

The “Universitisation” of Geography Teacher Training in Portugal: Reflecting on its Results and Weaknesses

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Abstract

In Portugal, geography teacher training followed a process of ‘*universitisation*’ that enhanced its academic dimension and weakened the importance of professional training. Training became focused on *outcomes*, more than on *processes*, and its effects were increasingly disappointing as regards changing teachers’ practices. Although such problems are not confined to geography teacher training, in the case of geography they seem to be particularly pertinent, since they contribute to widen the gap between academic and school geography. The paper intends to address two questions: (1) how did the ‘*universitisation*’ of teacher training affect teachers’ involvement as regards the overall training process?; (2) how to explain the marginal results obtained by training as regards changing teachers’ practices? From the data collected for this research through the content analysis of primary documents, databases and the results presented by various field researches, it seems possible to identify the main weaknesses that affect geography teacher training: (a) training programmes fail to narrow the gap between theory and practice; and (b) training processes are unable to identify and take into account the experiences and the personal beliefs that shaped student teachers’ knowledge before they enter training. These justify the design of a new reflective methodology.

Keywords: Teacher education, teachers’ beliefs, teachers’ practices, geography education

Introduction

In Portugal, the establishment of a national network of initial training programmes spanned almost two decades. It was a long process designed to achieve two main goals:

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(1) to assure the certification and supply of qualified teachers; and (2) to support the definition of the standards required to guarantee the quality of the training provided by both public and private universities. The route followed during that period led to what Formosinho (2000) characterizes as the '*universitisation*' of teacher education. The term was intended to make evident the kind of changes that began to frame initial teacher training programmes in Portugal since the mid 1970s, as regards their institutional background and curricular structure. These were (1) that higher education institutions gradually took over the responsibility to provide the theoretical and practical pedagogical education required to assure the qualification of teachers, though falling back on the collaboration of schools; and (2) the nature of the training provided by the universities ended up enhancing its academic dimension and weakening the importance of school-centred professional training.

Meanwhile, changes in society made the obligation of policy-makers to adapt education to new socio-economic demands unavoidable. How far these demands had an impact on the content of teacher training is therefore a question of utmost importance, one that needs reflection taking into account that education authorities are inclined to increase regulation of initial teacher training as part of a tertiary-level educational provision.

When assessing the effects of the '*universitisation*' of teacher training on the transformation of long established classroom practices, it is possible to sustain that its results fell below what would be expected. One of the reasons that might explain the failure of such transformative ability lies behind the nature of the training process designed and implemented by higher education institutions. Training, which is usually founded in a '*performance-based*' approach, focuses on *outcomes* rather than on *processes*. As Delandshere and Petrosky point out (2004: 6), it is a kind of training that compares teachers' performances to '*benchmarks*' (i.e. idealized views of these performances), and assumes that tangible, observable behavioural criteria can serve as a basis for the training of non-qualified teachers. Still, doubts have been raised about its validity, reliability and/or practicality, because it seems difficult to assess the qualities of a good teacher just by measuring his/her performance on the basis of long lists of observable skills.

Although such problems are not confined to geography teacher training, in the case of geography they seem to be particularly pertinent, since they contribute to widen the gap between academic and school geography. Considering all the educational reforms that shaped the curricular and conceptual content of geographical education since the late 1970s, it seems surprising that successive generations of Portuguese geography teachers finish up describing the subject matter to which they were exposed as students in a qualitatively similar manner. They often portray geography as *encyclopaedic*, whose purpose was to provide lists of places, to present facts and statistical data, to portray the character of regions and continents, whose teaching methods were focused on learning by heart, centred on the use of textbooks and without any recognizable problem-solving approach. Indeed, a discipline whose contents recall the sort of school geography delivered in Portuguese schools until the last quarter of the 20th century.

As a consequence, it seems possible to conceive that the uniformity of both older and younger teachers' views about school geography is probably a result of an instructional homogeneity, which emerged from a perennial approach to geography teaching that teachers experienced as students, and that teacher training programmes seemed unable to transform (Alexandre, 1995, 2013; Brooks, 2006; Dolan *et al.*, 2014; Tutiaux-Guillon, 2008). Given this context, the paper intends to address two questions:

1. *How did the “universitisation” of teacher training affect teachers’ involvement in the overall training process?*

2. *How to explain the marginal results obtained by training in changing teachers’ practices?*

The data collected for this paper were obtained through the content analysis of primary documents (e.g. official reports and proceedings of government working groups and task forces, and programmes of study from different higher education institutions), and databases, as well as through the analysis of the results and conclusions produced by various field researches. Taking into account the information that was gathered it is possible to identify the main weaknesses that affect the quality and outcomes of teacher training in Portugal, in which geography is included. These are: (a) training programmes state that they adopt reflective approaches, but don't put them into practice; (b) teachers question the content of training and feel that its outcomes rarely change their own beliefs and practices; and (c) teachers perceive training as a process that does not provide them with the methods that they foresee as necessary to solve everyday problems. In order to overcome such impasses it is crucial to review the philosophy that guides most of the geography teacher training, an endeavour that requires a review of the overall design of the training programmes (e.g. vis-à-vis course planning and organization, as well as methods and strategies).

The factors that diminish either the quality or the efficacy of most geography teacher training programmes result less from their lack of theoretical content, than from the inadequacy of their training methods and strategies. Training programmes either ignore the epistemological and educational knowledge that teachers have gained prior to go into training (Anspal *et al.*, 2012; Bukor, 2015; Dolan *et al.*, 2015), or are unable to approach teachers' life histories in order to depict the contents of their beliefs (Pajares, 1992; Pomeroy, 1993; Sousa, 2011; Stenberg *et al.*, 2014). The absence of a training strategy designed in accordance with the principles of reflection-on-action and reflection-in-action, might be seen as a probable cause for the short-term effects of training (Stenberg, 2010; Lessard, 2012), from which results a kind of practice standardization that sometimes contradicts the educational discourse unfolded during training itself (Alexandre, 1995, 2009, 2013; Riopel and Gervais, 2008).

