



## Master in Geography Teaching – a content analysis of Portuguese reports

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### Abstract

In this article, it is our intention to present and discuss a content analysis that we made on master reports on Geography Teaching from different universities in Portugal concluded between 2017 and 2020 and published in the online repositories of the universities. We discuss the distribution of research topics of these reports in a global way and compare the universities. We also discuss the missing and less represented topics in these reports in order to identify research gaps to be filled in the near future so as to make this process of teacher training in Geography better fitting with key topics in Geography Education research. From our data, we are able to conclude that the majority of these master reports develop topics connected with “strategies and didactical resources” and “methods of teaching/learning” and only a small number of them develop topics as “Citizenship and Human Rights”, “Technologies of Geographical Information and Spatial Thinking” or “ESD/Environment”.

**Keywords:** Action Research, Content Analysis, Geography Education, Geography Teacher Training

### 1. Introduction

Initial teacher training is a key building block for the development of the teaching of a subject. Despite our teachers receiving continuous training, there is a basis of theoretical and pedagogical knowledge that teachers gain when they do their initial teacher training.

Following this idea, it was our intention to have full knowledge about what research topics Portuguese master students in Geography Teaching (initial teacher training) were dealt

with in the master theses during their internship as Geography teachers in a basic or secondary school that must be an action research activity according to the course’s rules. Figure 1 shows the Lewin model of “action research”. It has three points (research, action and training) that are interconnected. The research gives a theoretical and methodological base to the action of teaching in a school and to the process of training in all dimensions. The training gives relevant information to the research and important knowledge to the action. Lastly, the

action gives relevant empirical data to the research and also to the training. Therefore, these three points are connected and show that the process of training can gain from the relation with research and action.

Following this model of teacher training of “action research” (McNiff and Whitehead, 2002), the new teachers (in initial teacher training) are asked to develop a small piece of educational research in their lessons connected with the specific context (school, classroom, pupils) where they are doing their internship and to reflect on it in order to improve their teaching practices. This, in this model of teacher training, “action”, “research” and “training” are deeply connected and help the young teachers to develop their practices.

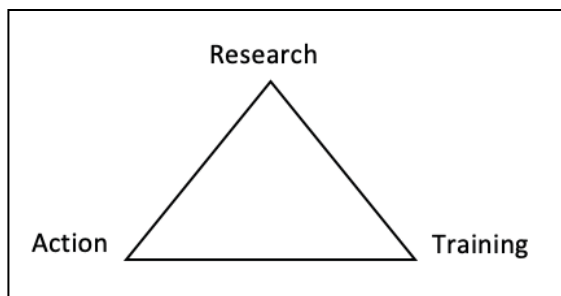


Figure 1. Lewin model of “action research” (in Coutinho et al., 2009, p. 361, our translation).

We believe that making this analysis of the master reports content is relevant because it will allow us to underline the topics that need to be more developed in these reports but also to develop an international debate on this matter for us to improve the teacher training structure in different countries.

Clearly, some contents such as GIS need to be more developed in these reports. This makes us reflect on the borders between Geography and GeoGeography (Goodchild, 2009).

With this aim, we divided the article into four parts:

- in the part “Initial Teacher Training in Geography” we give a brief “state of the art” of teacher education in Geography in the last years underlining the main authors that wrote about this issue and the specific focus of this

research. Because our research focus is the Portuguese reality, a deeper analysis of the Portuguese research on this matter is made;

- we then present our research methodology explaining the way we developed this research;
- the next step is the presentation of the analysis of the content of the Portuguese master reports in Geography Teaching, describing the content of the reports analyzed by categories and underlining the more and the less developed categories;
- finally, we present our conclusions referring to the categories of content of these master reports that we think that are important for further development in the near future, showing the research challenges on geographical education that this offers the international research community.

