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Defining a model and strategy to institutionalize and scale a project that aims to empower teachers who work with inclusion – How does Portugal compare internationally in terms of inclusive education?

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Abstract

In the path towards an inclusive society, the Education System plays a key role, following the premise that if teachers are empowered to address the heterogeneous needs of different students, these may receive support that matches their needs, preparing them for a self-sufficient future. Thus, the following research evaluates the Special Needs Students and the teachers' perspectives, to identify the existent gap between the two groups and how to mitigate it. After gathering international best practices, two solutions were proposed, based on an increase in the number of Special Education Teachers and a more complete qualification for the regular ones.

Keywords

Social Impact, Inclusive Education, Social Inclusion, Special Needs, Benchmark, Self-Sufficiency, Professional Inclusion, Investment in Special Education, Teachers, Public Schools, Disability, Family Perception, Recruitment Needs, Teaching Qualification, Unattractiveness, Specialized Courses

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Abbreviations

CAA: *Centro de Apoio à Aprendizagem*

CCPFC: *Conselho Científico-Pedagógico da Formação Contínua*

CRI: *Centro de Recurso para a Inclusão*

DGEEC: *Direção Geral de Estatísticas da Educação e Ciência*

EMAEI: *Equipa Multidisciplinar de Apoio à Educação Inclusiva*

ICF: *Inclusive Community Forum*

INE: *Instituto Nacional de Estatística*

INR: *Instituto Nacional para a Reabilitação*

IPSS: *Instituição Particular de Solidariedade Social*

NUTS: *Nomenclature for Territorial Units for Statistics*

PIT: *Plano Individual de Transição*

PwD: *People with Disabilities*

QZP: *Quadro de Zona Pedagógica*

RTP: *Relatório Técnico-Pedagógico*

SEN: *Special Education Needs*

SET: *Special Education Teachers*

SNIPI: *Sistema de Intervenção Precoce na Infância*

SSEN*: Students with Special Education Needs*

TCS: *Teaching Career Statute*

1. Introduction

The topic of the inclusion of PwD (People with Disabilities) in society is a truly complex one, being influenced by many variables and analyzed from various distinct angles. However, regardless of the perspective from which it is seen, if one intends to understand how a society may be structurally open to difference, the topic of education is unavoidable.

In Portugal, children must spend 12 years of their life at school, from the age of six until 18 (Decreto-Lei n.º 176/2012 2012). Therefore, it is at school where one is given the opportunity to grow, learn, and gather the tools that one day will allow for an independent and successful life, regardless of how this differs from person to person.

If this is true for a person without disabilities, the same happens – or should happen – with people with Special Education Needs (SEN). Provided that the school is prepared to receive these students and to adapt its approach to their needs, they are also capable of making the most out of the mandatory school time, in order to build their own future. One that focuses on their abilities and strengths, and where they may feel happy and accomplished.

Given this, in order to understand how a person with disabilities may be fully included in society, it is crucial to look at the years spent in school and to critically evaluate whether the necessary measures are being applied, or if a change is needed.

This type of critical evaluation only started to be put on the table in Portugal in the 1970s, when a regime of integration of blind, deaf, and those with motor disabilities started to progressively be established. In the year of 1986, special education started to be considered as a type of education with the approval of the *Lei de Bases do Sistema Educativo* (Lei n.º 46/86 1986), marking a milestone in the progress towards an inclusive society which, even with some delay, was being made.

Moving forward to 2018, an important step was taken in Portugal, which consisted of the approval of the Decree-Law n. º 54/2018, of July 6th. This established the legal framework for inclusive education and gave a new amplitude to the concept of Special Education Needs. While the previous legislation only targeted students with permanent SEN, the current one applies to all students. From that moment on, schools started to be given a higher degree of flexibility, to achieve the main purpose of this Decree-Law: that an inclusive curriculum is built not by assuming the same patterns for all students, but by allowing for an individual adaptation considering each individual profile (JPN 2022).

This Decree-Law represents the commitment to an inclusive school system, where each and every student finds solutions that enable them to acquire a level of education and training that facilitates their full social inclusion. This realizes the right of each student to an inclusive education that responds to their potential, expectations, and needs. This involves a common and plural educational project that fosters everyone's participation and builds on a sense of belonging in effective conditions of equity, contributing to greater levels of social cohesion (Decreto-Lei n.º 54/2018 2018).

However, even though the context of inclusion in Portugal, and especially in Education, has taken many steps further with the approval of this Decree-Law, "*inclusion is a process, it does not happen through a decree*", as said by the president of *Pró-Inclusão – Associação Nacional de Docentes de Educação Especial*, Margarida Loureiro (JPN 2022). Therefore, this process requires more than the establishment of laws to reach an inclusive society: everyone needs to be on board with them and have the resources to do so.

One issue raised under the topic of inclusion in schools has to do exactly with this point: the lack of qualifications that regular teachers, non-specialized in SEN, possess to deal with inclusion. This has been a barrier to achieving full inclusion in schools, since many teachers are

not empowered to deal with Students with SEN (SSEN), adding up to the increased difficulty of having to do so while teaching many more at the same time, with completely different needs. The results end up leading to a poorly achieved inclusion model, where neither students with nor without disabilities can learn what they need.

Given this, the purpose of this Work Project will be to define a model and a strategy with scalability that aims to empower teachers who work with inclusion. The scope defined for this purpose is the public school system, from pre-school to secondary school, and with a geographical focus on Continental Portugal. The belief that sustains this research is that by providing every teacher with the tools to deal with SSEN, these can more efficiently be included in regular classrooms, which leads to a much higher degree of inclusion in the school. Because, at the end of the day, it is not only about school but also about what comes after. If, when growing up, one is used to working side by side with peers with SEN, even though with different curricular programs, then an increasing normalization of this difference will start to happen, starting in classrooms and being taken to every student's life afterward.

While the concept of full and total inclusion may be seen as utopian for some, there is certainly a part of the society that refuses to believe so – the Inclusive Community Forum (ICF) is included here. One cannot tell yet if this vision of a truly inclusive society will take place in the near future. But, if so, it will certainly be due to the will of those who insist on looking at the added value that comes from people's differences, rather than to the possible obstacles that the lack of similarities may bring. Because, at the end of the day, acknowledging these differences is what will make the world move forward – and this can only happen with no one left behind.

2. Context

What is the current context of disability in Portugal and how is ICF acting on it?

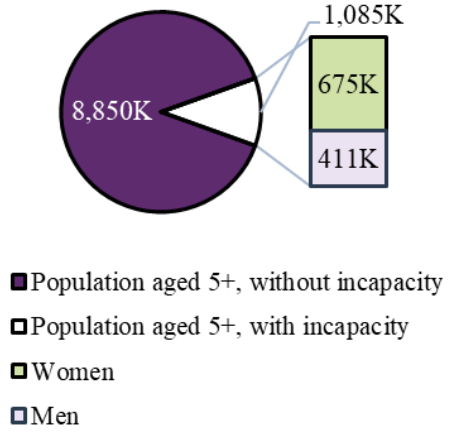
2.1. Disability in Portugal: Context

2.1.1. Disability in Numbers

In 2021, a comprehensive public census was conducted in Portugal, by *Instituto Nacional de Estatística* (INE), with the primary goal of understanding the difficulties of the Portuguese population that struggles with incapacity (INE 2022).

To assess incapacity, the census identifies seeing, hearing, walking, cognition, self-care, and communication as the six domains of functioning, with the first four being key to identifying incapacity (Washington Group on Disability Statistics 2022). Respondents were asked to articulate the degree of difficulty in each of these domains, with response options going from a range of "No difficulty" to "Cannot do at all".

Graph 1 - Breakdown of portuguese residents with disabilities



Legend: In 2021, there were 1,085k people with incapacities, most being women.

Analyzing the data from this census (Graph 1), one can understand the current disability landscape in Portugal in numbers. In 2021, there were 1.1M Portuguese residents, aged five or older, with at least one incapacity in the six domains of functioning. This value translates to 11% of the total census population, as there are 9.9M residents aged five or older. It is worth noting that the data displays a gender disparity, with 62% of people dealing with incapacity being women.

The impact of age on the incidence of incapacity is also clear, with 80% of people grappling with incapacity being aged 55 or older. Even if the age threshold were to be increased to 70 and older, one would still be observing 57% of the population with incapacity. In contrast, people aged between 5 and 34 years old only represent 7% of the population with incapacity.

Delving into the six domains of functioning, the most prevalent difficulty is in the domain of walking, with 607k people suffering from said incapacity, representing a total of 6% of Portuguese residents aged five or older. Following closely are seeing and cognition, with 352k and 340k people dealing with them, respectively (**Appendix 1**).

2.1.2. (In)equity and Inclusiveness Context

Despite showing relevant progress when it comes to the rights of PwD, substantial signs of inequity still persist in Portugal, contributing to a significant lack of inclusiveness. The covered topics will be Education, Employment, and Quality of Life.

Starting with Education, plenty of imbalances are shown. Despite only 7% of students having SEN (DGEEC 2021), the measures and indicators do not show a satisfactory level of inclusiveness.

79% of SSEN technical reports from pre-school to secondary education, *Relatório Técnico-Pedagógico* (RTP), show students only getting some selective support measures in the likes of slight teaching plan changes or reinforcements of taught contents, while only 5% of them got additional measures such as significative teaching plan changes, individual teaching plans or working on personal and social autonomy. Moreover, 16% of students got both selective and additional measures (DGEEC 2021).

On another note, in the academic year of 2020/2021, only 528 SSEN successfully graduated superior education (-17% than in the previous year), out of 2 582 enrolled students. Similarly,

only 2% of the total number of scholarships awarded in the same year were allocated to SSEN (Observatório da Deficiência e Direitos Humanos 2022).

In the sphere of Employment, a clear imbalance is observed, with an unemployment rate disparity between people with and without disabilities of 18%, in 2020. In that same year, 62% of unemployed PwD were looking for a job for more than one year. Furthermore, the unemployment of PwD has increased by 31% between 2011 and 2021. Despite a change of trend in 2022, with a 17% decrease in unemployment in the country, PwD only saw a 5% decrease.

In 2020, a mere 0.6% of the human resources of companies with more than ten employees consisted of PwD, while only 3% of public employees had disabilities. These values show how there is still a considerable track to cover towards inclusiveness in the labor scene (Observatório da Deficiência e Direitos Humanos 2022).

The Quality of Life for PwD is ultimately shaped by the interconnection of various factors, including the aforementioned topics of education and employment. Hence, it is clear that PwD strive to improve their living conditions and create a better life for themselves, hoping for opportunities and inclusiveness.

In 2021, 17% of families that have adults with disabilities struggle with paying bills, compared to 8% of families without disabilities. Likewise, PwD aged between 16 and 64 face a higher risk of poverty and social exclusion, with a rate of 34% compared to 19% for those without disabilities (Observatório da Deficiência e Direitos Humanos 2022).

Having covered crucial structural elements, it is also important to highlight the day-to-day issue of discrimination, with the occurrence of 1.2k formal complaints regarding disability discrimination in 2021, representing a 17% increase when compared to the previous year (Observatório da Deficiência e Direitos Humanos 2022).

As education is at the root of one's development, contributing to better employment opportunities and consequent quality of life, any progress towards integration in this area is expected to create a positive domino effect. In this sense, improving inclusiveness in education is the focus of this Work Project.

2.2. The Inclusive Community Forum

Born in 2017, the Inclusive Community Forum is a Nova SBE initiative that aims to promote a more inclusive community, with the mission to "*call for the community's active participation in the development of structured initiatives to address the main obstacles to the inclusion of PwD*." (ICF n.d.). This is supported by ICF's vision: to "*be the driver for an inclusive community in which every person with a disability can fulfill their life project*." Moreover, the core values of the project that sustain its existence are Inclusion, Equity, Cooperation, and Innovation.