The Massification of the Portuguese Educational System

The expansion of post-primary education in Portugal during the 1970s and 1980s triggered important changes in the overall structure of the educational system. Between the 1960s and the 1980s the number of teachers almost trebled while the number of pupils less than doubled (Table 1). This growth reflected not only the first wave of

expansion of the system that started in the late 1960s, but also all the reforms that emerged in the aftermath of the 1974 political regime shift. The data presented in Table 1 highlight the pace of expansion of the Portuguese educational system during the last fifty years, but are just a sample of the information available. In fact, in the decades 1970-1980, 1980-1990, 1990-2000 and 2000-2010, the growth rate of the number of students attending primary, and lower and upper secondary education was, respectively, 27%, 8%, -10% and 5%, while the number of teachers increased by 96%, 29%, 19% and 1%. The data also point to the very sharp rise in the number of students attending upper secondary education, whose growth rate for the same periods reached, respectively, 527%, 83%, 35% and 16%, which compares with a lower growth rate for primary and lower secondary education (e.g. 17%, -0.5%, -19% and 1.3%).

Table 1.

Number of students and teachers in Portugal, 1961–2013 (exclusive of tertiary education)

	STUDENTS			TEACHERS (Excluding pre-primary education)
	Pre-primary	Primary and Lower Secondary	Upper Secondary	
1961	6 528	1 066 471	13 116	36 473
1970	15 153	1 316 279	27 028	53 135
1974	41 080	1 444 883	43 653	68 456
1975	42 490	1 466 815	67 853	81 230
1978	64 739	1 560 791	133 406	93 179
1979	69 126	1 547 467	145 260	101 209
1980	80 373	1 538 389	169 516	104 194
1985	116 325	1 636 458	206 149	117 609
1989	155 857	1 555 573	276 222	132 205
1990	161 629	1 531 114	309 568	134 370
2000	228 459	1 240 836	417 705	159 772
2010	274 387	1 256 462	483 982	161 576
2011	276 125	1 206 716	440 895	156 669
2012	272 547	1 157 811	411 238	145 547
2013	266 666	1 093 523	398 447	133 172

Source: Pordata (<http://www.pordata.pt/Home>)

As regards tertiary education, the system was upgraded through the establishment of new Universities, which began to propose many programmes specifically focused on the training of teachers. Such driving forces gave rise to a process of transverse massification of the educational system that also led to the design of new models of teacher training and recruitment.

But the growing demand for teachers brought about a lowering of academic and professional standards of access to the teaching profession, since this need was initially satisfied more through the enlargement of the recruitment criteria, than through the development of teacher training institutions and courses. The teaching body of the secondary mass schools became more diversified than ever before, as regards its academic and professional qualifications; senior teachers trained for an elite school worked side by side with newly trained teachers, both working alongside non certified graduates and non graduates as well (Table 2).

Table 2.

Teachers placed in lower and upper secondary schools in accordance with their qualifications for teaching (%) (Braga et al., 1988: 1193)

Teachers		Years	73/74	75/76	77/78	79/80	81/82	83/84	85/86
		Qualified	28.4	27.2	42.6	50.9	48.0	50.5	51.5
Non-qualified	<i>With a degree</i>	40.6	48.8	36.4	32.8	35.9	36.5	36.6	
	<i>Without a degree</i>	31.0	23.9	21.0	16.3	15.9	13.0	11.9	

Until 1986 teacher training was mainly implemented through models ruled by the educational authorities, which promoted access to the teaching profession to the non-certified graduates, and valued the role of school experience rather than theoretical pedagogical information. However, such a system was unable to respond successfully to the massification of schooling and to the qualification of teachers. That is why schools were then compelled to welcome a large number of non-qualified teachers, some of them without a degree in the subject that they would have to teach (Table 2). Although the situation has greatly improved since the end of the 1980s, by 1996-1997 only 71.5% of all lower and upper secondary teachers had secured permanent tenure, along with 59.8% of those without permanent tenure remaining as non-qualified teachers.

Therefore, until the early 1990s many schools had indeed a majority of non-professionally certified teachers and a significant number of non-academically qualified ones. This did not lead to a change regarding teachers' practices and duties, as all were given the same roles, powers and responsibilities. All teachers had the same curricular planning expectations, the same evaluation tasks, and the same disciplinary powers, as well as, in some cases, the same access to co-ordination posts. This induced a lowering

of teaching performance standards, creating a 'teaching minimum duties load' (Formosinho, 2000: 6), from which emerged a kind of bureaucratic culture that was fostered by the complete integration of the teaching profession into the civil service. The expansion of mass schooling in Portugal was delivered through the creation of public schools, which meant that almost all those new teachers became civil servants. This also led to a functionary like definition of duties and responsibilities, which contributed to transform Portuguese teachers into the most significant group within the Portuguese Civil Service.

The need for new qualified teachers

The process of building mass schooling gradually implied a more comprehensive perception of the teaching profession, whose profile was stretched with new teachers' roles regarding the students, regarding the curriculum, regarding participation in school and community life, and regarding in-service training. In fact, during the 1990s the set up of a massive in-service teacher education programme was the answer given by the State to this problem, so that in-service attendance became an inherent part of being a teacher. In-service professional teacher certification thus developed into the easier way of access to the teaching profession for those non-certified graduates working in comprehensive schools all around the country.

