it. The remaining ones were given the opportunity to cooperate in advancing the different classes they would integrate. If everyone ended up deeming it gratifying, even if they thought it "would be worst", as mentioned by the ES1 participant, the experience showed that the competence to work cooperatively within a group still needed some improvement. An illustration of this

idea is the comment by the ES3 participant mentioning that "when things are not well, we have to realize what went wrong by talking to each other. [...] Cooperative work is something I have to improve".

It is more and more important to think about school and teaching and learning processes in a contextualized, creative, competent, and cooperative manner (Palmeirão & Alves, 2018, p. 5). Cooperation among students, among the faculty and among the whole school community is key to the development of projects included in Portuguese legislation today, which invests in the flexibility of education, but also in practices that promote an integrated knowledge management, valuing disciplinary knowledge and interdisciplinary, cooperative, and autonomous work (Portuguese decree-law 55/2018 from July 6th). To promote these practices and these competences among students, teachers, from the initial moment of their training, also need to understand and learn to interact and work together. In truth, the new manners of teacher's professionalism imply a reinforcement of the collective dimensions and cooperation of teamwork and of the joint intervention in the school's educational projects (Nóvoa, 2009, p. 207).

b) Teaching practice

In the Teaching practice category, there are three dimensions. The first, on the teacher's "bureaucratic work", presenting only nine (9) records, conveys that the participants were not aware of the amount of bureaucratic work associated with teaching. Despite having the opportunity to contact with different work areas, from the ones inherent to class direction to filling evaluation documents, documentation associated to professional teaching or work with students with special needs, the participants considered mostly the class director's work that concerned the procedures to contact with the guardians, information filing or "how to alert [the guardians] to any issues regarding the students", as indicated by the ES19 participant.

With Portuguese schools currently involved in the Curricular Autonomy and Flexibility Project, it is important for these students, apart from other older projects, to contact with different projects and curricular units that may exist in schools, with educational distinction, aiming to promote school inclusion. One of the groups had the opportunity to participate in the Curricular Autonomy Domains (DAC) and the Training and Education Integrated Program (PIEF)'s meetings, being able to understand the subjects and, as mentioned by the ES5 participant, "have a greater perception of the educational reality".

In fact, this contact with the teaching reality is extremely important, from the perspective of an on-training teacher, so that, in this initial training, the mobilization and integration of knowledge and problems that offer the capacity of reality through observation and intervention (Alarcão *et al.*, 1997, p. 5) can be stimulated. There is still little awareness regarding the analysis and questioning of the variety in teaching, the interaction with the different actors in the educational process and the importance this work has, not only to the proper functioning of the school community but, in particular, to the success and true inclusion of all students in their training process.

The second-dimension of the Teaching practice category is the one concerning the "behaviour of students". With eleven (11) records, this dimension gathers various assessments, mainly regarding disciplinary issues, students' attitudes towards study, and their participation in school dynamics. As for the disciplinary issues, the majority refers the "reduced attention", the "immaturity" or, as pointed out by the ES2 student, "the heavy atmosphere, with more than half of the class being inattentive and unmotivated". Only one of the participants – ES14 – mentions the students of one of the classes with which he had contact with as quite "calm and committed".

Understanding the differences in behaviour and attitude, identifying the students' manner of acting and acknowledging what

motivates or discourages them is elemental so that the teacher-student can build himself as a professional. Having the opportunity to see other teachers interact with their students and act accordingly to the different ways of being in school enriches the initial training because, as mentioned by Nóvoa (2009, p. 212), the difficulties arisen by the new students, by those who do not wish to learn, by those who bring new social and cultural realities to the school, draw attention to the human and relational dimension of teaching, to that daily one-on-one that the teachers are obligated to.