Given this, ICF's main goal in terms of concrete action is to build a network consisting of all those who play a role in these people's lives, challenging them to take an active role in co-creating solutions and structured initiatives. This happens under two pillars: Employability and Education. Having the former been the first topic approached, the latter entered the portfolio in April 2019, and ICF is now actively working on solutions for both areas.

As for Employability, after carrying out a diagnosis phase to understand the true needs of the community, ICF developed some solutions, tested through pilot projects. Nowadays, these solutions have been transformed into active initiatives which already work to fulfill ICF's purpose. One example is the "Journey to Inclusion", a 5-step path proposed by ICF for companies who want to be more inclusive concerning PwD, which has gathered 52 Portuguese firms up to now (ICF n.d.). Additionally, ICF has explored the topic of Inclusive Recruitment, by developing a project regarding the process that lies underneath it, together with recruitment

companies and IPSS's (*Instituição Particular de Solidariedade Social*) dedicated to inclusion. At today's date, 5 recruitment companies have incorporated the tested process in their activity and now operate in partnership with ICF, in order to connect PwD to job vacancies. Finally, inside this topic, ICF has developed "Peer2Peer", a program to provide preparation for entering the labor market by creating a dynamic pair between a university student and a disabled person looking for work. The goal is that both participants benefit from the opportunity to get to know a different reality and to learn from each other's strengths. This initiative is now spread across five universities.

In April 2019, ICF started to explore the topic of Education for PwD as a step for transitioning to working life, with the goal of "strengthening the empowerment of PwD for working life". Therefore, ICF and its community have begun to develop solutions to transform the current landscape in this area (ICF n.d.). Some examples of initiatives that emerged from these Labs were: the "Learn while Teaching" (a project to empower teachers to deal with SSEN); the "ComPIT" (a project that project promotes vocational experiences under the Individual Transition Plan (PIT) through the use of a platform) and many others.

As a sequence of this continuous effort to join ideas that may provide a better and more well-suited Education system for SSEN, ICF prompted this Work Project, so that more research is conducted regarding how teachers may be empowered to deal with SSEN, in a way that the latter graduate school with the required competences to enter the job market. The final goal is that, step by step, society becomes more inclusive each day, and that the obstacles previously identified (section 2.1. *Disability in Portugal: Context*) are eradicated, allowing PwD to live a happy and fulfilling life.

3. Current Landscape

What are the measures being taken on an international level?

3.1. International Benchmark

3.1.1. Comparative Analysis of Receptivity Towards PwD

In order to look at Portugal's current landscape in a critical way, it is crucial to understand what is happening in other countries, especially those Portugal may look up to as good examples of inclusion of people with SEN.

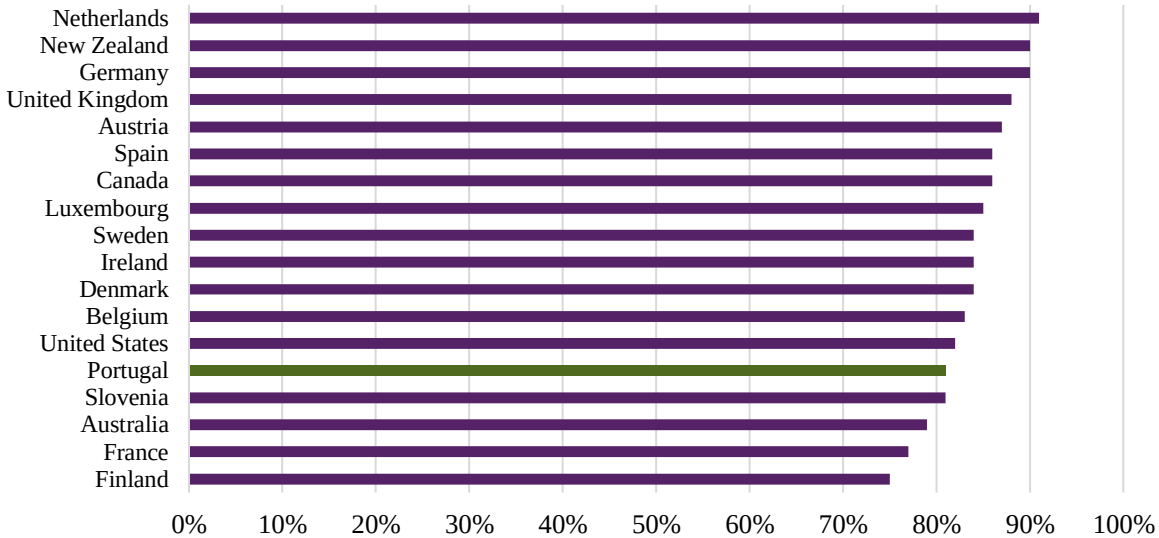
However, there is not one single variable that, by itself, translates the standings of a country in terms of inclusion. While the level of investment in SEN is indeed a good approach, it does not necessarily mean that the inclusion of people with SEN is efficiently done. Thus, taking a step back, a ranking of 102 countries based on the Gallup study (Muller 2021) regarding "Global Perceptions of Receptivity Toward People with Intellectual Disabilities" was analyzed. The rationale behind this implies that, if the educational setting of people with SEN is done correctly, their inclusion in the workforce is more likely to successfully happen, which then will positively affect their inclusion in society, leading to a better perception of receptivity towards them. As such, even though the current purpose of this work is based on the education of people with SEN, the long-term goal is their inclusion in society, the reason why this ranking was followed as a benchmark for good examples within the OECD countries. Also, an assumption made was that despite this ranking being focused on people with intellectual disabilities, the same is likely to happen for other types of disability. As the variable evaluated ends up being a translation of the mindsets towards disability, its values are not likely to change drastically regarding, for example, people with physical disabilities.

This study was based on data collected in 102 countries in 2010 by a survey administration that reached approximately 1,000 adults. With a 95% confidence level, the margin of sampling error is estimated to vary, ranging from ± 1.7 percentage points to ± 4.7 percentage points. Among

the 102 countries, Yemen reported the lowest perception score of 24%, being considered the less favorable place for individuals with intellectual disabilities, while the Netherlands demonstrated the highest rating, reaching a 91% result.

Under this study, Portugal is ranked 16th out of the 102 countries, with a score of 81%, indicating that it has a positive environment in terms of receptivity towards people with intellectual disabilities. However, there are 15 countries ahead of Portugal, 13 of which are OECD countries, which were considered to be more comparable under this context. These countries are, in descending order of ranking: Netherlands, New Zealand, Germany, United Kingdom, Austria, Spain, Canada, Luxembourg, Sweden, Ireland, Denmark, Belgium, and the United States (Graph 2).

Graph 2 - Top Quartile OECD Countries Perceptions of Receptivity Toward People With Intellectual Disabilities



Legend: Portugal is in the top quartile in global receptivity towards people with intellectual disabilities alongside other comparable 17 OECD countries.

For the analysis performed in this Work Project, these countries were considered a reliable source of comparison for Portugal in terms of inclusion. Hence, even though more practices and countries were analyzed, these 13 were considered those that Portugal intends to follow.

3.1.2. Comparative Analysis of Investment in SSEN

One of the possible reasons why some countries may be more receptive towards PwD is how much each government invests in the area. Hence, it was analyzed, how much is invested in public education from pre-school to secondary school per SSEN in these top 14 OECD countries.

Due to the lack of recent data in this area, the developed analysis was based on 2021 values, where pondered assumptions sustained the performed calculations to reach the total number of SSEN and total investment in special education per country.

Starting with the total number of SSEN, the first step was to find, for each of these 14 countries, the total number of students enrolled in public and private schools in the targeted levels of education. For Portugal's case, the total number of students is known, at 1,490,507 (DGEEC 2022b) (**Appendix 2**). For the other 13 countries, the number of students from primary to secondary school (World Statistics n.d.), as well as the number of students in pre-school were gathered. This separation comes from the fact that statistics regarding pre-school education are usually not included in the overall data regarding education (OECD 2023). To gather the number of students at this level, the enrollment rate in pre-school for each age (OECD n.d.c) was collected and multiplied by the respective total absolute number of children in that age group (OECD n.d.b). Calculations are shown in **Appendix 3**.

Additionally, to reach the total number of students in public schools, the total value of students previously gathered was multiplied by the percentage of students that attend public schools (OECD 2020) for each of the 13 countries.

According to *Direção Geral de Estatísticas da Educação e Ciência* (DGEEC), the total number of SSEN in public schools in Portugal in the school year of 2020/2021 was 78,268, which represents approximately 7% of the total number of students enrolled in public schools from

pre-school to secondary school. This percentage was assumed for the other 13 OECD countries since there is no reason to believe that these countries have a much different incidence of SSEN.

To find how much is invested in these students, the amount that each country invested in education from pre-school to secondary school education was computed. For Portugal, the total public expenditure on education in 2021 was €9,955M (Pordata 2023). This is assumed to include all education levels, from pre-school to tertiary education. The proportion invested in the latter is known, at 0.77% of the 2020 GDP (OECD n.d.a), which was assumed to be the same in 2021. Since the goal is to find the education investment values without tertiary education, the estimated 2021 value for it was deducted to the total education investment. Given this, the total amount publicly invested in education in Portugal from pre-school to secondary school was €7,024M (**Appendix 4**). From this expenditure, according to the European Commission (European Commission 2023), €301M were invested in special education in these education levels, representing 4.3% of total education efforts from pre-school to secondary school.

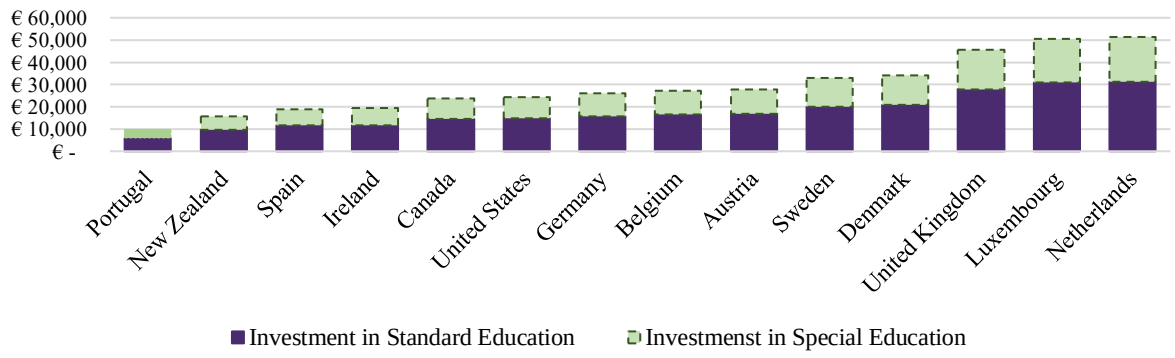
For the other 13 OECD countries, the reasoning followed was to extract the amount invested in education from the total GDP, and then how much of it was addressed to special education.

By looking at the percentage of public investment in education from pre-school to secondary school as a percentage of GDP of 2020 (OECD n.d.a), assumed as equal for 2021, Sweden was the country that invested more, weighting 5.8% of the GDP, and Ireland was the one that invested less with a percentage of 2.2% (**Appendix 4**). By gathering the GDP in USD from 2021 for these countries (Statista 2023) and multiplying them by the percentage invested in education, the absolute investment in this area was obtained. The GDP value was gathered in USD but converted to Euros using the average exchange rate of the year 2021 of 0.8455 Euros to 1 USD (European Central Bank 2023).

Furthermore, to get to these 13 countries' investment in special education, it was assumed that the percentage of the total public investment in special education from pre-school to secondary school would be the same as Portugal's, 4.3%. (**Appendix 4**). It is important to note that, despite having the same percentage of special education investment, contrasting GDP values and number of students will lead to contrasting country scenarios.

Given the absolute values for the year 2021 and the total number of SSEN, one could compare the 14 countries in terms of investment per student with SEN (Graph 3). This investment not only includes the investment in special education but also the investment in standard education since special education is considered an additional amount to be incurred for these students. Standard education, in this case, refers to all the investment in education excluding the part that refers to special education (**Appendix 5**).