## 2. Initial Teacher Training in Geography

With regard to the master reports on Geography Teaching in Portugal, it is important to underline a recent study that analyzed these reports in the scientific repositories of Porto and Minho Universities (Solé et al., 2020). These authors concluded that the thematic focus of the reports analyzed is connected more with competences development linked with “real life” of the students and less connected with technological issues.

In recent years, many authors have written about teacher education. The focus has been on the beliefs of Portuguese geography teachers and the content analysis of initial training programs (Alexandre, 2009); the “universitisation” of geography teacher education has also been highlighted (Alexandre, 2013; Alexandre and Ferreira, 2015). These studies are very relevant in order to understand the Geography teacher training process in Portugal.

There are many authors that worked on a comparison between Geography teacher training in Portugal and Brazil (Nascimento et al., 2016; Francischett and Claudino, 2017; Nascimento and Nunes, 2018; Braga, 2018; Gromoni and Pezzato, 2019; Nascimento, 2019). Shimizu (2015) and Shimizu and Pezzato (2017) compared this teacher training process not only

in Portugal and Brazil but also in Spain.

The Geography teacher training in a B-Learning model in the Azores was explained (Dinis et al., 2008) and also the model of Geography teacher training at Porto University (Martins, 2012; Martins and Correia, 2012).

Relevant approaches to the challenges of Geography teacher training in Portugal were also made (Claudino, 2011; Cachinho, 2017, 2019) and the Geography teacher training in Portugal was analyzed when this training was done together with History (Pacheco et al., 2015). An article about Geography teachers as teachers of the Alpha generation was also presented (Pacheco and Solé, 2021).

Finally, it is relevant to refer to an eBook with several articles reporting experiences of Geography teacher training (Castro et al., 2019).

All these authors enable us to have a deeper knowledge of this issue and allow the improvement of the process of geography teacher training in Portugal.

Looking at the recent references to this issue in an international perspective we would like to refer to a study on the use of GIS in Geography teacher training that underlines that “(...) *teachers often avoid engaging with GIS and research suggests that the lack of GIS training in initial teacher education is partially to blame*” (Walshe, 2017, p. 608). The use of geospatial technologies in Geography teacher training and education is also a relevant research topic (Harte, 2017; Lauffenburger et al., 2020; Kerski, 2003; Pesaresi, 2017).

With regard to Geography teacher education, we would also like to refer to the works of authors such as Bagoly-Simó et al. (2018) on Education for Sustainable Development in teacher training, or Knecht et al. (2020) on the conceptions of Geography teachers in initial teacher training, Hursen and Beyoglu (2020) on storymaps in Geography teacher training, Chang (2020) who refers to teaching and learning Geography in the post-pandemic reality, Puttick and Warren-Lee (2020) on the mentors in Geography teacher training, Al-Maamari (2020) on the perceptions of new Geography teachers about global citizenship, Bikar et al. (2021) on the conceptual understanding by Geography

teachers, Golightly (2021) on the self-assessment of Geography teachers, Lako and Mubita (2021) on engagement in research and Rushton (2021) on Geography teacher identity.

This article aims to give new data for the international research in Geography teacher education and also to challenge colleagues from other countries to share the process of Geography teacher training in their countries to enable us to improve the process in our countries.

All these studies show the importance of research in Geography teacher training. Despite all of them having a different focus, they all defend the importance of developing quality Geography teacher training where the new teacher is an active actor in the process.

### 3. Research Methodology

In order to carry out this research we checked the scientific online repositories (Figure 2) of the four universities that have master courses in Geography Teaching (for upper basic education and secondary education) in Portugal (UniA, UniB, UniC and UniD), using keywords like “Geography teaching”, “Geographical Education” and “Geography Didactics”, between 2017 (the year when first reports were concluded) and 2020, in a total of forty-seven reports (UniA – twenty-five reports; UniB – seven reports; UniC – seven reports; UniD – eight reports).