Several participants, having had the opportunity to attend a School Assembly, considered quite interesting the students' attitudes in that particular occasion, as was stressed by student ES6, having that moment contributed "towards a trust based relation between teacher and students", the students being "uninhibited in the relation between colleagues", with orderly participations and with the common goal of solving existing problems and sharing "fears, concerns, difficulties felt in school life".

The possibility of observing these new school dynamics, which little by little will certainly be settled in every Portuguese school, as a result of the new legislation and the quest for a participative, inclusive and dynamic school, demands the teacher to be open to innovations and constant learning, accepting diversity, building trust, share and dialogue with its peers, students and the several education agents, thus promoting the construction of an holistic knowledge (Felício & Silva, 2017, p. 152).

The third dimension of this category, "class sequence", was approached by all participants, being the aspect to which more attentions were drawn, raising the concern over this component of the teaching life, soon to be put into practice. There is mostly a stress on the strategies and resources used by teachers, with a focus on the more active and, as perceived by the participants, extra motivating practices, those that increase the students' attention. It must be

considered that there is a growing wish for the school to be a space where skills associated to autonomous work, critical spirit, cooperation, and resilience must be developed, producing a school where students effectively "practice" an education, i.e., interact, stimulate, and live, in fact, what the school must teach them (Dias-Trindade, 2018, p. 94).

The teacher-student interaction is also underlined, showing that the participants can distinguish models of relations between teachers and students as being promoters of empathy. The ES14 participant mentioned to have realized that "how we reach the other is determinant in our everyday life". In fact, the studies by Branwhite (1988) or Bozkurt & Ozden (2010) refer exactly that relationship between the teacher's empathy and the students' academic success. Therefore, it is not strange that the participant ES8 highlighted that the teacher "was very humane" or that the participant ES17 indicated that "the teacher really liked her students, even calling them my darlings", but, mostly, that reflections for the future teaching practice were raised, such as participant ES6 mentioning he would "try to follow the model of this teacher in classes, specifically in the relationship she establishes with the students, because, from what I've seen, it can obtain very positive results".

c) Community

The category Community comprehends two dimensions. The first, "functioning of the school community", with 14 records, points to all the dynamics associated with the school functioning, from several activities integrated in the school's everyday life, such as the School Assembly or Participative Budget, infrastructures (stressing the greater or smaller quality of equipment or rooms, existence or not of bell rings or the fact that students and teachers have lunch in the same space), and also the work within the scope of inclusive education.

The issue of the students' participation in the Class Assemblies, already mentioned, or the Participative Budget, seemed, to the eyes of the participants, as moments in which the school is united and working together towards everyone's benefit, instilling in the students the ability to speak up so that, as mentioned by the ES12 participant, they "decide what they would like to improve in school" or, according to the ES7 participant, a moment in which the own class is disposed in another manner, creating a greater proximity and closeness among all, thus promoting moments of sharing and dialogue and "where everyone can participate".

Moreover, it was within this experience that students had the opportunity to verify exactly what it is to work towards an inclusive school. As mentioned by the Portuguese decree-law 54/2018 from July 6th, the school must be for all, allowing everyone to participate, giving them a sense of belonging to a community, and that that must be put into practice not only through examples, like the ones mentioned before, but also through an educational dynamics that fits each student's individual characteristics and conditions, seeking to ensure they all achieve their Student Profile on Leaving Compulsory Schooling, even if through different paths, enabling them to individually progress in the curriculum and reach educational success (Portuguese decree-law 54/2018, p. 2919). The ES16 participant stressed that the possibility of interacting with a Special Education class had been "the best moment of the week", providing "a new look on new realities".

Understanding that there are students with different life paths, health issues, intellectual difficulties, or non-standard family dynamics, is important for a teacher's training, acknowledging that the technical and scientific components, even if necessary, are not the whole of being a teacher. It is fundamental to reinforce the person--teacher and the teacher-person (Nóvoa, 2009, p. 212). Like the ES14 participant mentioned, "it has been without a doubt the first moment

when I realized some of the challenges of teaching and of the career as a teacher", the need to work with and support everyone, at the same time knowing how to manage the different needs inside the same classroom space.