Graph 3 - Top Quartile OECD Countries' Investment per Student with SEN



Legend: Portugal is the country with the lowest investment per student with SEN, and each country invests approximately 64% more per SSEN than per standard education students.

By looking at Graph 3, one may conclude that Portugal is the country that least invests per student and consequently the same is true per SSEN, with a total of €9,851. Since a SSEN is impacted by both standard and special education investments, this value corresponds to a total of €6,002 invested in standard education per student, added to €3,849 invested in special education SSEN. The analysis leads to the conclusion that each of the 14 countries invests

approximately 64% more per student with SEN than they do per standard education student. Furthermore, one can confirm that all the other OECD countries that were above Portugal in the Gallup study, invest more in standard education, and thus more in special education per student with SEN.

3.1.3. International Best Practices

There is not one single clear path about how to successfully implement inclusivity in the school system. Throughout the years, countries have been coming up with new measures and making efforts to create bridges when it comes to SEN. To fulfill this purpose, it is key that each country learns from the good practices that are implemented throughout the world. As such, this section is devoted to analyzing some of the best practices regarding inclusive education, which will later – if found to be feasible to be applied in the Portuguese scenario – be included in the Proposed Solutions (section 7. ***Error! Reference source not found.*** and section 8. ***Error! Reference source not found.***) and, if applicable in the longer term, in the future recommendations (section 9. *Final Recommendations and Conclusions*). The following analysis is not a complete list of what every country does regarding this topic. As such, if a good practice is found in one country, it does not necessarily mean that other countries do not follow similar measures.

In October 2018, the French Ministry of Education organized a conference on inclusive education, in which United Nations representatives took part, to compare approaches taken around the world. Therefore, this conference was analyzed as a structured approach to this benchmark analysis. Besides talking about the different models of inclusive education, the discussion was set around four general topics: “From coordination to partnerships”, “From support to self-sufficiency”, “From specialization to training for all” and “From schooling to social and professional inclusion”.

3.1.3.1. Inclusive Education Models

Before covering the four mentioned topics, the Mainstream setting for education was discussed at the conference. The intervening parties found it to be the most beneficial SSEN education setting in comparison with other options. Given this, the countries gathered agreed on maintaining the Mainstreaming setting as a settled basis for further discussion. Concerning this topic, the Boston Consulting Group (BCG) carried out research regarding the different models SSEN may be taught in. In general terms, three models were found to be applied: Specialization, Hybrid, and Mainstreaming.

In the case of Specialization, the main purpose is to focus on serving SSEN with more complicated needs. It is used in schools designed to offer more intensive personalized attention and specialized services for these students (Hoteit et al. 2022). Some countries that have large percentages of this type of support allocated to their SSEN are, in ascending order, the UK, Switzerland, Germany, and Sweden.

The second model is the Hybrid one, where students with and without SEN attend the same school and are, sometimes, in the same classrooms. While some educational content is the same for all students, other is specifically designed for SSEN (Hoteit et al. 2022). Countries that follow this model with a significant share are, ascendingly, Spain, Ireland, Australia, France, and Finland.

Lastly, Mainstreaming happens when students with and without SEN attend the same schools, are taught core subjects in the same classrooms, and participate in school activities together for ≥ 80% of school time (Hoteit et al. 2022). Some of the countries highlighted as mainly using this model are Italy, Norway, Portugal, and the USA

Adding up to the predominance this last model has in Portugal, ICF has also shared their interest in the analysis being focused on the specific model, reason why it was assumed as being the desirable one from this moment on.

3.1.3.2. From Coordination to Partnerships

On the first topic – "From coordination to partnerships" – the discussion touched on the fact that, while it is the responsibility of the public education system to ensure that all children are included in school, it cannot work alone. There are various agents whose participation is key to a successful integration, so this section covers the need for supporting teachers and other stakeholders to work under the same system. Among healthcare, social work institutions, local authorities, NGOs, and others, there is an active need to organize this network.

Given that the whole universe of disabilities has multiple singularities and is an extremely complex one, resulting in each student with SEN having their own needs, it is important to accept the premise that no teacher can possess the expertise to speak directly to each and every single one of them. If this is already a reality when it comes to students without any disability, it gains a much higher dimension when focused on SSEN. As such, it is crucial to engage in partnerships between various entities so that, all together, they may have a more holistic approach, which responds better to the students' needs. For this to happen, the special education staff should receive training that prepares them to work side by side with regular teachers, since these do not receive as much specific training as them. In the end, the concept is to focus on creating partnerships, complemented by a cooperation scenario. If every education stakeholder is involved and willing to work together with different professionals, all of them being crucial for the development of the student in question, then the results tend to be much more satisfactory and the daily work to happen in a much smoother way.

In order to deepen the discussion around this topic, some best practices were shared. In Canada (New Brunswick), in addition to the specific skills required to work in the special needs field, professionals acquire and develop the skills to support fellow teachers, who have less specific training on special needs. Also, in France, there is a growing awareness of the importance of preparing teachers to work with other adults and manage their classes in a way that disabled students are taught in group settings. A specific measure taken is the existence of joint training programs involving education, healthcare, and social professionals. Additionally, the French intervenient in the discussion brought up another measure implemented in the country. which aims for partnerships among education stakeholders: the *Paris Santé Réussite* "Learning Difficulty Prevention" program. Here, a local unit of expert professionals identifies students showing difficulties in reading and arithmetic in the first and second grades, and ensures they receive targeted support right away. By putting different educational stakeholders working together, this scheme helps to assess students at the beginning of their educational path. This way, the action is taken quickly, without having to wait for a disability to be officially recognized, but the only way for this to happen successfully is by making all integral parts of the scheme act in a well-oiled partnership.

Finally, a best practice carried out by Denmark is the Inclusion Matrix (**Appendix 6**), a tool used to support the shift from the specialization model to mainstreaming. This matrix aims to coordinate activities between different specialists and is based on three dimensions. The first focuses on three different levels of inclusion: physical, social, and psychological. As for the second dimension, it concerns the various types of social communities in and out of school, from which a child may be included or excluded. The class is one type of social community, equally important is the membership in the schoolyard self-organized community of children, the bilateral relationships with other children and/or teachers, etc. (Qvortrup, A., & Qvortrup, L. 2018). Lastly, the third dimension is the degree of inclusion. All in all, the point is that a

child is not either completely included or excluded, but included in or excluded from the different communities in different degrees (Qvortrup, A., & Qvortrup, L. 2018).

3.1.3.3. From Support to Self-Sufficiency

Moving on to the second topic – "From support to self-sufficiency" – the conversation lied on the mismatch between the support that SSEN get in school in comparison to the one they truly need to reach a happy and fulfilled life, which should come with the development of their self-sufficiency. As such, the main question that prompted this discussion was: *"How to encourage these students to become more self-sufficient?"*.

In the first place, it is important to understand if the efforts being made regarding the support provided are compatible with the learnings that will help each student to lead a fulfilling life. Hence, it is crucial to evaluate the curriculum of SSEN and consider what are the areas of learning that will in fact contribute towards their self-sufficiency, as it is the end goal for these students. Given this, the path should pass through providing students with the tools to be able to gradually create a sense of autonomy, through the aid of differentiated support.

In Scotland, for instance, the priority is to prepare students to live independently as adults, and an interesting aspect is the role that digital tools play in reaching this goal. "CALL Scotland", an organization that operates both as a research center and a service provider and which is mainly funded by the Government, has the purpose of helping Scottish children and young people with SEN to overcome disability and fulfill their potential. In this sense, the organization provides different types of support to students, families, local authorities, and professionals. The support provided relies widely on the use of assistive technologies and other digital tools, whose correlation with a successful learning path within children with disabilities – such as, for

example, Autism Spectrum Conditions – is widely studied. "CALL Scotland" has conducted solid research in this area, empirically supporting their action.

One of the types of provided support in Scotland is a "Pupil Assessment and Support" service for SSEN who require assistive technology and/or augmentative communication. Through an equipment bank, "CALL Scotland" lends assistive technology equipment to SSEN, free of charge, to create a more autonomous and digitally supported way of learning. On average, more than 200 users are provided with equipment loans per year (CALL Scotland 2023). In conclusion, it is crucial to understand if the given support is leading the student to greater self-sufficiency and to explore new ways of delivering it, as seen in the Scottish example.

A second point is the role played by the support workers on the daily basis of SSEN and the possible fine line between receiving their support and creating a feeling of dependency. Human support needs to be provided in the right way, in order to help students become more self-sufficient, not more dependent.

While the existence of specialized staff is crucial for having a properly adapted and individualized curriculum for each student, the line between support and dependency may be hard to distinguish when considering an overly one-to-one approach, where the student interacts almost singularly with the support worker. In Ireland, the role of support workers was revised in 2014, and the features that could create a dependency relationship were changed. Now, the role of these specialized workers is more about helping SSEN to integrate with others in group settings, thus not being segregated– which brings back the topic of the Mainstreaming setting being the one that allows for a more organic integration process. Thus, in this scenario, support workers have a dual role: to help these students make progress regarding the academic curriculum, and also to encourage them to work with other students. Moreover, the support

workers are in charge of drawing a personal plan for each student, and afterward tracking and reporting the progress made towards a common goal of self-sufficiency and independence. Furthermore, it is key to have a multidisciplinary team working with the student, since by ensuring the support comes from various professionals, one can counter any tendency for having a dependent relationship with a single support worker.

The third topic discussed under the second pillar is the development of social skills among SSEN. Returning to the example of Ireland, social skills are an integral part of the curriculum of SSEN (National Council for Special Education n.d.). Furthermore, in Spain (Basque Country), the compulsory school requirement goes until 16 years old, but for SSEN the program can differ. If coming to this age, the student still has limitations related to autonomy, they will be allowed to continue in a mainstream school in a "Task Learning Classroom", where they perform a basic apprenticeship (16-18 years) and on-the-job training through placement in companies (18-20, 21 years) (Ruiz 2008) (Gaintza et al. 2020). This accounts for the likelihood of these students experiencing higher difficulty regarding social and adaptability skills and allows them to finish their studies at their own pace.

3.1.3.4. From Specialization to Training for All

The discussion moved on to the third topic – "From specialization to training for all". The Mainstreaming model can only work if an emphasis is placed on raising awareness and providing the right training for all personnel involved. Therefore, this topic explores how teachers may be trained to face this reality of diversity among their students. What is the role each teacher should play? What can be adapted in their normal course of action to accommodate the different needs of different children? Lastly, what may be changed in the training that teachers receive to prepare them to face this reality?

The first point raised was the decentralization of the training curriculum, by allowing it to be set locally, by specific schools. Delving into Canada's example, Quebec's education system is a decentralized one, with both the organization of the services and the schooling decisions being made locally. There are general public guidelines given to schools, but the support that is actually offered to these students is given as a consequence of an individual determination of students' needs and abilities. Thus, each school is allowed to diagnose the actual existing needs, draw up an action plan with the input of various education stakeholders, and later ask for the corresponding services to be provided. This allows each school to get the resources it truly needs, with the specializations that will in fact be useful in each context. Another example is the UK, which works with a decentralized education system among the four constituent nations, even though a common approach is shared. This setting may work in some countries better than others, as it depends on many factors such as the organization of resources, the size of the country, and the political settings, to name a few. Nevertheless, it is still an interesting benchmark of a possible method for coordinating existing resources, as well as understanding which types of training are truly needed among teachers, as each school evaluates its true needs.

Moving on to the second point, the actual delivery of the training varies from country to country. Taking Canada (Quebec) as an example, primary and secondary teachers need to complete four years of training, where education adaptation issues are covered among the obligatory topics to get the diploma. Subsequently, there is an undergraduate program specialized in educational and social adaptation, as well as a postgraduate degree for people who have already completed the subject-specific training. The specializations aim to prepare teachers for two roles: to teach a special class and to support regular teachers in dealing with SSEN. In France, ESPEs (Education Universities) must deliver inclusive training to all teachers as a part of the mandatory training curriculum, even though each college is free to determine the exact number

of hours dedicated to this. Besides this, the Ministry of Education is responsible for offering continuous professional development.