An online repository of a university is an online platform with free access where the university makes available works of their staff and students (master, doctoral and postdoctoral reports) with the permission of the authors.

After that, in each report we analyzed the title, the abstract and the keywords and we identified with the theme of each one. Following the content analysis methodology (Krippendorff, 2004), from this analysis we were able to define the next analysis categories:

- strategies and didactical resources;
- methods of teaching/learning;
- citizenship and human rights;
- educational psychology;
- no regular education;

- technologies of geographical information and spatial thinking;
- ESD (Education for Sustainable Development)/environment;
- evaluation;
- professional practice.

The identification of these categories was made from the content of the reports.

We then made the statistical and content analysis of these reports in order to know the topics more and less developed by teachers that allowed us to reach our conclusions, underlining research topics that need to be more evolved in these reports in the next years.

In this data analysis, we also give some examples of titles of analyzed reports in order to justify and contextualize the statistical data that we are presenting and discussing.

#### 4. Content Analysis of the Master Reports on Geography Teaching

From the total reports analyzed we can conclude<sup>1</sup> (Figure 3) that 35% of these reports are related to the category “strategies and didactical resources” with reports with titles like “*Homework of Geography in a classroom of 9<sup>th</sup> grade of basic education*”<sup>2</sup> (UniA) or “*In Geography we don’t go to Futebol... or we go? Learning experiences in Geography in 12<sup>th</sup> grade*” (UniB) or “*The application of brainstorming in Geography lesson*” (UniC) or “*Cinema and Education: a new approach in Geography Teaching*” (UniD).

With 19% of the reports we have the category “methods of teaching/learning” with reports’ titles like “*The application of the Theory of Multiple Intelligences of Howard Gardner in Geography Teaching*” (UniA) or “*The Cooperative Learning: a strategy in Geography Teaching*” (UniC).

<sup>1</sup> Most of the reports analyzed were classified only in one category each one. However, some of them needed to be classified in more than one category because they really “cover” more than one category of analysis.

<sup>2</sup> All report titles here presented are our translation from Portuguese to English.