The second dimension in this category, "institutions and local community", with fifteen (15) records, comprehends the perceptions regarding the participation in activities outside the school space but that, somehow, interconnect with it, for example, the two workshops, one on teaching in the PALOP (Portuguese Speaking African Countries), and another on voice placement and bodily expression.

The Arronches based group visited local spaces such as the A Brincar museum, the Graça Fort in Elvas, and the Specialized Youth and Infant Home (LIJE), which receives children in risk situations. The other group has visited CERCI Mira and Obra do Frei Gil, as well as the Mira historic centre. These moments have once again triggered the understanding and identification of different realities, foreseeing all kinds of activities that could be performed by any teacher. For the great majority, these have been important moments that "enabled a reflection on important subjects that, because we do not know them, we do not emphasize them", as mentioned by one participant – ES15.

Knowing the local spaces and understanding the dynamics of the interaction between those spaces and the school are essential knowledge in a teacher's life. In fact, already in 1964, a study by Blair & Erickson highlighted the importance of teachers knowing and using the community's resources to design their own school curricula and plan learning activities, being necessary to provide experiences during their training to know how they are done.

d) Training

The last category comprehends the "impact on teacher training" dimension, with fifteen (15) records. Different studies have come

around to evidence the need for universities to find strategies to provide their students-teachers with a careful and well supported preparation during initial training (Carter, 2015; Hudson, Hudson & Adie, 2015; Guillen & Zeichner, 2018). Carter (2015) stresses the importance of going "beyond traditional placement models to offer carefully crafted school-based learning experiences for trainees" (p. 37) to develop moments in which future teachers make the first contact with reality and, mostly, can learn, during practice, with more experienced teachers and have a better understanding of what their professional life will be.

All records include expressions that manifest how important the opportunity for these participants to immerge in school context and actively participate in the life of that community was. An example of this is the comment by the ES14 participant: "It has been the first time that a student has called me teacher, which has been a captivating and motivating moment, given I have still not achieved such a goal". To be able to interact actively in classes, receive feedback from students in the presentations they have prepared, realize the type of teachers they want to be (as stated by the ES5 participant, "today's activities have showed that I must try to create a more dynamic and exciting environment in the classroom, so that the students can enjoy the taught subject and content"), or even the type they do not want to be, have been very positive experiences with the participants mentioning they should be repeated.

The participation in the voice placement and bodily expression workshops were also considered an asset, with the ES16 participant alluding that, in the university itself, there could also be these workshops, because they are especially important to the teaching practice.

Despite the initial reluctance in contributing towards the dynamics of this activity, it ended up being assessed as incredibly positive, with suggestions that this type of practice should be repeated.

Considering the demonstrated (and afore mentioned) difficulty in articulating the work among the participants and, mostly, the development of interdisciplinary activities, this can also be regarded as an area to be invested in, thus boosting practices that intend to be more and more taken as standard in school spaces.

Based on this analytical side, and as a summary, we were able to perform the SWOT analysis of the collected data. Therefore, we highlight in Table 1 the strengths, opportunities, weaknesses, and threats of the Teaching Laboratory experience.

Strengths	Weaknesses
- Observation and interaction with school dynamics (students and peers) - Analysis of the sequence of several classes (used strategy and resources) - Contact with students with different school and social backgrounds - Contact with the social community surrounding the school	- Few abilities in terms of interdisciplinary work - Little notion of the bureaucratic dimension in teaching - Limited duration of the laboratory experience (5 days) - Difficulty conciliating the Teaching Laboratory experience with academic and personal life
Opportunities	**Threats**
- Integrate more group experiences (practical work) in the initial training of teachers - Increase the time limit of the Teaching Laboratory experiences, formally integrating them in the school calendar - Diversify the Teaching Laboratory experiences in terms of school, community and social contexts	- Inability for all students to be able to benefit from the Teaching Laboratory experience - Difficulty in conciliating the Teaching Laboratory with other activities proposed by other curricular units - Work effort and overload for participating teachers and students