In line with the in-service solution, the new Universities created in the 1970s also began to formulate new models of initial teacher education, thus bringing about a so called "integrated approach", during which teachers were trained and certified all along the same process. This entailed a structural change in teacher education, through which teacher education institutions tried to adapt to the new demands of mass schooling. Consequently, the new teacher education curricula began to include a significant number of new issues and topics from the emerging educational sciences (e.g. curriculum development, educational technology, sociology of education, psychology of education, didactics, school administration and management).

Hence, it seems possible to conclude that the process of mass schooling was the origin of two different and apparently divergent policies of teacher recruitment and training. On the one hand, there was the creation of professional models of initial teacher education explicitly aimed at the new comprehensive school, which valued theoretical information on educational subjects and were based on the new universities and polytechnics. On the other hand, there were training programmes run by the educational authorities (from 1974 to 1986), which promoted access to the teaching profession to non-certified graduates by valuing the role of school experience and devaluing pedagogical theoretical information *per se*. The policy intended to close the gap between those two opposing approaches came out just in 1986, when the government decided to adopt the model of integrated initial teacher education, provided by both universities and teacher education colleges, as the only path to teacher certification.

The 'Universitisation' of Teacher Training

The 1986 Education Act defined the integrated model of professional teacher education as the standard route to become a teacher. In the 1990s teachers intended for teaching in all areas of the curriculum (except the technological ones) were trained in accordance with this new model. From then on, the mainstream of professional teacher education was provided by higher education institutions, which were also in charge of supervising the final on-the-job stage of the training process. As a result, most of the teachers trained in the 1990s were already professionally certified before getting a placement in schools. In fact, while shortening the certification process, the integrated training model also tried to assure that all its graduates had an immediate access to employment if not to permanent tenure.

Such 'universitisation' of teacher education was reinforced by the establishment and development of several private colleges and universities offering teacher education courses (e.g. in 1973, four new universities were created, three of which were called upon *new universities* — Aveiro, Évora, Minho — due to their different institutional culture and organizational dynamics, and they immediately initiated teacher education courses under a professional perspective). Moreover, the importance of higher education institutions as regards teacher education was also consolidated by the creation of many post-graduate courses (e.g. post-graduate diplomas, as well as masters and doctorate degrees), which decisively contributed to the improvement of both the research and knowledge produced in the field of teachers' professionalism. That is made evident when analysing the increasing number of PhD Theses presented in the field of the educational sciences (Table 3).

Table 3.

Number of PhD Theses presented in the field of Education (1974–2014)

	1974-86	1987-89	1990-99	2000-09	2010-14
Social Sciences and Humanities	279	274	1570	4492	3556
Education	39	24	235	706	850

Sources: PORDATA and DGEEC (<http://www.dgeec.mec.pt>)

In brief, it is possible to sustain that in Portugal, as well as in many other countries, the political decision that allowed the creation of new initial training programmes was part of a twofold movement, which on the one hand resulted in a growing number of new work placements and, on the other, handed over to the universities the task of ensuring both the supply of qualified teachers and the development of the scientific knowledge that was needed to assure the reliability of their training. This decision gave universities an opportunity to produce sound knowledge about teachers' practices and decision-making processes and, therefore, gave rise to improve the interaction between the fields of training and professional practice as well (Etienne *et al.*, 2009).

In addition, the 'universitisation' of teacher education was joined together with a movement of growing university autonomy that protected their power to decide on the structure and content of the training process. At the same time the State lacked the ability to control all the variables that could interfere with the quality of the path designed by the higher education institutions to certify teachers. Therefore, some conflicting interests emerged as regards the control of the teacher training process (Formosinho, 2000: 4): (a) universities conferred the professional certificate and the academic degree, but the State kept on being responsible for formulating and implementing the overall educational policy, which included the definition of teachers' profile and roles; and (b) the State kept the position of biggest employer of teachers, while the educational market continued to be largely free from regulation (e.g. teachers' activity had no corporative or professional orders control).

As mentioned before, the 'universitisation' of teacher education gave rise to more research in educational sciences, particularly regarding teaching and teachers' knowledge and beliefs, as well as to more status recognition for the teaching profession. Nevertheless, it also contributed to raise the general awareness regarding the problems that resulted from the mismatch between the universities' academic culture, which traditionally framed their organisation and performance, and the specificity of the programmes they should conceive in order to qualify and certify teachers. The underlying problem is that frequently those mismatches are not seen as problems. This is partly because the analysis produced by academics is reserved for state policies, instead of being used to understand university policies (Canário, 2001). In addition, critical thinking is more often used over school culture and practices, rather than on universities' own culture and teaching practices (Desjardins and Hensler, 2009). Furthermore, university-based teacher education programmes seem to be unaware of the dissonance between the socialisation experiences of student teachers during their own schooling and practicums, and the content of the training programmes, a fact that is indicative of the broader theory/practice dichotomy in education (Gleeson *et al.*, 2015).

In the 1990s, though there was some consensus about the role that universities should play as regards the development of teaching professional courses, there was less consensus as to their ability to confer teaching professional certification, and no consensus about the most suitable model to deliver professional initial teacher education. Many university disciplinary departments then began to claim for a greater percentage of the teacher training curriculum at the sacrifice of its educational sciences components (i.e. the curricular elements that merge the theoretical knowledge in the fields of sociology, psychology, or pedagogy). This led to two different models of teacher' education: (1) a comprehensive professional model based on an extended professionalism concept; and (2) a more restrictive professional model based on a didactic vision of teachers' professionalism. Actually, underlying this debate there was often a bias against the educational sciences, which supposedly suffered from both the lack of objectivity and reliability of the natural sciences, and the long historical tradition of humanities.