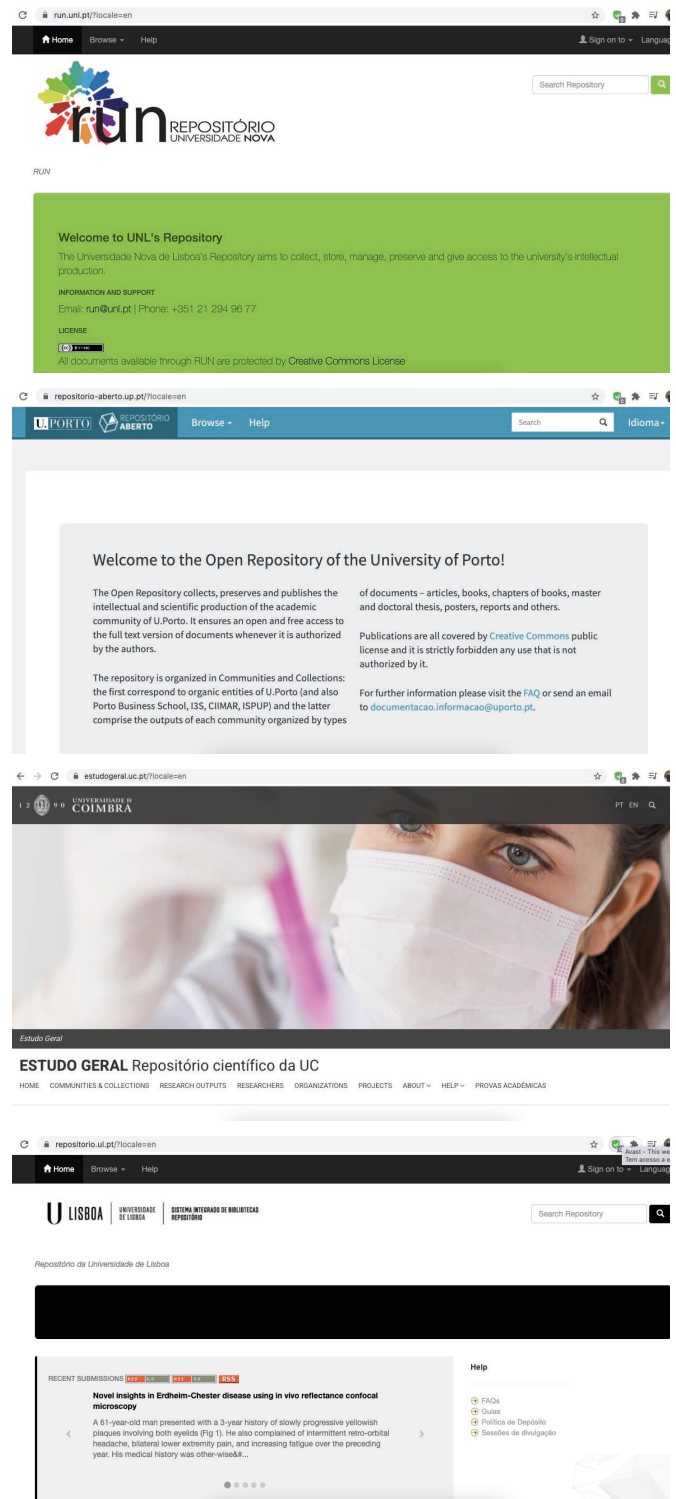


Figure 2. University repositories online used in our research.

With 10% of reports each, we have two categories: “citizenship and human rights” and “technologies of geographical information and spatial thinking”. In the category “citizenship and human rights” we have reports like *“Geography for Citizenship – essays in basic and secondary education”* (UniA) or *“Geography and citizenship: how can Geography improve the quality of the decisions of the young in XXI century”* (UniC) or *“Refugees in European context: a proposal of didactical application”* (UniD).

In the category “technologies of geographical information and spatial thinking” we have reports like *“A way for new knowledges: the ICT in Geography Teaching”* (UniA) or *“The Google Earth in Geography Classroom”* (UniD) or *“Spatial Thinking: a challenge in the teaching of scholar Geography”* (UniD).

With 8% of the reports we have two categories each: “educational psychology” and “EDS/environment”. In the category “educational psychology” we have reports like *“I learn better when I like! – methodological essays to improve the success in Geography”* (UniA) or *“Meeting (or not) with Indiscipline”* (UniA).

In the category “EDS/environment” we have reports like *“No matter if it rains or it is sunny: environment and society, a didactical approach in Geography of secondary education”* (UniB) or *“The approach of sustainability in Geography Teaching”* (UniC).