Table 1. SWOT Analysis of the Teaching Laboratory experience

The observed strengths are based on the contact that the future teachers involved had with the school dynamics, namely with students and peers, and the chance of attending and discussing several examples of classroom/subject sequences, in terms of strategy and used resources. The opportunity to contact with students belonging to different school and social backgrounds was also emphasized,

without forgetting the surrounding community. This last point was a novelty within the context of the initial training of teachers, since it is an obliterated dimension in the academic curriculum.

Concerning the weaknesses, it was drawn attention to the scarce competences in terms of interdisciplinary work revealed by the future teachers, as well as to the little notion of the bureaucratic dimension inherent to being a teacher. There were two other situations, both from the competence of structure and scheduling, i.e., the 5 days limited duration of the experience, as well as the difficulty in juggling the Teaching Laboratory experience with academic and personal life. These strengths are the basis for the identified weaknesses, translated into the incapacity of all students to benefit from these activities, given the difficulty in balancing the Teaching Laboratory with additional activities proposed by other curricular units. Because it was only possible to schedule the experience during the supplementary exam period, some students have not been fully concentrated in the Laboratory, as they still needed to conclude the evaluation of some subjects from the first semester. Besides, it also required an added effort and work overload by the involved professors and students, forcing them to forgo a few pause days between the first and second semester.

However, the Teaching Laboratory offers the possibility of reflecting and improving some practices of the initial training of Geography and History teachers, thus hoping that, in a near future, more group experiences (practical works) can be integrated in the several curricular units throughout the degree. Besides, it is desirable to increase the duration of the Teaching Laboratory experiences, formally including them within the academic calendar, as well as diversifying the locations where the model can be replicated. It would also be beneficial to resize the participant student groups which, in our view, must consist of around six and eight elements. This number would facilitate the observation within classroom con-

text, rendering the presence of future teachers more discreet, as well as it would enable a more customized and individualized attention, thus strengthening the empathetic ties between the several elements of the group.

Conclusion

The more positive aspect of this experience is centred on the opportunity of the trainees to get in touch with the reality of the job in its multiple dimensions: pedagogical, administrative, and management of human relations. The contact and observation of the pedagogical relation, the teacher/students' interaction and the behaviour of children and adolescents of diverse social extraction and with different social and cognitive competences is decisive to the construction of the perceptions about the career and to the future pedagogical path.

On the other side, as already mentioned, the group interaction in a real context underlines the little preparation training teachers have for the interdisciplinary work and the performance of duties based on a project that transcends the interdisciplinary logic. The difficulties reflect a logic of compartmentalised training that is urgent to rethink, considering the intentions of Portuguese schools to become more inclusive and based on an educational culture that privileges cooperative and interdisciplinary work and active and critical participation of teachers and students.

Despite the constraints inherent to the conduction of experiences based on the introduction of pedagogical practice in real context within a logic of immersion in the everyday life of the school and of the community (such as finding host schools, providing housing and travel support, surpassing the resistance of trainees in travelling to distant areas of their training or home location and interact

with colleagues from different areas of knowledge), the Teaching Laboratory is, as it is visible by the results achieved, an essential tool for improving the learning quality of teachers in initial training, for signalling the needs of developing competences (within the academic training context), and for allowing to answer the challenges of 21st century schools.

In this sense, and considering the original issue of this research, we support the formal implementation of the Teaching Laboratory in the initial training of Geography and History teachers, currently still an informal part of the academic year, as a complement. The participants have manifested this desire, associating the experience to a training dimension that will much contribute towards initiating the teaching practice in a traineeship context, providing some vision on what the teaching world is. We regard it as a part of curricular enrichment, capable of attracting more and more teachers of these masters in Teaching, and claimed by the students at the beginning of every academic year.