In Italy, the inclusive system is based on a co-teaching concept, where, in addition to the regular teacher, the classes have a specialized teaching assistant responsible for supporting SSEN. For this role, a two-and-a-half-year program is required. Moreover, all teachers receive specific training as a part of their mandatory qualifications. Another measure taken in this country is the fact that teachers receive continuous training, during their professional lifetime, which has *à la carte* training options, with teachers being allocated a training allowance so that they can study at their own pace. A practical example of those is an e-learning platform, called "*Dislessiaamica.com*", which, in agreement with the Ministry of Education, offers free e-learning training courses aimed at teaching staff. One offered program was called "Dyslexia Friendly Advanced Level" and occurred from 2016 to 2021. During this time, Dyslexia Amica saw 7,182 state schools join at least one edition of the e-learning course, representing 84% of Italian state schools. Over 235,000 teachers have successfully completed the training phases, taking advantage of approximately 8M hours of training (Associazione Italiana Dislessia n.d). As for England, they also explore digital tools, with the existence of an online portal where teachers may access documents, resources, and self-guided learning modules.

Summing up, each country has its own training structure, but there is a common ground when it comes to providing regular teachers with the ability to deal with inclusion on a daily basis. Moreover, there are interesting initiatives that aim to continuously train teachers for this purpose, and online options can be an effective path to do so.

3.1.3.5. From Schooling to Professional Inclusion

The last discussion point explores the topic "From Schooling to Professional Inclusion". As professional inclusion is a key step in the path towards self-sufficiency, it is crucial to understand whether the support measures set in school are the right ones to foster inclusion in the labor market. Also, there are specific mechanisms that may be used to support SSEN in their transition from education to employment, and thus increase the likelihood of success.

Firstly, the curriculum offered to SSEN must help them gain the right skills that, years later, will be required for them to thrive in the job market. Even though social skills have already been covered, there are more that may be worked on, and support during school time may be given. In Finland, career guidance and support starts being provided at primary school, and at secondary school there are specialist career guidance staff to members fulfill this purpose. Once SSEN leave school, the "Youth Guarantee" ensures the right of all young people under 25 and graduates under 30 the right to employment, or to vocational training if unemployed. Over the past 15 years, the number of students in secondary and higher education has marked an increase. Consequentially, at the time of the conference, 20% of young working-age PwD were in full-time employment, 50% were in temporary employment or in a subsidized contract in the past two years, and 30% had a high capacity for work.

Secondly, after ensuring SSEN receive the necessary support to prepare for this transition, there are measures that can be taken to ease the process of the transition itself. For example, in the UK (England), there is a support system called the "Merton Transition Team" whose goal is to smoothen the transition to adulthood, targeting SSEN up to 25 years old. The system is based on advice, assessment, planning, and support (Merton Council 2017).

Thirdly, despite being crucial to prepare SSEN for the job market, governments must ensure that the job market is open to receive them as well. However, as this leaves the educational scope that this Work Project intends to follow, it was not further analyzed.

In summary, this conference allowed for the sharing of good practices in various areas which, all together, ensure that the time spent in school by SSEN is giving them the right tools to develop and fulfill their life projects, in which their abilities and strengths are valued.

Graph 4 – Pyramid Framework of Life Quality for people with SEN

Legend: To obtain Life Quality among PwD, Self-Sufficiency is key, and is supported by three parameters.

After performing the benchmark analysis regarding the best practices followed internationally, a framework was developed regarding the path followed by PwD towards Life Quality, to accommodate the best practices found (Graph 4). Following a deductive approach, one may state that, generally, the life goal of a person is to obtain Life Quality – in other words, to feel happy and fulfilled. For PwD, this Life Quality comes mostly out of being able to reach their own Self-Sufficiency. This is what will allow them to build their own path, with the lowest possible dependency from external parties – knowing that the form that Self-Sufficiency may acquire depends from person to person.

To reach Self-Sufficiency, Professional Inclusion plays a major role, since it is not only what brings financial stability, but also what allows for a more complete inclusion, where the application of the main strengths and skills of PwD results in a valuable contribution to society,

along with their continuous development of important life skills. However, for this Professional Inclusion to be successfully done, Inclusive Education is key. While it is mandatory for PwD to go to school, the quality of the time spent there may truly determine their future path. If done correctly, the Education system has the power of providing the right tools for SSEN to be prepared to work autonomously and reach their independence in life.

Summing up, to reach Life Quality, PwD should strive for Self-Sufficiency, which comes out of Professional Inclusion, which is previously supported by Inclusive Education. However, there is a parallel aspect of both Professional Inclusion and Inclusive Education, which is also a crucial factor for Self-Sufficiency: Social Inclusion.

The human being is inherently social, and the way society itself is organized is an exact reflection of that: people gather themselves in families, groups of friends, they work with and for other people, and the list continues. However, more than a way of organization, the social behavior of the human being is vital for its health and survival (Young 2008). Logically, for PwD, the scenario is not any different. The feeling of belonging in a social environment is a necessary condition in the pursuit of Life Quality, and this is true for both the Inclusive Education aspect and the Professional Inclusion one. In fact, it is a complementary condition for these two parameters to be fulfilled. For the first, one of the main goals of the school is the development of social skills and the interaction with other peers. As for the second one, the professional inclusion of PwD also has the function of integrating them into society, among other people. By having social inclusion fulfilled in these two areas, Self-Sufficiency may be achieved – independently of how it looks like for each person, leading to the goal of Life Quality. Having this framework set, the next step was to consolidate the benchmark analysis previously done and to sort the best practices found into these three areas: Social Inclusion, Inclusive Education, and Professional (**Appendix 7**).

3.2. National Practices

In order to see whether Portugal is following the right path towards having exemplary international best practices, one needs to investigate the goals set under this topic and the consequent efforts being made at a national level.

In 2021, the "ENIPD 2021-2025 - National Strategy for the Inclusion of Persons with Disabilities National" report was developed, to set a concrete strategy regarding the inclusion of PwD. This was built by *Instituto Nacional para a Reabilitação* (INR), which is a public institute under the Ministry of Labor, Solidarity, and Social Security in Portugal, responsible for ensuring the planning, execution, and coordination of national policies aimed at promoting the rights of PwD (INR n.d.c). Under the topic of education, two main goals were established.

The first goal is to strengthen the mechanisms to support the learning and consolidation of the current inclusive education system. To achieve this, two objectives were set, focusing on the intervention from pre-school to post-school years.

One of the objectives is to reformulate early childhood intervention, which goes by the name of *Sistema Nacional de Intervenção Precoce na Infância* (SNIPI), that aims for children with disabilities to have access to high-quality education and support from an early age, which will facilitate their transition to inclusive education, as well as improve their academic performance and social inclusion (SNIPI n.d.). Additionally, the second objective is to deepen the inclusive education model, when it comes to the access to quality educational opportunities and the transition to post-school life, which translates into improving the access to quality education and training opportunities for SSEN.

The second identified goal is to promote higher-level qualifications for PwD. For this to happen, there were two underlined objectives: the improvement of the access and attendance of PwD to higher education, and the improvement of the physical accessibility conditions. This goal,

despite being crucial for the inclusion of PwD, was not further considered in this analysis, as it leaves the scope of the project.

Focusing on the first goal in Portugal, and on what is being done to achieve it from pre-school to secondary education levels, some measures were identified in the three intervention areas: Social Inclusion, Inclusive Education, and Professional Education.

Looking at Social Inclusion, the practice in which Portugal is excelling the most is the application of the Mainstreaming model of education, showing a predominance relatively to the other models presented, with 84% of SSEN being integrated into it (Hoteit et al. 2023). Furthermore, Portugal is making efforts to bring the discussion regarding inclusion to the table, so that everyone is on board – not only those who experience this situation closely. An example is one simple yet innovative practice: the *Escola Alerta!* competition, promoted by INR, whose aim is to motivate young students and the overall school community to be more sensible towards the topic of the inclusion of SSEN. This targets students from the 1st to the 3rd cycles, both from private and public schools, by encouraging them to present feasible and innovative proposals that contribute to the improvement of the quality of life for PwD. By inviting all students to participate with ideas for a greater and better inclusion in the school and the surrounding community, this competition fosters a culture of awareness and active participation towards SSEN inclusion.

Looking at the second area – Inclusive Education – the Decree-Law no 54/2018, July 6 states the most important measures being implemented, ensuring that inclusion becomes a process addressing the diverse needs of every student by promoting a greater participation in learning activities and within the overall educational community.

One of the characteristics of the Portuguese model is the organization by levels of intervention, which vary in terms of type, intensity, and frequency of interventions, and are determined based

on the needs of students. These three levels of intervention are Universal measures, Selective measures, and Additional measures, and the principle is that they should be mobilized throughout the student's school career, depending on their educational needs.

According to the Decree-Law no 54/2018, the first type of measures – the Universal measures – are available to all students, including those who may later need to benefit from selective and additional measures. The objective of these measures is to improve the overall learning environment. These can be, for instance, the promotion of pro-social behavior, curricular enrichment, or curricular accommodations. Secondly, the Selective measures result from the student's response to the universal measures and are activated when the learning support needs are not met by the application of the previous ones. These are usually destined for students at risk of school failure or for those who need extra support. Some examples of measures for this category are differentiated curricular pathways, tutorial support, or non-significant curricular adaptations. Lastly, the Additional measures are applied when the previous two are not sufficient for students. These measures are destined for students with higher and persistent difficulties in communication, interaction, cognition, or learning that require more specialized resources, such as significant curricular adaptations or the development of personal and social autonomy skills.

Moreover, both selective and additional measures must be stated in the *Relatório Técnico-Pedagógico* (RTP), a document stating the needs and individual plans for SSEN. This document is built by the *Equipa Multidisciplinar de Apoio à Educação Inclusiva* (EMAEI) alongside the student's legal guardians or parents and any other agent that might be relevant (Decreto-Lei n.º 54/2018 2018).

The EMAEI is another Portuguese practice, composed of the co-adjunct director, a special education teacher, three pedagogical coordination members from the pedagogical council, the

class teacher, other relevant teachers, technicians from the *Centro de Recursos para a Inclusão* (CRI), and other professionals involved with the student. Its responsibilities include promoting inclusive education awareness, proposing and overseeing learning support measures, advising teachers on inclusive pedagogical practices, and producing the RTP (Decreto-Lei n.º 54/2018 2018).

In addition to these measures, CRI, one of the members of the EMAEI, was created by the Ministry of Education, with the objective of helping students with additional measures. The CRI technicians are especially important in their participation in the classroom alongside these students, ensuring the well-functioning of the mainstream model (Decreto-Lei n.º 54/2018 2018).

Lastly, within these measures for an inclusive education, the *Centro de Apoio à Aprendizagem* (CAA) is a structure that aggregates the human and material resources needed, the knowledge and skills of a school, to support every student. This center not only helps the inclusion of students up until secondary school, but it also has the objective of helping them in the transition to post-school life (Decreto-Lei n.º 54/2018 2018). Furthermore, these promote greater openness of schools to the community, by establishing partnerships with local organizations/institutions that support them in implementing their educational projects and mobilizing the necessary complementary resources (Ribeiro et al. 2022).

This last measure creates the bridge to the last area of national best practices – Professional Inclusion – having *Plano Individual de Transição* (PIT) identified as one of the most meaningful ones. The PIT is an individual program tailored to the student's interests, skills, and expectations, designed to promote the transition to post-school life and, whenever possible, to pursue professional activity. It promotes, for example, the participation of these students in experiences such as volunteering or job shadowing, allowing them to find a vocation which can

lead to a sense of contribution to society and to the pursuit of a path of self-sufficiency. It is an integrant part of the additional measures and is developed by the EMAEI three years before the compulsory school-age limit for SSEN.

Knowing now the principal measures applied in Portugal, the Decree-Law n.º 54/2018 also addresses the process of applying them.