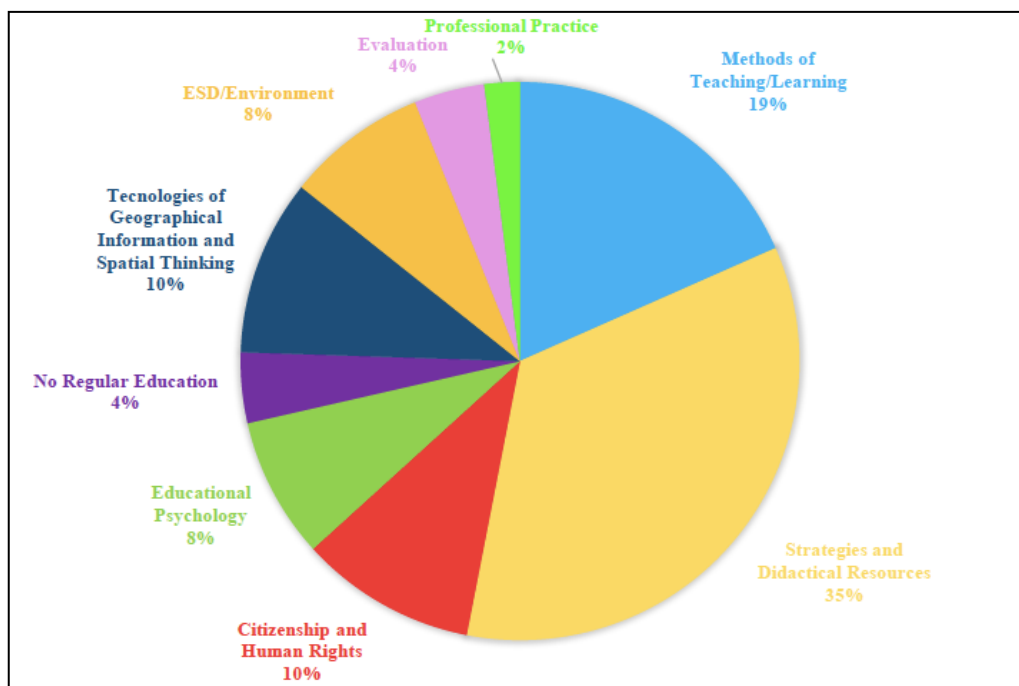


Figure 3. Topic distribution of the master reports in Geography Teaching in Portugal (published online between 2017 and 2020). Source: Author’s elaboration.

With 4% of the reports we have also two categories: “no regular education” and “evaluation”. In the category “no regular education” we have reports like *“The teaching of essential concepts in Geography, using digital*

*technologies and collaborative work in no regular education”* (UniC) and in the category “evaluation” we have reports like *“My apologies teacher, but... this exam does not evaluate knowledges! – the National Exams and the work of*

teachers and students” (UniA).

Finally, with 2% of the reports it is the category “professional practice” with a report with title “*Report of Professional Activity*” (UniA).

Looking at Figure 4 we can conclude that the category “methods of teaching/learning” is mainly developed at UniA with seven reports. At UniC and UniD, this category has only one report and at UniB there is no report in this category.

The category “strategies and didactical resources” also have seven reports at UniA. At UniB it has five reports, at UniC two reports and at UniD three reports. It is important to underline that this is the only category represented at all the universities analyzed.

The category “citizenship and human rights”

has two reports at UniA and UniC and one at UniD. It has no report at UniB.

Concerning the category “educational psychology” it has only four reports at UniA. It has no representation in other universities.

With regard to the category “no regular education” it has one report at UniA and UniC. At UniB and UniD it has no report.

The category “technologies of geographical information and spatial thinking” has three reports at UniD and one at UniA and UniC.

But in the category “ESD/environment” the UniB has two reports and UniA and UniC have one report each. The UniD has no report in this category.