The comprehensive model encompassed courses in the sociology of education, educational administration and management, and curriculum development, and had an important component of student teaching practice through the entire training process. It was the model usually implemented by the new universities. On the other hand, the restricted model emphasised the subject-specific knowledge domain and focused the educational sciences component mainly on didactic courses, thus devaluing the study of the social and cultural problems that emerged from the process of mass schooling. It was the approach most commonly applied by the *classical* humanities faculties, which were traditionally resistant to implement professional teacher education programmes and, therefore, adopted without enthusiasm the teacher education policy established by the 1986 Education Act.

Both models propose a final *on-the-job* qualifying stage, which was defined as a period of transition between the initial training of teachers and their entry into professional life as fully-fledged teachers. Trainee teachers had to spend a significant amount of time in a real working environment (a school) where they carried out wholly or partially the tasks incumbent on fully qualified teachers. They were supervised as regards all tasks related to teaching as such (e.g. planning of lessons, class management, pupil assessment), as well as with other activities more focused on human relations. Such activities were organised in order to encourage candidate teachers to take part in the life of the school to which they have been assigned (e.g. relations with parents, knowledge of school management). Teachers were also observed during their work in the classroom, a strategy conceived to help them overcome their difficulties and formally assess their progress, and intended to provide prospective teachers with a practical insight into their future profession.

Until 2000 there was no national system for the accreditation of initial training programmes, or a compulsory list of standards with which trainees had to comply. Given their autonomy, each training institution was ultimately responsible for evaluating candidates. They all issued documents regulating the training process to some extent, with a view to providing a minimum level of homogeneity in teachers' qualifications. The skills thus defined were clearly within the limits of subject-oriented knowledge or teaching ability in the strict sense. Under such circumstances it is possible to agree with the assessment made as regards the overall coherence of teacher education provided in Portugal until the beginning of the XXI century (Campos, 2000: 22-23), which was that the specific expected outcomes of teacher education were not clearly established and the definition of the curriculum components to achieve them was generic, as higher education was scientifically and pedagogically autonomous.

Answering to this de-regulation of the teacher education system, the State set up in the late 1990s an accreditation process for all initial teacher education, both private or public, and polytechnic or university. For that purpose, an accreditation body was created in 1998 — the *National Institute for Accreditation of Teacher Education* (INAFOP) — which was extinct in 2002. The process of teacher education accreditation was intended to evaluate how appropriate the existing initial teacher education programmes were to qualify demands of professional teaching performance. However,

it never went beyond a preparatory stage. Still, in spite of its short existence, INAFOP led to the official publication of some important documents, one of which is still in force: *the schoolteacher general teaching profile* (Decree-Law 240/2001, 30th August). The Institute also issued the framework of what was intended to be the global *standards of initial teacher education* (Deliberation 1488/2000).

Since 2007, the accreditation process of all teacher education programmes is committed to the *Agency for Assessment and Accreditation of Higher Education* (A3ES). The agency seeks to develop an accreditation system for initial teacher education that does not aim to take away from higher education institutions the power to certify its graduates' teaching qualifications. Its role is not envisaged as a mere administrative verification of whether or not new and existing training programmes meet legal requirements, but is focused on evaluating their adequacy to provide a professional teaching qualification, as well as on assessing the quality of the human and material resources, the training processes and the outcomes achieved.

Much of the norms that shaped the core of the legal regime that ruled teacher education since the late 1980s were revoked in 2007, following the approval of a new law intended to regulate and frame all initial teacher training programmes (Decree-Law 43/2007, 22nd February). The new legal framework was partly justified by the need to change the structure of existing teacher training courses in accordance with the three cycles of higher education studies imposed at European level by the Bologna process. From then on, the route to teachers' qualification is regarded exclusively as a process intended to develop their professional competences, which for lower and upper secondary school teachers means the obligation to attend a *consecutive* training path with a total duration of five years: a three years 1st cycle that provides the scientific subject training and confers a bachelor's degree, followed by a two years 2nd cycle, awarding a Master's degree specifically designed to provide professional qualification for teaching.

In May 2014 a new Decree-Law introduced minor changes in the structure of the previous model and reinforced the *consecutive* nature of the existing training path: three years of *general education* (admission to professional training in a specific field requires at least two years of scientific training in the subject), followed by two years of *initial professional training* (in which the *on-the-job* qualifying stage can be distributed throughout the whole training process). As regards the weighting of the different training components, the 2014 law defines as follows the minimum requirements to which all programmes must comply with: *general educational sciences* (15%); *subject-specific didactics* (25%); *teaching supervised practice* (35%); *subject-matter knowledge* (15%).

In spite of all the trends and legal changes that shaped Portuguese teacher education policies along two decades, it is possible to state that the basic principles that underline its practices remain relatively unchanged, thus reinforcing the weaknesses that come out from the outset of teacher education 'universitisation'. This is because, firstly, a university culture based on *subject specialisation* may not be the most adequate context to foster attitudes of interdisciplinary cooperation, or multiprofessional work. Secondly,

a university culture that envisages *curricula as a simple juxtaposition of individual courses* may not be the most adequate context to foster a global vision of teaching within the movement of mass schooling. Thirdly, a university culture based on *departmental compartmentalisation* may not be the most adequate context to develop the links between theory and practice and, therefore, to engage teachers in reflective practice and teamwork.