The process starts off with an identification of the need for support measures for a specific student. The identification can be done by the teachers, parents/guardians, or other entities involved in the student's academic life. Despite for students with diagnosed disabilities this identification step being a more obvious one, for others it can be less straightforward. Therefore, the involved agents must be attentive and critical to be able to recognize this necessity for the student.

After those who are responsible complete the identification step, they must present their reasoning to the school director, who will present the evidence to the EMAEI. These will analyze the available information and evaluate the situation after meeting with the parents, the student, and with any other relevant agent.

Then, considering all the information, it is the job of the EMAEI to define which measures to implement. As previously stated in this section, there are Universal, Additional, and Selective measures, that can be implemented as many as necessary and from different intervention levels. Moreover, there are no permanent measures, meaning that said measures can be removed if they no longer apply. For Selective and Additional measures, an RTP must be written by the EMAEI, and, if "*Adaptações Curriculares Significativas*" is defined, a PEI (*Programa Educativo Individual*), which is a personal plan, must be attached to the RTP. The RTP will state all measures applied, including the amount of time the student must spend in class and in the "*Centro de Apoio à Aprendizagem*" and state whether the situation requires a class size

reduction below the minimum legal value. If only Universal measures are defined, the process is returned to the director who passes it to the teacher responsible, and then the teacher sends it to the parents for approval. The entire process since the identification takes 13 weekdays, at most. However, if an RTP had to be written, the process goes first to the parents for approval and is only after sent to the director who approves it after hearing the pedagogical council. This process can take up to 45 weekdays (Pereira et al. 2018).

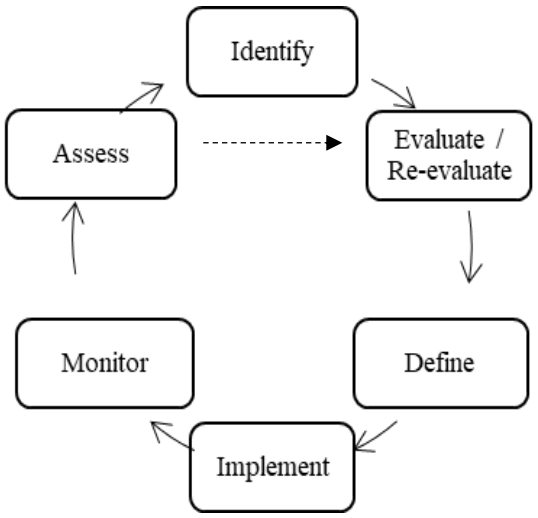
Following the definition of measures, comes the phase of its implementation. This implementation should start immediately after receiving the approval of the measures by the director. The role of the special education teacher (who is part of the EMAEI) will become particularly relevant in this stage by acting on two fronts. Firstly, through cooperative work with the relevant agents on the educational path of the student, and secondly through direct support to the student to complement classroom work.

The next that follows is the monitoring one. This part of the process must happen regularly, and it is the responsibility of the EMAEI. It is recommended the EMAEI establishes instruments and mechanisms that gather information routinely to support the next stage (Pereira et al. 2018).

The last part of the process is assessing the effectiveness of the measures. Making use of the information gathered with the monitorization, and analyzing the evolution and performance of the student, the multidisciplinary team can assess the success of the measures implemented and use it to guide future decisions (Pereira et al. 2018). Namely, if the measures had the expected impact and whether the student will still need them in the future, requiring a re-evaluation.

This is a continuous process, meaning it actively works for as long as the student needs specific support measures (Graph 5).

Graph 5: the process of applying SEN measures in Portugal.



Legend: The application of SEN measures in Portugal has a continuous process underneath it.

The existence of these mentioned practices allows for the Portuguese education curriculum program to be adaptable to the needs of each student. These measures work as a way to create increasingly inclusive environments within schools, ensuring solid building blocks for SSEN to reach self-sufficiency and the desired life quality.

3.3. Best Practices Mismatch

Having analyzed what is being done worldwide and the measures being taken in Portugal, the final step in this section is to understand what the existent mismatch is, and what international best practices could, therefore, be possible paths for Portugal to undertake.

Referring back to the Pyramid Framework, the mismatch was analyzed according to the three parameters: Social Inclusion, Inclusive Education, and Professional Inclusion.

Starting with Social Inclusion, the efforts made towards the development of social skills among SSEN in Portugal, do not seem to be sufficient. While it is true that the personal plans developed for these students may involve social development – even though not always in great depth – and that the predominance of the Mainstream setting is clearly the path that most fosters

integration, there is a lot of work to be done. Throughout the development of this Work Project, the research done has proved that, even though the correct measures may be in place, their enforcement is crucial, and Portugal still needs to improve on that point.

Moving on to the second parameter – Inclusive Education – there are some examples of international best practices that are not taken in Portugal. For example, the use of Assistive Technology, as seen in the Scotland case, could be an innovative approach to learning. While one may argue that schools do not have the resources to do so, the Scottish example shows an efficient way of overcoming this obstacle, with the Equipment Bank working through loans of equipment. This investment on a generalized availability of assistive technology could be an interesting path for Portugal to explore, and to innovate the SSEN learning approach.

Another point in which Portugal seems to lag behind is the use of digital tools. The England case has been analyzed, regarding the existence of a unified online portal for teachers to use containing resources, documents, and even self-guided learning modules. This a good example on how digital tools may be an efficient path to approach teacher training and even to facilitate their daily work.

Finally, still on Inclusive Education, a measure taken in some countries is the extension of the time spent in school after the mandatory age, when the student benefits from it. In Portugal, there is no specific legislation that covers the extension of the permanence in school with any special requirements in comparison to students without SEN.

Moving on to the third and last parameter – Professional Inclusion –some practices were also identified as possible paths for Portugal to undertake. While the PIT helps prepare students for the transition to life after school, some countries have actual support systems that provide advice, assessment, planning, and support after these students leave the school system. This measure helps this process happen in a much smoother way.

There are also countries that have measures guaranteeing the right to employment for young people and providing solutions in cases where they cannot find a job, such as vocational training. While there are some solutions in Portugal, they are not enough to cover up for the issue that is to find a career path for a person with disabilities after school.

This list is, of course, not collectively exhaustive, and there are some measures which are not analyzed to its full extent which could possibly be a good path for Portugal to follow. Nevertheless, here lie some good examples of areas to be explored.

Coming back to the top OCDE countries that were defined as being examples to look up to, following the ranking of receptivity towards people with intellectual disabilities developed by Gallup, a new analysis was performed. By crossing the values for the investment done per student with SEN with the best practices found for these countries, tiers were created, with the goal of seeing if, among the best practices analyzed, some corresponded to the countries seen as highly receptive and to those dealing with higher investment levels. Furthermore, Portugal was also analyzed in comparative terms with these countries.

Four tiers were defined with investment per SSEN intervals of €10,000 (except for the last one, which has an open interval), composed by Portugal and the remaining top OCDE countries above it. The aggregated analysis can be seen in **Appendix 8**.

The fourth tier, whose investment values range between €0 and €10,000 per SSEN, only accommodates Portugal. This shows that, despite showing some interesting practices, the investment made per student with SEN is still fairly behind the one made by these comparable countries.

The third tier, which comprises the values between €10,000 and €20,000, is composed of New Zealand, Spain, and Ireland, in ascending order of investment. This interval corresponds to some of the best practices highlighted regarding Social Inclusion, such as the Mainstreaming

being the predominant model used among almost all countries, and the social skills being included in the academic curriculum of SSEN. As for Inclusive Education, some best practices can be highlighted, such as allowing for SSEN to stay in school longer than the maximum age, and the creation of an individual and personalized plan per SSEN. Lastly, regarding Professional Inclusion, none of the practices analyzed corresponds to any country in this tier.

Moving on to the second tier, whose values of investment range from €20,000 to €30,000, the analysis now focuses on Canada, the United States, Germany, Belgium, and Austria, in ascending investment order. As for Social Inclusion, the majority of these countries follow the Mainstreaming model. Moreover, for the Inclusive Education parameter, some best practices were associated with these countries. Regarding teacher training, here lie the examples of including specific training for SEN in the mandatory curriculum for all teachers and training Special Education Teachers (SET) to support regular teachers. As for the methods used in special needs education, another relevant practice is the creation of a multidisciplinary approach towards education, combining different specialists. Lastly, as in Tier three, none of the practices analyzed corresponds to any country within this category.

The first tier comprises values of investment above €30,000. In this category, five countries are identified: Sweden, Denmark, the United Kingdom, Luxembourg, and the Netherlands, in ascending order. Regarding Social Inclusion, these countries have, as the previous ones, the best practice of mostly using the Mainstreaming setting. Moreover, Denmark stands in this Tier, thus corresponding to the best practice followed by the country of having Social Inclusion as a central topic on the holistic evaluation done of the student, coming from the concept of the Inclusion Matrix. For the Inclusive Education parameter, the best practices that stand out within these countries are the use of digital tools, such as Assistive Technology, and platforms for the teachers to use. Lastly, for Professional Inclusion, this tier boasts one of the best practices analyzed: the system to support the transition to adulthood.

Hence, it is possible to understand that, among the analysis done of the discussion under the French conference, there are many practices that are reflected within the countries followed in this Work Project as good examples. Furthermore, it can also be seen that, with an increased level of investment, more practices may be associated with the countries corresponding to the tier. Lastly, Portugal stands out as having a much lower level of investment per student with SEN. An increase in this value should allow the country to focus more on following the steps of the countries in the tier above.

4. Supply

4.1. Applicability of SE Training Benefits Through Survey Results

To understand the applicability of these benefits and other content related to the area of special education that was important to know in detail, a survey was carried out for all teachers, regardless of they were SETs or not, from the public and private sectors and from pre-primary to secondary school. Given that there were different questions for different groups, 5 blocks were delineated (Graph 14):

Graph 14- Survey Structure

	Building block #1 Characterizing the sample	**Building block #2** Current teaching situation	**Building block #3** Training	**Building block #4** Inclusion environment	**Building block #5** Open questions
For who?	• Everyone	• Everyone, but with extra questions for Public school teachers not specialized on Special Needs	• Public school teachers, separating between specialized and non specialized on Special Needs	• Everyone	• Everyone
Takeaways	• To draw a **profile** for the sample • To understand whether there can be any **correlations** between socio- demographics and other topics • To explore **differences** among **Public and Private** schools	• To understand how teachers feel about their **workload with SwD** • To understand the **failures** of the **career progression process** and whether training in Special Needs is seen as a part of it	• To understand **if current training is enough to deal with SwD** (either standard teacher training or Special Needs specializations) • To analyze **training options considered** by teachers and **incentives**	• To understand what is the **general feeling** about **inclusive school culture** in portuguese schools • To analyse **needed and valued resources** to deal with SwD and inclusion	• To understand the **general belief about inclusion** in the public school system in Portugal • To **gather ideas** about possible solutions for current problems

Legend: Survey divides regular and SETs, private from public

For said survey, only the target audience of teachers was questioned, as the aim was to contrast what is decreed by law with their opinions on the current teaching situation, training, and

inclusion environment of all SSEN. Within the general target, subgroups were created, public and private, regular and SETs, to adapt the questions to each teacher's reality.

To avoid an incoherent and incomplete analysis of results, all respondents who did not complete the survey in full, as well as all those whose answers contradicted each other, were deemed invalid and thus eliminated. Therefore, a total of 1,636 responses were registered, of which 1,174 were considered valid. Moreover, just like in the survey to families, the sample gathered is considered representative one, since there are answers both from Males and Females, private and public institutions, and there are answers corresponding to all districts in Portugal, thus providing truthful answers. A complete characterization of the sample used from the population of teachers in Portugal can be found in **Appendix 9**.

On a national level, there are a total of 147,718 public school teachers and 19,610 private school teachers, 88% and 12% respectively. Of the 1,174 teachers present in the survey, only 11% are from private schools, while 85% are from public schools, thus having a similar distribution. The remaining 4% are teachers in IPSS, professional schools and public and private schools.