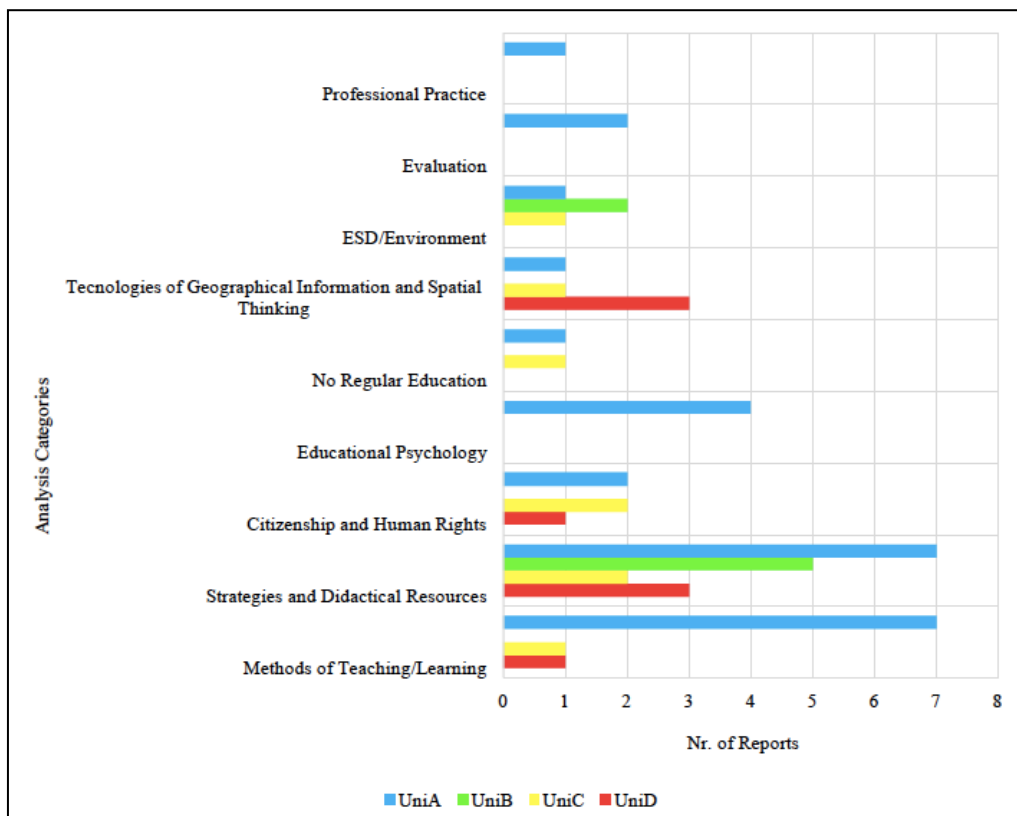


Figure 4. Report distribution by universities in each analysis category. Source: Author’s elaboration.

In the categories “evaluation” and “professional practice” only UniA has reports (two in “evaluation” and one in “professional practice”). The other universities have no reports

in these categories.

When we look at Figure 5 we are able to check the report distribution by an analysis of the categories in each university.