Models of Initial Geography Teacher Training

The first initial training programmes intended to certify geography teachers were proposed in 1986 by four higher education institutions: the Faculties of Arts from the Universities of Coimbra, Oporto and Lisbon, and the Faculty of Social and Human Sciences of the New University of Lisbon. Although the endorsement of those programmes occurred simultaneously, their structure and rationale followed different directions as regards the training of geography teachers. Actually, taking into account the content analysis of the four proposals, it is possible to envisage the definition of training models that were not only rooted in different theoretical backgrounds, but from which also emerged different beliefs about the nature of the processes that should lead to the qualification of teachers.

The proposed institutional arrangements put forward either a *concurrent model* of teacher training, hence made available from the outset of tertiary education (involving a programme which combined general education in geography with theoretical and professional teacher training), or a *consecutive model* (involving general education in order to obtain a degree in geography, followed at or near the end of this period of study by a programme of initial professional training that could still contain some general education courses). In both cases, the teacher training process ended with an *on-the-job* qualifying phase, which was compulsory for students who wanted to be considered as qualified teachers. Since 2014 all geography teacher initial training follow the consecutive model.

As to the overall content of training, the existing programmes try to put together two main training components: (a) general training devoted to provide trainees with a thorough knowledge of geography; and (b) professional training corresponding to the theory and practice of teaching, which included both courses in various educational subjects — e.g. sociology of education, psychology, teaching methods, school management and administration, and in some cases ICT — and the *on-the-job* phase previously mentioned. Support offered during this last phase is usually multidimensional and displays three core dimensions: *training*, concern with the *working environment* and concern with *monitoring and evaluation*. Such arrangements imply the participation of tutors who play a crucial role in supervising prospective teachers, though teachers at the training institution are eventually responsible for the whole mentoring process. Even if tutors rarely have to undergo special training for the role they perform, some training institutions organise an annual plan of seminars and workshops specially designed to support the implementation of the mentoring activities.

Since the 2007 revision of the initial training programmes that trainees attending the *on-the-job* stage are no longer regarded as professionals and, as a result, they do not

undertake much of the tasks usually assigned to fully qualified teachers. The training strategies implemented during the *on-the-job* phase are quite diversified. Over and above the classroom activities that trainees have to carry out, this phase generally includes more theoretical training (e.g. educational concepts and teaching methods in the strict sense).

Trainees may be obliged to attend a range of training sessions (e.g. conferences, seminars, workshops) the content of which is concerned with various aspects of the teaching profession, and/or to prepare reports so as to satisfy the evaluation criteria at the end of this stage. In general, these training sessions are organised flexibly enough to match the changing needs experienced by teachers throughout the final qualifying phase. On its completion, teachers often have to write self-assessment reports stressing the outcomes of their training, which constitute an important part of their evaluation process.

The theoretical dimension of training, which comes together in both its general and professional components, is usually based on courses delivered to students as lectures. This approach, which is a sign of a break between theory/discourse and practice, ends up leading trainees to identify a major contradiction between the strategies in which they are involved as learners, and the ones they are urged to adopt as teachers. As stated before, this stance seems to result from the substantial autonomy granted to training institutions, where still flourishes an *academic* view of teacher training founded on a technical-rationality model that does not raise doubts about the status of disciplinary knowledge and assumes that theoretical knowledge is the starting point for practice.

Given the difficulties that higher education institutions usually exhibit as regards changing their own practices and philosophy, and considering the never-ending departmental rivalries and the heavy bureaucratic procedures, it is possible to foresee that the overall transformation of initial training programmes will only take place when and if induced by external factors (Popkewitz, 2010). Until then, the content analysis of the regulations and evaluation criteria issued by several training institutions (Alexandre, 2009, 2013) shows that the competences profile officially endorsed is applied in quite a marginal way, since training programmes — mainly in what concerns the *on-the-job* phase — continue to put an accent on the more technical dimension of the teaching profession, that is, on both subject specific and instrumental competences, which demonstrate the persistence of an outdated educational paradigm (Gonzalez & Wagenaar, 2003) and a sound example of an outcomes ideology.

Limits of the Paradigm That Frames Initial Geography Teacher Training

Teacher education is still based upon the notion that theory and practice can be separated because each is located in its own separate domain, although we can now see that disciplinary knowledge (theory) is not a disembodied form but is itself inseparable from particular practices and personal educational philosophies. The latest have been found to be associated with teachers' beliefs about learning and teaching as well as with their beliefs about what they are learning. Therefore, if we want to improve teacher education and to reinforce its role in changing teaching practices in school, it is also

indispensable to know the contents and the structure of that specific kind of knowledge (Brooks, 2006; Bukor, 2015; Dolan *et al.*, 2014).

Teachers' beliefs challenge the role and the strategies adopted by the various institutions and organisations responsible for teacher education. They also allow questioning of the meaning of *knowledge*, particularly of *knowledge about education*, as a conceptual tool that teachers can apply either when shaping their personal educational philosophies, or when making decisions concerning the teaching and learning activities they intend to develop. Indeed, the problem is related to questions of ownership and power, for knowledge regarding education is produced and owned by people who are not necessarily teachers, or if they are, who focus not on their own practice, but on the practices of others. Teachers are objects of study for non-teachers, and no matter how interesting, useful or relevant the knowledge resulting from that study, the position of those being observed is less powerful than that of the observers.

Still, as correctly pointed out by Usher *et al.* (1997), knowledge regarding education in the form of education disciplines, because it is implicated in power/knowledge discourses, can not be separated, either epistemologically or ontologically, from educational or even from wider social practices. This is because disciplinarity is always present in educational practices. There is no area that can be occupied which is not yet implicated with, if not captured by it. Hence, the technical-rational position where disciplinary knowledge (theory) is applied to practice is clearly problematic. Equally problematic is the traditional counter-position of rejecting *theory* and returning to unalloyed practice or experience. Here too, there is a failure to consider the working of disciplinarity, in the sense that what might seem appealing or even liberating, actually serves only to more effectively mask the workings of power and regulation. Teacher education cannot draw from disciplines, not because disciplines are inadequate or because no integrating theory can be found, but because it is already *in* disciplinarity, if not *in* disciplines. Thus, the question here does not so much concern *application* but what might be more correctly designated as *implication*.