Within public education, SETs, as already mentioned, weigh 5,3% compared to the total number of teachers (DGEEC 2022b). According to the valid responses to the survey, SETs have a weight of 15%. The difference, although small, was relevant in a good way, since most of the points to be questioned were aimed at this group, so a representative sample was important. Geographically, the distribution of responses by NUTS is similar to the territorial distribution of teachers (DGEEC 2022b), so there was greater receptivity in coastal areas. For a more visual insight please notice **Appendix 10**.

In terms of age, more than 50% of teachers are over 50, as shown at the national level on section 5.1. ***Error! Reference source not found.*** (Ferreira 2023). When it comes to the level of education, the distribution corresponds to the actual landscape, with a predominance in the 3rd

cycle and secondary, as seen in **Appendix 11**. Lastly, and with a strict focus on permanent teachers in public education, there is a greater occupation of these teachers in tiers 4, and 6, in both national and survey results, as **Appendix 12** shows.

In this sense, one can conclude that in addition to a valid total number of responses, the survey is also representative since it follows national trends and data, making the results from each of the aforementioned segmentations more credible, and conformed to the reality of the Portuguese public system.

Having completed the characterization of the sample, it is important to understand if the benefits decreed by law for training take place, in practice. To do so, a series of questions were asked specifically to SETs who inevitably had to go through the training process. To begin with, only 4% of the teachers were not working at the time of the specialization, mostly due to unemployment. Only one teacher took sabbatical leave, and unpaid leave, although it was included in the options, was not mentioned at all by any teacher (**Appendix**). This leads to the conclusion that the benefits of temporary leave do not fully apply in reality, either because teachers are unaware of them or because schools lack the initiative in when it comes to promoting them.

Of the 88% of teachers who continued working during their specialization, only 12% reported having reduced working hours, as a result of their student-worker status (**Appendix**), showing that the ongoing incentives for training are also practically not taken advantage of by the majority of teachers.

In order to define the reason behind 137 of 159 teachers not using any training incentive, additional interviews were carried out to question whether the non-use of these benefits was due to a lack of openness to these policies, on the part of schools, or a lack of knowledge about

these incentives, on the teachers' part. The first option was concluded to be the one most common to occur, although there may be scenarios of a lack of knowledge of the rules in force.

4.2. Career Progression

Progression in the teaching career consists of a change in pay index through progress in a tier that depends on the cumulative verification of three requirements.

The first one is a minimum period of effective teaching service in the immediately preceding tier. The teaching service time required is four years, except for service time in the 5th level, which lasts two years. Moreover, at least a "Good" grade in the last performance evaluation is required. Finally, it is mandatory to have a successful attendance of continuous training or specialized training courses for at least half of the evaluation cycle, for a total of no less than 25 hours in the 5th level of the teaching career and 50 hours in the other levels of the teaching career.

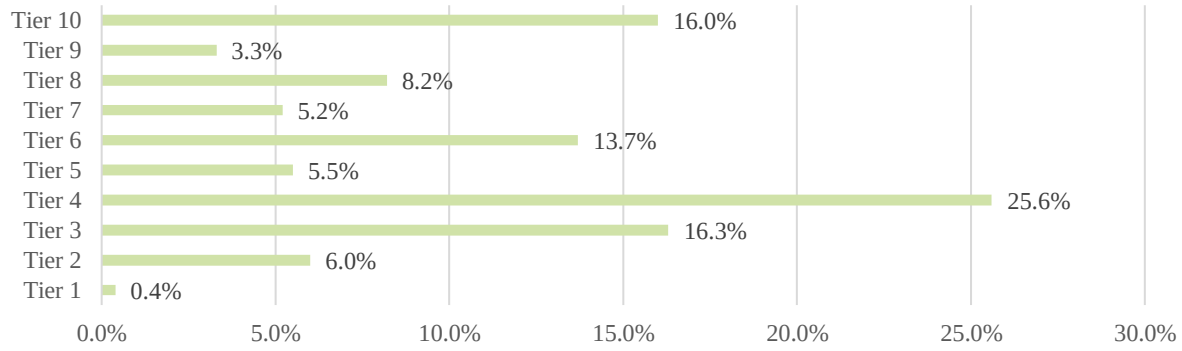
In addition to the basic requirements, there are two additional requirements related to obtaining spots in the next tier and observing classes. The first takes place from the fourth to the fifth tier and from the sixth to the seventh, while lesson observation is requested from the second to the third tier and from the fourth to the fifth. If teachers receive an "Excellent" or "Very Good" rating, they automatically move up to the next step, without the requirement for vacancies.

In order to materialize these criteria, it is important to understand how the teachers are distributed by tier, which can range from the first to the tenth (Graph 15). Of all the tiers present, four of them (tiers 3,4,6, and 10) stand out due to the higher percentage of teachers retained in them. Before delving into the next point, which concerns the national competition for teachers - another factor that contributes to the lack of attractiveness of teaching careers - it is worth noting that, on average, a teacher in mainland Portugal spends the first 16 years teaching under successive contracts, as indicated by the National Teachers' Council in its "State of Education

2021" report. This means that half of all teachers, i.e., 48% are expected to be in the first four tiers, because it corresponds exactly to the 16 years of integration into the teaching career.

In addition to the delay in permanent recruitment, it is also necessary to obtain a vacancy in tier four, thus validating the retention of more teachers in that tier, which represents one fourth of the total, being the tier with the most teachers at the moment. Tier 6 is the third tier with the most retained teachers and stems from the same cause as the fourth and. Lastly, tier 10 stands out only due to highly aged teachers, as the average age in this tier is 60.7 years old with 38.6

Graph 15 - Distribution of permanent teachers by tier



full years of service. However, this figure does not mean a fully functional career progression. For this to be the case, there would have to be a much greater predominance in the last tiers, since the average length of service of teachers is around 26.2 (**Appendix**), which means that if they were to change tiers every 4 years, as provided for in the law, with the exception of the fifth, they would mostly be in the seventh tier which, consequently, is the third tier with the fewest teachers in it.

Legend: The distribution of teachers by tier does not follow the trend of aging teachers.

Since career progression is a support system for teaching careers that, through its requirements, encourage the completion of specialized training, through its eligibility for fulfilling the necessary hours in the training aspect, it is important to keep career progression active and above all efficient so that it creates the incentives envisaged. It is therefore essential to

understand its applicability to teaching careers, which is obtained through the following survey results.

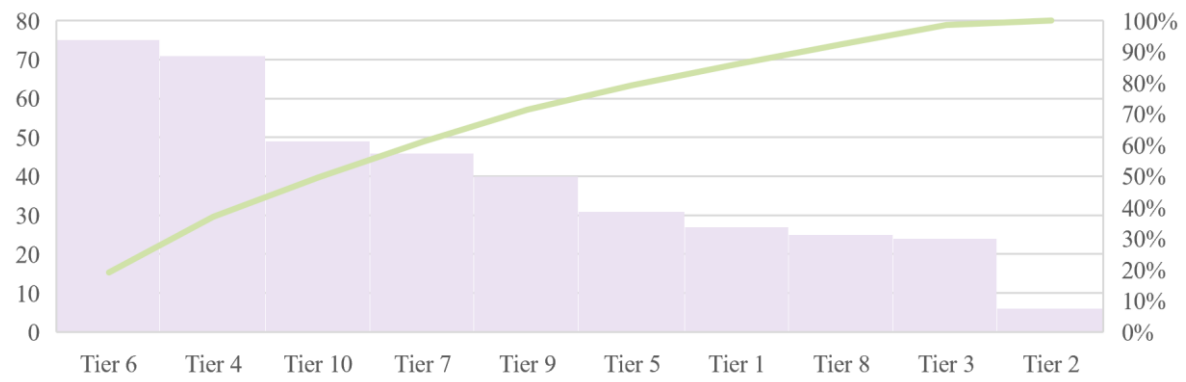
4.2.1. Applicability of Career Progression Through Survey Results

The data presented above shows that there is a clear delay in the transition between tiers, which indicates that the teaching career support process is not being implemented in the desired way. For this reason, extracting teachers' perceptions of the process in question is key to understand whether it is a problem or not and above all, to identify the causes that lead to failures in the system.

Career progression is seen as a process that is mostly unfair and difficult to comply with for 95% of the teachers (**Appendix 9**), validating that there are indeed gaps to be optimized. The majority of the 5% of teachers who believe that the process is fair are mostly in the top tiers, having always moved up, except during the career freeze years. Nonetheless, there is also a small percentage of 1st tier teachers who, because they haven't been through the process yet, don't have an opinion. So, it's safe to say that career progression was only efficient for 5% of the current permanent teachers interviewed.

In order to identify the causes of an unfair process, difficult to comply and dubious information, the question *"Throughout your career, have you always progressed?"* was asked. From this question, the conclusion that emerged is that 45% of teachers did not always move up a tier,

Graphic 16 - Distribution of teachers survey by tier



once they had completed their time in the tier they were in (**Appendix 9**). Given that teachers' career progression is automatic, albeit with the fulfilment of requirements, there are bound to be flaws in the system that justify this lack of progression. To identify the causes, the tiers with the most retained teachers from the surveys were identified (**Appendix** and Graph 16), which are the fourth and sixth tiers, going hand-in-hand with the national trend. In each tier, the main causes for not moving up were extracted from the respondents.

Legend: Tiers 4,1 and 6 have the most retained teachers, respectively

In tiers 4 and 6, the most common causes were the lack of vacancies at the top tiers and career freezes. Although the latter stems from a financial crisis, which continued from 2011 to 2017, that left froze career progression for a long time, it was not the only cause of the current situation. The most important cause cited by teachers was the lack of vacancies, showing a great inefficiency in the career progression system, leading to its discrediting.

Concerning tier 1, although it is not a tier with substantial SET it should also be noted that one of the reasons for teachers not moving up to the next level was the delay in becoming permanent staff and the transition from the private to the public sector. As mentioned earlier, it takes teachers an average of 16 years to become permanent, largely due to the precariousness of the teaching career which makes it impossible for them to apply for permanent positions and, even when they can, the hiring system also seems to be flawed. These flaws will be discussed in the next section, but they affect contract teachers' access to a teaching progression career, since it is only available to permanent teachers. The transition from the private to the public sector, while being a positive point in terms of attracting talent, partly reflects the lack of viability of the teaching career, as teachers opt for the best conditions in the private sector in line with the hours in the public sector, until they join the ranks of the public education system.

Therefore, career progression presents serious inefficiencies in its operation, resulting in a neutrality of the benefits it tries to promote and a general demotivation of teachers. From this last factor derive the last reasons given by teachers for not entering the next tier, which are evaluation below required, non-compliance with training hours and non-delivery of Ad report. These are non-compliances, not because of a lack of knowledge of the requirements, but because of a devaluation not only of career progression but also of the other theoretical benefits involved, which don't make it past the paper stage and therefore become irrelevant to fulfilment in the eyes of many teachers.

4.3. National Teacher Competition

According to data from 2018/2019, the education sector in mainland Portugal had 120,369 teachers, divided into school boards, pedagogical zone boards, and hired. If the first two were to be added together, as they are permanent placements, they account for 86.6% of the total workforce, which means that there are 16,129 teachers on contract.

From a more funnelled perspective in the area of special education, one can observe a deterioration of 3.4 percentage points compared to the above hiring scenario. Out of a total of 7,164 SET, 83.2% were permanent, leaving 1,202 teachers on contract (Nova Knowledge Center 2021).

The purpose of contract teachers is to meet temporary needs. However, given the aging of teachers and the lack of attraction of new talent to meet recruitment needs, contract teachers are being used as permanent human resources, albeit without access to a teaching career. This scenario creates precariousness in the teaching profession, due to the instability of placement, both due to geographical distance and monetary reward, since they are paid at the 1st tier regardless of length of service. However, it creates greater instability and an unnecessarily complex process for the Ministry of Education, having the pressure of placing 1202 teachers,

at the start of each school term. These teachers, due to the fact that they are not contracted, will always have the possibility of not accepting their given placement, promoting the shortage of teachers that it is been seen, given the precarious timetable that is suggested to them (Machado 2023).