BIBLIOGRAPHY

Alarcão, I., Freitas, C. V., Ponte, J. P., Alarcão, J. & Tavares, M. J. F. (1997). A formação de professores no Portugal de hoje. Acedido em http://www.educ.fc.ul.pt/docentes/jponte/docs-pt/97-Alarcao-Ponte(CRUP).rtf

Alarcão, I. & Tavares, J. (2003). Supervisão da prática pedagógica: Uma perspetiva de desenvolvimento e aprendizagem. Coimbra: Livraria Almedina.

Alarcão, I. & Rodão, M. C. (2010). Supervisão: Um contexto de desenvolvimento profissional dos professores (2.ª ed.). Mangualde: Edições Pedagogo.

Alexandrache, C. (2014). Journal reflexive, an instrument for student preparation in the teaching profession. Procedia-Social and Behavioral Sciences, 149, 20-24.

Almeida, L. S. & Freire, T. (2008). Metodologia da investigação em psicologia e educação. Braga: Psiquilibrios Edições.

André, M. E. D. A. & Pontin, M. M. D. (2010). O diário reflexivo, avaliação e investigação didática. Meta: Avaliação, 2-4, 13-30.

Bardin, L.(1977). L'analyse de contenu. Paris: PUF.

Blair, L. & Erickson, P. (1964). The student teacher's experiences in the community. Cedar Falls, IA: The Association for Student Teaching.

Bozkurt, T. & Ozden, M. S. (2010). The relationship between empathetic classroom climate and students' success. Procedia Social and Behavioral Sciences, *5*, 231--234.

Branwhite, T. (1988). The PASS survey: School-based preferences of 500+ adolescent consumers. *Educational Studies*, 14, 165-76.

Carter, A. (2015). Carter review of initial teacher training (ITT). Acedido em https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/399957/Carter_Review.pdf

Day, C. (2001). Desenvolvimento Profissional de Professores: os desafios da aprendizagem permanente. Porto: Porto Editora.

DECRETO-LEI n.º 54/2018. D.R. I Série. 129 (6 de julho de 2018) 2918-2928.

DECRETO-LEI n.º 55/2018. D.R. I Série. 129 (6 de julho de 2018) 2928-2943

Dias-Trindade, S. (2018). Ambientes digitais de aprendizagem, comunidades de prática e dispositivos móveis. In D. Mill, G. Santiago, M. Santos & D. Pino (Orgs.), Educação e Tecnologias: reflexões e contribuições teórico-práticas (93-104). São Carlos: EdUFSCar.

Felício, H. & Silva, C. (2017). Currículo e Formação de Professores: uma visão integrada da construção do conhecimento profissional. Diálogo Educacional, 17 (51), 147-166.

Freixo, M. J. V. (2009). Metodologia científica. Fundamentos, métodos e técnicas. Lisboa: Instituto Piaget.

Gaspar, I., Seabra & F., Neves, C. (2012). A supervisão pedagógica: significados e operacionalização. Revista Portuguesa de Investigação Educacional, 12, 27-55.

Grimmett, P. P. & Mackinnon, A. M. (1992). Craft Knowledge and the Education of Teachers. Review of Research in Education, Jan 1, 385-456.

Guillen, L., Zeichner, K. (2018). A University-Community Partnership in Teacher Education from the Perspectives of Community-Based Teacher Educators. Journal of Teacher Education, 69(2), 140-153.

Gürel, E. & Tat, M. (2017). Swot analysis: a theoretical review. The Journal of International Social Research, 10-51, 994-1006.

Hargreaves, A. (1998). Os professores em tempo de mudança: O trabalho e a cultura dos professores na idade pós-moderna. New York. McGraw Hill.

Hudson, S., Hudson, P. & Adie, L. (2015). The School-Community Integrated Learning pathway: Exploring a new way to prepare and induct final-year preservice teachers. Improving Schools, 18(3), 221-235.