Taking into account the principles and goals of geographical education, it seems possible to recognize that the challenges and demands that confront geography teacher training programmes are quite similar to those usually mentioned vis-à-vis the education agenda in general (e.g. environmental education, education for peace, etc.), since they all assume as a central goal the purpose of changing teachers' practices. However, in order to actually transform teachers' practices, it is imperative to change the philosophy that lies under those very same teacher training programmes.

Firstly, although the purpose of adopting reflective approaches is already built into the theoretical guidelines of many training courses, there is still a long way to run until such practices are effectively implemented during training itself (Amobi, 2003; Barnett and O'Mahony, 2006; Bean and Stevens, 2001; Cox, 2005; Stenberg, 2010). Secondly, during the whole training process there is frequently a contradiction between *discourses* and *actions*, which probably explains why teachers so frequently disbelieve training, and why its outcomes so rarely lead to change in teachers' beliefs and conceptions about teaching and learning. Such inconsistency begins when the pedagogical models that

teacher educators apply during training are not consistent with the theoretical discourse that they present as the foundation on which trainees should root their school practices. But it also deepens when student teachers start questioning the feasibility or the adequacy of those various theoretical pathways vis-à-vis the culture and the contexts they will have to manage and negotiate during school placement (Alexandre, 2013; Dolan *et al.*, 2014; Gleeson *et al.*, 2015).

The same sorts of contradictions are felt while comparing the goals of geographical education and the way it is put into practice. The qualifications that teachers must develop in order to carry out geographical education are not only related to the teaching and learning strategies that should be implemented to pursue it, but concern the global framework for improving teachers' professional development as well. Some of the guiding principles that are also important for training geography teachers include the ones of *innovation*, *social inclusion* and *active citizenship participation*, all considered as crucial elements of a process leading to *lifelong learning*. In fact, if such elements are missing from teacher training, than we can hardly expect that geography teachers will be able to promote the learning activities that can enable the development of the skills and competences that society expects students to reveal when acting as citizens.

On the other hand, it is fair to say that schools are not the only avenue through which students can develop the awareness, the consciousness and the will to be socially and politically engaged (Clark and Drudy, 2006; Tutiaux-Guillon, 2008). There are other non-statutory education settings and sources of information that play an increasingly significant role in shaping peoples' knowledge, attitudes and values: the media, the internet, the social networks, the new social movements, the local communities and interest groups. In fact, it is just because schools no longer lead on their own the whole educational process that they have been asked to change their goals, philosophy and methods. Schools have been encouraged to deal with the world outside, thus to strengthen the links between theory and practice: the starting point for active citizenship and one of the structural benchmarks of geographical education.

Teachers, as well as students, have been asked to be aware of *complexity*, to reveal *autonomy*, to be engaged in *team* and *collaborative* work, to foresee behind the strict limits of disciplinary *knowledge*, to develop *decision-making* and *problem-solving* skills, to consider their own learning as a continually unaccomplished *process*. Whether or not proposed to respond to the requirements of geographical education, the concepts underlined run through some of the topics that are usually discussed throughout teacher-training programmes, which usually end up asking teachers either to be many different things, or to reveal countless skills and competences. Teachers have to be able to work in accordance with a cross-curricular network of theoretical and conceptual references and, above all, they are asked to be *reflective*. The role of the teacher has rapidly shifted from someone transferring knowledge to someone guiding students, which means that teachers are expected to adopt a different view of their role, and a different answer to the question *who am I as a teacher?*

Given this context, it seems possible to conclude that after decades in which 'the person' was largely absent from the theory on how best to educate teachers, we are now

witnessing a surge of interest in the question of how they think about themselves and how they undergo the substantial personal transformations they pass through as they become teachers. The relevance of this *new* reflective paradigm is well stressed by the words of Hamachek (1999), saying that ‘the more that teachers know about themselves – the private curriculum within – the more their personal decisions are apt to be about how to pave the way for better teaching’ (p. 209).

Nevertheless, in spite of a wide agreement concerning the importance of considering both teachers and students as ‘persons’, despite the efforts to adopt reflective approaches in both teacher training and classroom practices, and the existence of common views about which should be their goals, the reality of training and teaching reveals the pervasiveness of an inconsistency — or conceptual gap — regarding the decision about the best route to accomplish those very same goals. That contradiction is a sign of a conflict between a paradigm focused on technical rationality and true knowledge, and a paradigm centred on existentialism, in which knowledge is built in the course of a reflection process upon the meaning of each individual own actions and practices.

In what concerns initial geography teacher training, the existence of such a conflict depends on the emphasis given either to theory or to practice, the latter seen as the starting point for theory itself. Training geography teachers for citizenship implies considering and thinking carefully about the repercussions of adopting one of those two paths. Not only because teachers themselves will thus develop different skills and competences, but because these will certainly contribute to develop in their own students conflicting images about what it meant to be a geographically informed citizen. Their outcomes will put the accent on either a concept of geography seen mainly in terms of its content, or a concept of geography centred in the ethics and meaning of its contribution to develop active and participative citizens.