As a result, recruitment reserve lists are used more than ever. Instead of being used to meet temporary needs, they are used from the start of the school year to fill vacancies not filled by the initial recruitment. Proof of this can be seen in the 50 vacancies placed on the first recruitment list for that same school year, all of which were annual, with 49 going to group 910, where the greatest need lies, and a single teacher to 920, with no need for recruitment to 930. Although this represents a negligible percentage, it will increase over the course of another 29 recruitment reserve lists that take place at the end of the school year, which means that, given the SET ratios per school, there could be serious shortcomings, such as the lack of any teachers to support the SSEN (DGAE 2019). It should be noted that the ongoing annual need for teachers is largely due to teachers refusing to join a particular school and timetable, due to the lack of conditions that the offer provides for the teacher in question.

For teachers to be eligible to apply for staff positions, they need to sign three annual contracts (from September to August), with a full timetable (22 teaching hours) and no breaks. In this sense, the reason for the teachers' refusal is that they want to meet the criteria to speed up their service time (Decree-Law n.º 32-A/2023 2023). However, the refusal does not mean that they will subsequently have a full annual timetable, quite the opposite, but other values, such as family, take precedence in their decision.

This year, a new model for recruiting teachers has been created, called "dynamic attachment", which allows teachers who do not fulfil the successive 3 full annual contracts to apply for the board. This new model ends up giving a more stable position to many teachers who, due to the

precariousness of the teaching profession, are unable to have three consecutive years of full-time and therefore have to change schools every year. However, it has been heavily criticized and the fact that 25% of teachers who met the conditions to join the board, that is, 2064 of 8,223 did not do so, serves as proof. The justification is that in the first year, the teacher can only be placed in the preferred *Quadro de Zona Pedagógica* (QZP) and not in the school's board, while in the second year, they would be obliged to be placed in any QZP in the country since the first year's placement is in a QZP that is being abolished (Sindicato dos Professores do Norte 2023).

There has been a lot of analysis predicting a sharp drop in the number of teachers, which is why it is essential to integrate more contract teachers into the workforce, by giving them more stable options than what is being made. In the medium term, the number of teachers will fall, as described in on section 5.1. ***Error! Reference source not found.***, so the use of contract teachers will be greater, as they will have to attract new entrants to the education system without the full three-year timetable. In this sense, it is crucial to ensure that current permanent contract teachers are included in the teaching career, in order to minimize the pressure of the national teacher competition and its possible failures, given the significant increase in demand which, consequently, is still uncertain as to its capacity to meet all needs.

Another point to mention relates to the list of non-placement recruitment reserves. As will be mentioned section 6. ***Error! Reference source not found.***, the ratio between students and teachers in Portuguese public schools is not ideal, especially in special education. However, there are many qualified teachers on the list of those not placed in the recruitment reserves, which indicates an inefficiency in updating the number of teachers needed in each school. In 2018/2019 there were a total of 3,377 SETs awaiting placement (DGAE 2019). Even if all contracted teachers rejected their placement, which is not the case, there would still be almost three times the number of contracted teachers needed. Compared to 2023/2024, the recruitment

reserve list has dropped by 39.7% compared to the figures presented in 2018/2019, which demonstrates the deterioration in the number of available teachers. Even so, there are still 2,035 teachers on the waiting list, enough to renew all the necessary contract teachers more than once (DGAE 2023). It is therefore clear that, even if the Ministry of Education wants to guarantee room for manoeuvre for possible annual and temporary replacements, it must increase the number of vacancies, not only with a view to improving the ratio between teachers and students with SEN, but above all to retaining the future active teachers who will be so needed in the medium term.

Retaining teachers through the transition from contract to permanent and the consequent increase in vacancies will not only ensure less negative variation in the number of teachers in the medium term, but will also help to increase incentives to support careers, whether in terms of training or even career progression, leading to greater incentive to undertake specialized training, which is the primary goal.

At the beginning of the supply section, the research objectives were defined. The first was to define the causes of the continuing shortage of human resources and the prospects for its development. As a sum up of the findings, it can be said that the number of teachers, both regular and special education, will fall sharply, especially in the medium term and with a greater impact on the coast due to the aging of the teaching profession. This decline is not currently supported by the number of graduates in the field of education, creating a considerable gap concerning recruitment needs. This lack of vacancies in education courses is, in turn, due to the unattractiveness of the teaching career, which is caused by the lack of applicability of training requirements and inefficiencies in career progression and in the national teacher competition, which contributes to entry levels that are increasingly lower than necessary.

The next point will deal with the consequences that this will all have on the school environment, at a material, human and procedural level, both inside and outside the special education environment.

4.4. Adverse Effects of the Identified Causes

Based on Decree-Law n.º 54/2018, July 6, the government showed, through changes in the educational system, that having an inclusive education is something that schools should aim for. However, it failed to take into consideration if schools had the necessary conditions to make it work successfully.

To understand the public teacher's perception on the effectiveness of the system, they were asked, through the previous survey, the following question: "*From 0 ("insufficient") to 5 ("excellent") how do you classify the response of the current system to the needs of SSEN?".* The average of responses was 2.06. Additionally, they were asked if they felt SSEN left their teaching cycle properly taught. Only 19% answered "Yes" (**Appendix 18**), thus, together with the earlier question, validating the premise that there are serious flaws in the education system. When prompted to explain why such a poor evaluation was given, the vast majority responded that the schools did not have the conditions to implement the system, mostly due to a lack of resources and qualifications on how to deal with SSEN.

Lack of resources was the problem mentioned the most, thus resulting in the non-compliance of the measures mentioned in the Decree-Law n. º 54/2018, of July 6th. One year after it was released, 30% of schools did not have the mandatory multidisciplinary team (Diário de Notícias 2019). Additionally, some schools are not complying with the reduction in class size (SIC Notícias 2023), which is a mandatory measure stating that classes that have at least two SSEN with this specificity stated in their RTP, cannot exceed 20 students (INCLUSO 2019). Creating an even more difficult environment for the teacher to give proper attention to all.

However, the main problem within the lack of resources focuses on the absence of sufficient human resources. At the root of the problem is the 64% of SET that state they are responsible for an excessive number of SEN students (**Appendix 17**), thus find it difficult to comply 100% with their tasks, that is, adequate support to all SSEN and cooperation with teacher, by providing them strategies on how to deal with specific student. The latter is validated by 61% of regular teachers who answered "No" when faced with the question of whether the system created a relevant space where all the relevant agents in the student's academic life could interact effectively. This brings a consequent problem, which is an excessive number of SSEN felt by 44% of regular teacher which have great responsibility but inadequate support, due to lack of time and above all qualification (**Appendix**).

Regarding lack of time, in the academic year of 2020/2021, there were 120,842 regular teachers working in public schools in Portugal (DGEC 2022b). Geographically, teachers are more concentrated in *Área Metropolitana de Lisboa* and *Porto*, with 27% and 16% of the workforce, respectively (**Appendix**). The rest of the teaching population is evenly distributed across Portugal overall (DGEEC 2022b). Since there is an increasingly aging teaching class, as already mentioned in section 5.1. ***Error! Reference source not found.***, the pressure under regular teacher, especially in *Lisboa* and *Porto*, will drastically increase, making the problem about their inadequate support even bigger which, will then have serious impacts on the sustainability of the inclusive education system.

However, it is important to notice the lack of qualification, as this being considered the second most mentioned problem of regular teachers when dealing with SSEN. From 872 regular teachers at public schools, 87% of them stated that their base training did not provide them with the necessary skills to teach SSEN because "*a few years ago this topic was not taught in schools*" and "*currently there are not enough courses on the matter and the ones that exist are*

too broad and theoretical", thus not preparing regular teachers for the wide range of different cases and particularities of each SSEN (**Appendix**).

Since the base course was considered not enough to capacitate regular teachers on how to deal with SSEN, it was important to understand if teachers would seek, during their career, special education courses to gain competences, given the impact it has on their jobs and 41% said "No". Furthermore, for the 59% that did actually do an extra course on SEN, when asked if they felt like the course gave them the skills they were looking for, 46% answered "No", providing the same reasons as the basic course (**Appendix**).

As stated above, teachers do not feel their base formation gives them the skills to teach students with SEN, but despite this, almost half of them do not do the training to learn while the other half that does the training, does not feel that it was what they were looking for, making only 6% of 872 feeling that they have enough qualification to deal with SSEN, which shows a massive margin for improvement (**Appendix**).

Apart from the reasons already raised, there are others such as lack of incentives to training, lack of time, interest in the field and closeness to retirement which discourage teachers interviewed from undertaking training in the area of special education in the future (**Appendix**).

5. Financial Impact of Proposed Solutions

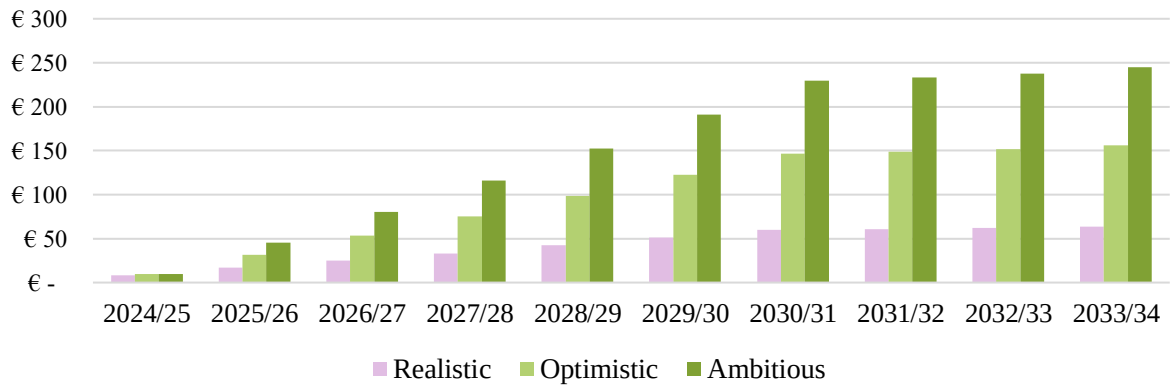
What are the costs and overall impact of the proposed solutions?

To move forward with the implementation of the solutions of this Work Project, these should be presented to the Ministry of Education, advocating said measures. Therefore, one crucial aspect that will influence the Ministry of Education's decision is the financial impact of the consolidated solutions, which is the part assessed in this section. This will include the predicted

expenses, the budget for education implications, and the Return on Investment (ROI) associated with these solutions.

Starting with the predicted expenses, Graph 26 illustrates the annual costs of both measures combined, considering three scenarios that incorporate the investment in the second solution (section 7. ***Error! Reference source not found.*** and section 8. ***Error! Reference source not found.***). It is important to note that the impact of solution 2 on the overall expenses is minimal, representing only 0.8%, 0.4%, and 0.2% of the total costs in the realistic, optimistic, and ambitious scenarios, respectively.

Graph 26 - Total Yearly Cost of the Two Solutions per Scenario (in millions)



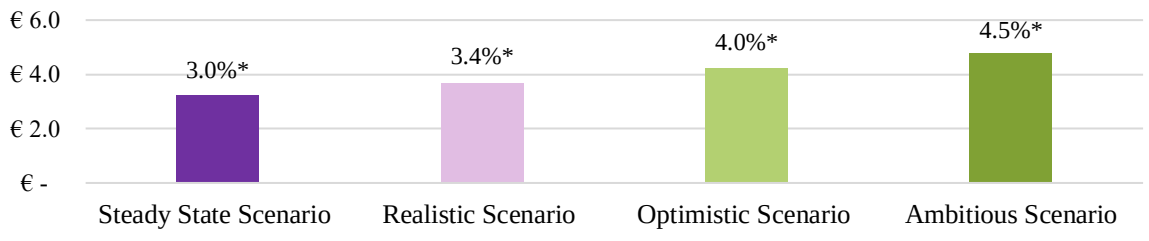
Legend: The second solution has a minimal impact on the overall costs and the ambitious scenario can triple the costs when compared with the realistic one.