Lessard-Hébert, M., Goyette, G. & Boutin, G. (2005). Investigação qualitativa. Fundamentos e práticas. Lisboa: Instituto Piaget.

Mesquita, E. & Roldão, M. C. (2017). Formação inicial de professores: a supervisão pedagógica no âmbito do processo de Bolonha. Lisboa: Edições Sílabo.

Miranda, J. I. F. & Felice, M. I. V. (2012). O diário reflexivo como instrumento de avaliação formativa. Revista Intercâmbio, XXVI, 129-153.

Mouraz, A., Leite, C. & Fernandes, P. (2012). Formação inicial de professor em Portugal decorrente do processo de Bolonha: Uma análise a partir do "olhar" de professores e estudantes. Revista Portuguesa de Pedagogia, 46(2), 189-209.

Nóvoa, A. (2009). Para una formación de profesores construida dentro de la profesión. Revista de Educación, 350, 203-218.

Oliveira, I. & Serrazina, L. (2001). A reflexão e o professor como investigador. In GTI-APM, Reflectir e investigar sobre a prática profissional. Lisboa: Associação de Professores de Matemática.

Oliveira-Formosinho, J. (2009). Desenvolvimento profissional do professor. In J. Formosinho (Coord.), Formação de Professores: Aprendizagem profissional e acção docente (221-284). Porto: Porto Editora.

Palmeirão, C. & Alves, J. M. (2018). Escola e mudança – construindo autonomias, flexibilidade e novas gramáticas de escolarização – os desafios essenciais. In C. Palmeirão & J. M. Alves (Orgs.), Escola e mudança – construindo autonomias, flexibilidade e novas gramáticas de escolarização – os desafios essenciais (4-8). Porto: Universidade Católica Editora.

Pinto, J. (2016). A avaliação em Educação: da linearidade dos usos à complexidade. In L. Amado & I. Oliveira (Orgs.), Avaliação das Aprendizagens: perspetivas, contextos e práticas (3-40). Lisboa: Universidade Aberta-LE@D.

Queiroga, L. C., Barreira, C. & Oliveira, A. L. (2019). Supervisão pedagógica e desempenho docente: contextos colaborativos e papel dos pares para o desenvolvimento profissional. Lisboa: Chiado Books.

Sammut-Bonnici, T. & Galea, D. (2014). Swot Analysis. In: C. L. Cooper (Ed.), Wiley Encyclopedia of Management (1-9). New York: John Wiley & Sons.

Silva, E. D., Ferragini, N. L. de O. & Tognato, M. I. R. (2018). Estágio supervisionado e saberes docentes: o diário reflexivo na formação inicial. Entrepalavras, 8-3, 204-229.

Silva, M. A. (2014,). Diários reflexivos e avaliação formativa: um olhar sobre a prática do professor. Domínios de Lingu@gem, 8(1), 541-542.

Stake, Robert E. (2016). A arte da investigação com estudos de caso. Lisboa: Fundação Calouste Gulbenkian.

Trif, L.; Popescu, T. (2013). The reflective diary, an effective professional training for future teachers. Procedia-Social and Behavioral Sciences, 93, 1070-1074.

Ukrop, M., Svabensky, V. & Nehyba, J. (2019). Reflective diary for professional development of novice teachers. SIGCSE'19.

Vala, J. (1986). A análise de conteúdo. In A. Silva & J. Pinto (Orgs.), Metodologia das Ciências Sociais. Porto: Edições Afrontamento.

Velez de Castro, F. & Reis, A. M. (2018). Teaching Lab as an educational proposal in the initial training of Geography Teachers. European Journal of Social Sciences Studies, 3-2, 18-32.

Wang, F. & Hannafin, M. J. (2005). Design-based research and technology-enhanced learning environments. Educational Technology Research and Development, 53 (4), 5-23.