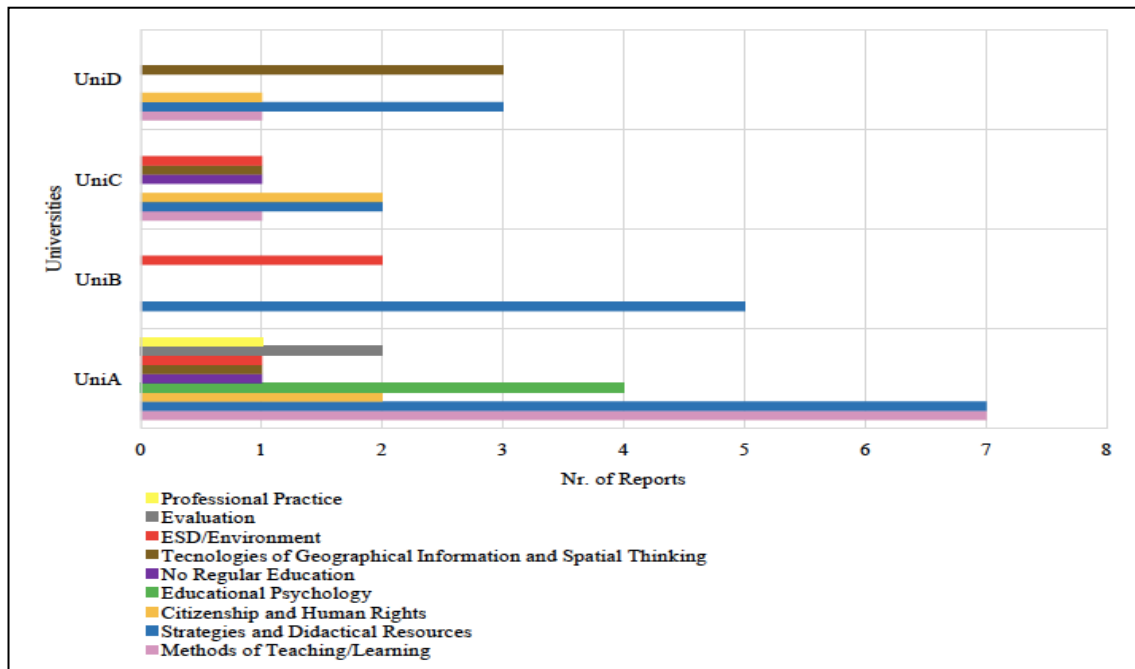


Figure 5. Report distribution by analysis categories in each university. Source: Author's elaboration.

The UniA is the only university where we were able to find reports from all categories. It has seven reports in the categories “methods of teaching/learning” and “strategies of didactical resources”; four reports in “educational psychology”; two reports in “citizenship and human rights” and “evaluation” and one report in the other categories.

The UniB has only reports in two categories: “strategies and didactical resources” (five reports) and “ESD/environment” (two reports).

The UniC has two reports in the categories “strategies and didactical resources” and “citizenship and human rights” and one report in the categories “methods of teaching/learning”; “no regular education”; “technologies of geographical information and spatial thinking” and “ESD/environment”. It has no reports in the other categories.

The UniD has three reports in the categories “strategies and didactical resources” and “technologies of geographical information and spatial thinking” and one report in the categories “methods of teaching/learning” and “citizenship and human rights”. It has no reports in the other categories.

## 5. Conclusions

With this research, we would like to refer the following conclusions:

There is a big difference in the number of students (new Geography teachers) in the master courses in Geography Teaching in the universities analyzed with a prevalence of the UniA. Here it is important to note that at this time only four universities offer initial Geography teacher training for upper basic education and secondary education<sup>3</sup> in Portugal and that there is a lack of these teachers in the educational system. Because of this, we think it is very important that other universities offer this course<sup>4</sup> or the universities that have it already must offer more places.

It is clear that the majority of the reports

<sup>3</sup> In lower basic education in Portugal, Geography is not an independent subject. It is taught in the subject “Environment Study” and “History and Geography of Portugal”.

<sup>4</sup> With regard to this, it is important to say that in Portugal for a higher education course to run in a university or polytechnic institute it must be approved by A3ES, the national agency for the evaluation of higher education.

focus on strategies and didactical resources and methods of teaching/learning and a small number focus on topics like the technologies of geographical information and spatial thinking, citizenship and human rights and on EDS/environment that are relevant research topics in geographical education research. This fits with the conclusions of Solé, Pacheco and Soares (2020) that this kind of teacher training reports are more connected with the real life of the students (internee teachers) and less with technological issues. In fact, the internship as a Geography teacher is hard work in a school (and also at university) that limits the capacity of these students to develop more complex research issues. It is also limited in time (one academic year) and too dependent on the supervisor. Therefore, we understand the fact that these teachers mainly work on practical issues connected with the practice that they are experiencing as internee teachers.

However, we would like to underline that in the last years these reports played an important role in the development of research in geographical education in Portugal. They are action research reports that aim to prepare our Geography teachers not only to be teachers of Geography but also to be able to read and lead research in Geography Education in their schools.

The challenge now is for future reports to be able to address topics not yet tackled in this kind of feedback (for example, about powerful knowledge in Geography) and let their results be published in journals for other teachers to follow their examples and experiences. Here, from our experience as internee teacher supervisors, it is relevant to refer that many of these master students (teacher internees) have a limited mastery of the English language that hinders several of them in reading and following relevant international research in geographical education. This is an important point that we think our universities need to address.

Internationally, we think it would be very useful to have more information about updated Geography teacher training processes in different countries. This comparative knowledge could give us precious information for future changes in the process in our country. Exchange

programs of master students in Geography Teaching would be a great plus in this issue despite the language barriers.

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