Geography student teachers are constructing their professional knowledge out of completely different circumstances to those in which their trainers started teaching, and so students’ knowledge cannot be the same as theirs (Altet, 2008; Brooks, 2006; Riopel and Gervais, 2008). In Portugal, teachers’ professional knowledge has been shaped by the numerous educational reforms that were implemented in all levels of education since the mid 1970s. They affected academic geography, where the introduction of new paradigms led to revision of programmes of study, the proposal of new degrees and the reinforcement of scientific specializations, which contributed to change teachers’ views about the meaning and the purpose of geography (Alexandre, 1995, 2013). But they also affected school geography, either as a corollary of the wider process of mass schooling, or as a consequence of the frequent revisions of both the national curricula and geography syllabi.

That is why in most situations teacher educators try to model their trainees in accordance with a certain way of talking like a teacher. Therefore, rather than propositional knowledge that might be subjected to tests of validity and reliability, students frequently encounter a certain type of rhetoric. Still, their professional knowledge should not simply be a matter of making connections between theory and

practice, but a means to explore the possibilities and limitations of teachers' standardized and socially accepted language.

The conceptual framework presented before appears to be a valid approach to explain why it seems so challenging to build bridges between *theory* and *practice* in the context of initial teacher training. It also makes possible to understand why the 'universitisation' of teacher training programmes contributed to weaken student teachers' commitment to the overall training process, thus undermining its potential to renew prevailing teaching practices. Such weaknesses might result from the fact that initial teacher training struggles to force students to apply some form of *knowledge about education*, forgetting that their implication towards its content depends on the *educational knowledge* the subjects built and experienced before they were engaged in the training programme.

Teachers' *educational knowledge* is a form of knowledge that can be described in accordance with some core attributes (Alexandre, 1995, 2013; Brooks, 2006, 2011; Bruce and Russell, 1992; Riopel and Gervais, 2008; Tam, 2015):

- It is generated from practice and through the dialogue that teachers build up with their peers, in a process that sets teachers at the heart of it; in this sense it is knowledge that is owned by teachers and produced by them and for them.
- It is produced when teachers engage themselves in reflective processes, which might be encouraged through their involvement in action-research orientated investigations into their own practices.
- It describes and explains in some form or another what happened when they tried to develop new teaching and learning practices, or to improve the ones they are used to carry out, possibly in order to meet the terms of a training programme.
- It is composed of what teachers have learnt by means of the educational experience of reflecting upon their growing understanding of the teaching and learning processes which occur in their own classrooms.
- It is inherently dialectical, because it is initiated and sustained by contradiction as well as being tested and developed in practice and through dialogue.

Although these attributes can explain the origins and the foundations of the educational knowledge of any teacher, it is important to point out that its specific content will also vary in accordance with the principles and epistemological significance that assure the coherence and rationality of every field of study. On one hand, geography teachers might share with teachers of other disciplines some common views about the meaning of *being a teacher*, or about which are the best teaching practices to develop students learning and competences. On the other hand, their discourse and practices are also framed by the particular nature of geographical knowledge, by its fundamentals, scope and validity, which they use to define the meaning of *being a geography teacher*.

The educational knowledge of geography teachers crosses over multiple influences, which contribute for the development of a system arranged as a network of beliefs,

social representations, personal experiences, information and data, collected and accommodated throughout the subjects' lives. The structure and content of each individual system are the outcome of a particular life history, as well as a result of social interaction (Bukor, 2015; Dolan *et al.*, 2014; Gleeson *et al.*, 2015; Riopel and Gervais, 2008). Therefore, the system becomes increasingly complex as the teacher merges new information and knowledge, or lives new and challenging experiences. In either case, the existing system will always act as a filter that will constrain both the development and the direction towards which it is going to widen (e.g. the acceptance or rejection of new educational theories, and more or less openness to the implementation of new teaching strategies).

Given this context, it is unwise to envisage candidate teachers as a sort of empty bags, which are just open to be uncritically filled with the knowledge about education that trainers are so zealous to convey. Even without questioning the validity of such knowledge and its importance to keep young teachers' practices in pace with either the needs of students or the unpredictability of the political will, the fact is that all trainee teachers already have an educational knowledge system. Although it was built mainly throughout their school years, it is powerful enough to lower the effects of training and to limit the validation of its content in accordance with the trainees' own views about what it means to be a good geography teacher.

Consequently, the distinction between *educational knowledge* and *knowledge about education* brings about the separation of theories regarding education which are rooted in an atomised approach to "disciplines" and are theory-based, with a questionable direct relevance to practice, from educational theories which can be considered practice-based and holistically appreciated. Neither is more valuable nor more logical than the other. *Educational knowledge* needs and uses *knowledge about education*; the latter is thus a component of the former, although it is not the same thing (Perrenoud, 2008).

As was said above, knowledge regarding education stresses power relationships between those who produce it and those who are only supposed to apply it. Except for the scientific knowledge they teach, teachers are detached from the location of knowledge-as-power, since they are being told what to teach and what constitutes competent teaching. For that reason, they are sometimes viewed as low status executors, who are excluded from research and its findings. According to McKernan (1992), this is the result of a division of labour between those who research and those who are objects of research, through which the opportunities to learn and develop through research into each other practices are lost. Actually, this reflective process is a premise that is regarded as essential to change teachers' practices and to adapt their teaching to new educational and social contexts.

Another important issue relates to the possibility to understand how *educational knowledge* works in practice, not in an ideal setting, but in the real world of the existing educational establishments in which teaching and learning take place. Indeed, there is not much point in having something that looks good in theory but does not work in the constrained circumstances of today's educational world. That is why it is also possible to argue that professional development as much as lifelong learning are no longer

optional, privately pursued extras for teachers, but necessary parts of their public accountability. Teachers need to reflect on their practice if they are to improve and develop, but reflectivity alone is not enough; they need challenge and support if their development — as well as the quality of their students' learning and competences — is to be enhanced (Schön, 1983, 1987, 1992).

Perhaps *educational knowledge* can be questioned from an epistemological perspective. Some might view it as "immature" and "non-scientific", partly because educational theory is itself highly disputable, since except for subject knowledge, there are no specific techniques of teaching or learning which are directly applicable to educational practice and have universal validity. This point of view probably also persists because the "disciplinary" model of knowledge in education does not seem to have been replaced by any other agreement about what is considered an educational theory with widespread academic credibility.

Nonetheless, the epistemological value of *educational knowledge* lies precisely in its dialectical rationality, thus enabling the description of the rules by which teachers create and use their knowledge. The previously mentioned action-research process is itself a rational construct that enables the educational development achieved by many teachers when acting as action-researchers. It embodies the way in which teachers create *educational knowledge* within a dialectical form of knowing and acting, a form that provides the logical foundation for what can be more generally defined as *teachers' knowledge*. On the other hand, the methodological manifestation of this dialectical form of rationality — action research — also illustrates how the *educational knowledge* thus created can assimilate *knowledge about education*, and simultaneously be integrated within the practice of other educators and inform institutional policies.

The role of geography teacher educators is to induce their students into a professional community that involves dialogue and debate, as its members collectively endeavour to understand the complexities of their professional lives. All geography teachers (e.g. prospective, novice or experienced) involved in any training situation, are not passively inducted into professional development, with change enacted upon them, the subjects of a discourse over which they have no control. On the contrary, they actively participate in their own making, consciously applying various frames of reference — e.g. social representations and belief systems as mentioned earlier — in order to make sense of their experiences and arrive at judgements about professional practice (Alexandre, 1995, 2013; Brooks, 2006, 2011). For that reason, it is essential that training programmes assume the will to deepen the relations between theory and practice through the implementation of well-chosen reflective strategies, which would also act as a means to overcome the weaknesses of teacher training "universitisation".

Still, all higher education institutions responsible for training geography teachers in Portugal will also need to answer — more practically than theoretically — to some key questions: *what does it mean to make links between theory and practice? What is meant by reflective practice?* If practice is conceived simply as a means of testing ideas by implementing them, then this is an equally narrow version of the *truth* to those abstract forms of contemplation and correspondence ascribed to technical rationality.

Unfortunately, that is still the prevailing training model, a direct product of the “universitisation” of teacher training, which the most recent legal rearrangements seem to strengthen. On the contrary, practical-critical activity means actively intervening in the world in an attempt to reform it; that is one of school geography’s leading goals. But many trainers do not thereby free themselves from the technical-rational ideology in order to better understand the world through praxis, because the standards they use to assess the quality of their own training continue to be shaped by the techno-rational values on which they found the meaning of a *good trainer*.

Conclusion and Discussion

Given a context in which initial teacher training merely has to respond to short-term results, it is possible to affirm that the performance-based model of training constitutes an efficient way to assess and evaluate teachers’ observable and measurable behaviours. Yet, it is doubtful that it might still be the best training approach, as soon as the training process is conceived in order to promote long-term changes as regards teachers’ deep-rooted conceptions and perspectives. In particular when such unchanged beliefs might be the cause that lies beneath teaching discourses whose meaning also seems to be untouched over the years. After all, it seems possible to state that standard or performance-based models of training fail to change teachers’ beliefs, conceptions and perspectives, either as regards geographical education or any other curricular subject.

Though it is unwise to imagine school geography as a replica of academic geography, the shift between the two entities can influence the public perception concerning the value of geography education, and thus undermine its curricular status. That is why it is important to discuss the role that geography teacher training can or might play as regards changing teachers’ views about the subject, both from an epistemological and a pedagogical perspective. The process during which teachers bring together academic and school geography deserves a deeper analysis in order to understand the process that lies behind the conceptual standardization of school geography. Solving the problems that emerge from the two questions that frame the reflection proposed in this paper, demands a wider reflection upon, on the one hand, the source of the gap between theory and practice that weakens the effectiveness of teacher training in general and, on the other hand, the best strategy to narrow the gap between academic and school geography that, while affecting geography teacher training in particular, contributes to undermine the usefulness of geographical education.

In order to overcome the impasses that were identified initially it is indeed crucial to review the philosophy that guides most of the geography teacher training programmes:

- By promoting the articulation between the theoretical domains that usually structure teacher training programmes (e.g. sociology, psychology, school administration and leadership, curriculum development, student evaluation) in order to avoid the fragmentation of knowledge that inhibits the establishment of thorough links between theory and practice.
- By promoting the study of both the evolution of geographical thought and of geographical education in order to increase teachers’ epistemological awareness (not

just as an additional course of study but as a conceptual frame of reference through which teachers can apprehend and bridge the contents of the paradigms that give sense to different types of geography and geographical education).

However, the factors that diminish either the quality or the efficacy of most geography teacher training programmes result less from their lack of theoretical contents, than from the inadequacy of their training methods and strategies. As stated above, the effects of training on changing teachers' practices seem to be marginal mainly because it misreads the process through which teachers construct their social representations about geography as a science, as well as about geography teaching and learning. Training programmes either ignore the epistemological and *educational knowledge* that teachers gained prior to training, or are unable to approach teachers' life history in order to depict the structure and the content of the system that frames that very same knowledge.

The absence of a training strategy designed in accordance with the principles of reflection-on-action and reflection-in-action might be seen as a probable cause for the short-term effects of training, from which results a kind of practice standardization that sometimes contradicts the educational discourse unfolded during training itself. This means that training was unable to reach the core of the system that rules teachers' educational knowledge, and only touched some elements of its peripheral ring. Therefore, the process of perennial change that would be expected as a result of an effective training programme, becomes one in which change is easily reversible.

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