Furthermore, it is crucial to assess the implications of these solutions in terms of the overall additional investment that the Portuguese government would incur in, possibly increasing its education budget. This budget increase would come from an increase in the investment in special education fomented by the two proposed solutions. To quantify this impact, projecting the investment in education until 2034 was a key step, enabling the assessment of the percentage allocated to the business-as-usual scenario, upon which the additional costs of these solutions can be added.

In order to forecast the expenditure on education, historical data regarding the public expenditure on education was collected, from the year 1995 to the most recent available value of 2021, and by analyzing its behavior, one can see how Portugal had a steady increase in investment on education, from 1995 to 2010 (Pordata, n.d.). From this point onwards Portugal had a period of disinvestment, during 2010-2013, due to the contractionary economic policies, especially the cut in public spending, that were in place during this period of time. This corresponds to the years when Portugal suffered most from the global financial crisis of 2007-2008. Also, since 2014, the year marking the end of the external intervention (Troika) in Portugal, the expenditure on education has been gradually recovering (**Appendix 21**). Due to this, the forecast made has as background the average percentual change in the public expenditure on education from 2014-2021. This will mean that each year this investment will increase on average by approximately 0.85%.

From this total investment in education, a proportion goes to special education (**Appendix 22**). Given that in the year 2020/2021 the budget for special education was approximately €301M (European Commission 2023), which represents around 3% of the total expenditure of education of that year, this percentage will be assumed for the following years, until the year 2033/2034, for the business-as-usual scenario. Considering this, by adding the extra costs associated with the proposal to the business-as-usual scenario, it can be inferred that, in terms of the increase in overall investment in education, Portugal would need to allocate an additional 0.4%, 0.93%, or 1.44% in the realistic, optimistic, and ambitious scenarios, respectively, from 2024/2025 to 2033/2034 (Graph 27).

Graph 27 - Total Investment in Special Education from 2024/2025 to 2033/2034 (in billions)



* percentage of the total expenditure on education

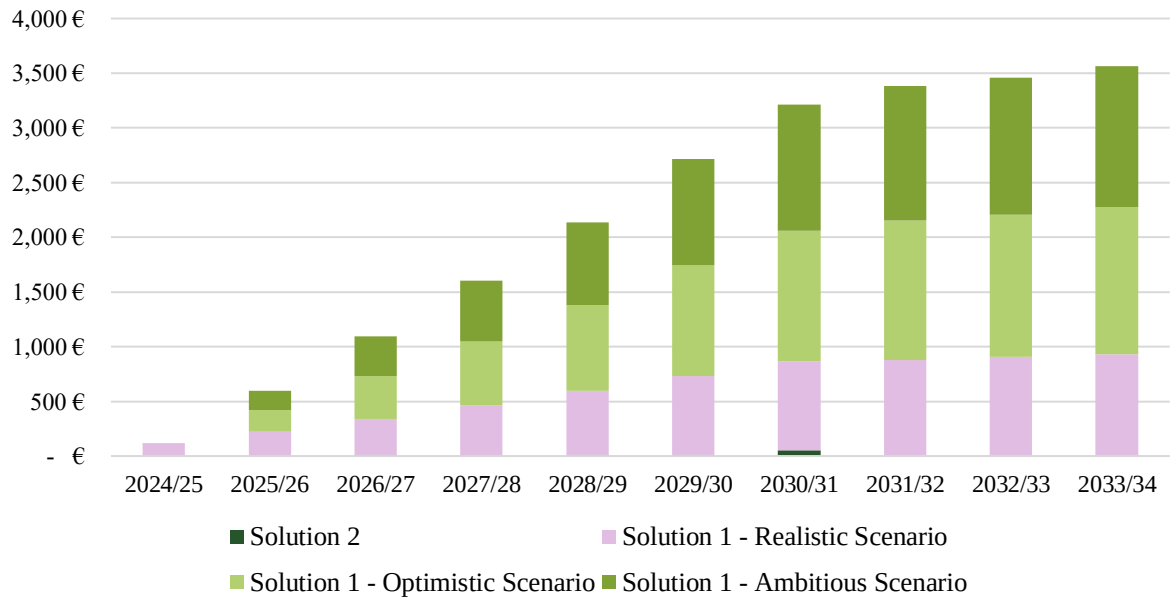
Legend: There is the need to allocate additional 0.4%, 0.93%, or 1.44% in the realistic, optimistic, and ambitious scenarios, respectively.

In section 3.1. *International Benchmark*, it was mentioned that Portugal invests €9,851 per student with disability with €3,849 being from investment in special education. To measure the impact of these solutions on the investment per SSEN, forecasting the evolution of the investment in special education in the business-as-usual scenario, was a crucial step. This scenario was obtained by dividing the forecasted yearly investment in special education by the SSEN forecast presented in section 4.2. ***Error! Reference source not found.***. Nevertheless, this forecast was only made until the year 2030/2031. From that forecast onwards, the assumption made was that the number of students would continue to decrease until 2033/2034. This projection was calculated by adding the average recovery rate of 0.13% to the growth rate observed in the preceding year. Given that the amount invested in special education has an increasing trend contrarily to the decreasing total number of SSEN, the amount invested in special education per SSEN will increase from 2020/2021 to 2023/2024 by 30% in the business-as-usual scenario.

Additionally, in Graph 28, one can identify the extra amount that would be invested per SSEN. This would mean that in the year 2033/2034 the investment in special education per SSEN would have increased comparatively to the business-as-usual of that year by 19%, 47%, and 73% in the realistic, optimistic and ambitious scenarios, respectively. Also, when compared with the investment in special education per SSEN of the year 2020/2021, €3,849, to the

expected investment in 2033/2034, would have an increase of 50% with an investment of €5,832 the realistic one, 90% in the optimistic one with a value of €7,175, and of 120% in the ambitious case with €8,467 invested in special education (**Appendix 23**).

Graph 28 - Investment per SSEN per solution



Legend: The impact on the investment per SSEN is considerable, with the last year of the forecast reaching a minimum increase of 19% in the realistic scenario, comparatively to the business-as-usual.

In section 3.3. *Best Practices Mismatch*, different tiers of investment in SSEN were discussed where Portugal stood alone among the top 14 OECD countries, with an investment below €10,000 (**Appendix 8**). When summing the forecasted values of investment in special education per SSEN to the investment in standard education, which was assumed to be increasing at the same rate as the investment in special education per SSEN in the business-as-usual case, it is possible to conclude that Portugal would automatically be placed in Tier III, in this scenario. This grouping includes New Zealand, Spain, and Ireland, assuming these countries maintain their investment levels.

This conclusion holds in all the other three scenarios, although there's a higher likelihood that if the optimist or ambitious scenarios are considered, Portugal would more easily approach Tier

II in the future (**Appendix**). Also, it is important to note that considering the costs of these scenarios the government would more likely choose the realistic one. Nevertheless, this will depend on the sources of funds that the country would have available at the moment of implementation.

It is important to highlight that, although the costs were only estimated in the years of implementation, until 2033/2034, the expenses associated with the first solution will be maintained at least for the duration of the career of the newly hired SET.

Moving to the ROI of this strategy, due to the complexity of the research area, it is not easily quantifiable, but there are some benefits that can be identified by following the proposed solutions.

One of the primary advantages relies on the improvement of academic results of students with SEN, due to the better-quality teaching methods of regular teachers and higher presence of special education teachers that will allow the educational experience to become a more tailored and effective for students with diverse learning needs.

Additionally, a crucial aspect of this strategy is its broader societal impact since this strategy focuses on levels of education starting from pre-school to secondary school. Early exposure to inclusive education instills values of acceptance and diversity in students, cultivating a foundation for a more inclusive society. Consequently, due to better quality education, students with SEN are more likely to join the workforce and to be more productive, thus being more independent and possibly increasing their quality of life.

Moreover, there are more agents that would be affected by these solutions, for example the legal guardians of the SSEN by knowing that teachers are well-qualified and equipped to handle special education needs can boost their confidence in the overall education system. Additionally, these solutions lead to the reduction of the need for external support services,

since legal guardians may feel like their children no longer need costly outside school teaching support.

Finally, regular teachers can also be impacted by this, feeling more confident, competent, which may increase their job satisfaction, and higher retention rates. The objective is that if a survey similar to the one discussed in section 5. ***Error! Reference source not found.***, which was administered to teachers, is conducted seven years from now, the percentage of SETs feeling they have excessive number of students (currently at 64%) would decrease. Simultaneously, the satisfaction level of regular teachers regarding their qualifications in special education would also improve.

In essence, the proposed strategy not only focuses on improving academic outcomes for SSEN but also cultivates a more inclusive society, focusing on all levels of the Pyramid Framework of Life Quality for people with SEN built in section 3.1*International Benchmark*. Besides, this strategy by having three alternative scenarios that although differ on the size of the impact, may adjust to different financial resources available.

6. Final Recommendations and Conclusions

Which existent problems are not covered in the proposed solutions, and how may they be addressed in the near future?

This Work Project began with a question to be answered: how can the teachers be empowered to work with inclusion?

In order to do so, a benchmark analysis was performed to find the best practices in the area, both nationally and internationally. Afterwards, a deep characterization of the demand (students with SEN) and the supply (teachers) was made, where the root problems were identified with the aid of research performed and two surveys conducted as reliable sources of primary data. The next step was to understand what the gap between demand and supply was and, finally, the two solution proposals came up as a possible answer to fill in this identified gap.

However, while the explanation might sound simple, this problem is anything but simple. On the contrary: it is, indeed, a truly complex one. As such, throughout the analysis performed, plenty of subproblems were found, which all actively need an answer. While the solution proposed aims to answer the two main identified issues, there are some which end up not being totally addressed by it.

As such, the aim of this final chapter is to provide final recommendations, which intend to be high-level answers to the problems found along the way and which, ideally, should be looked at and solved in the long term by those in charge that have the means and responsibility to do that.

Following the structure used throughout the project – the Pyramid framework of Life Quality of SSEN – the final recommendations will also be organized within these three topics.

The first one is Social Inclusion. In the beginning of this Work Project, one topic explored the different approaches to Special Needs education, where three models were defined: the Mainstreaming, the Hybrid, and the Specialization (section 3.1. *International Benchmark*). Regarding this, Portugal was highlighted as being one of the countries in which the Mainstreaming model is predominant, with 84% of SSEN being taught under mainstreaming settings (Hoteit 2022).

However, throughout the research conducted, and especially taking into account the comments received from families of SSEN, the actual application of this model might not be working in the most efficient way. Plenty of the complaints received claim that these students are being closed off in the Special Needs room, thus segregated from the remaining students. While it is hard to pay the attention needed to those students if these are always in the regular class, the Mainstreaming model does not suggest that every SSEN should be integrated in regular classes all the time, but at least 80% of it. In the survey conducted within the families of students with SEN, when asked the question about which setting would be more suitable for learning, around 73% answered that the best one would combine being integrated in a regular class with individual support, being the latter done inside or outside the regular classroom. On the other hand, only around 6% answered that the best setting would be a Specialization one, proving that the application of the Mainstreaming model in Portugal follows the desire of the families of SSEN. However, many of the gathered comments on this matter state that, while on paper this system is the proposed one, what happens in reality ends up being different, and plenty of respondents complain about their family member being kept in a special room for most of the time.

If the Portuguese approach on Special Education is sustained by the belief that the Mainstreaming is the setting that helps to foster Inclusion the better, then it must be correctly applied. Thus, the recommendation that follows is that the Ministry of Education closely

follows the cases where there is an active complaint about this inclusion method not being correctly applied, and to try to understand what is missing for it to happen in a way that makes sense for each student's curriculum.

While it is important to ensure that the SSEN are integrated in regular classes, another issue raised was the lack of adaptation of the school activities for SSEN. Even though these students end up, many times, following a specific curriculum and that the subjects taught in a regular class cannot always be adapted to accommodate the existent special needs curriculums along with the regular ones, it is crucial to ensure that there is an adaptation of the social activities done in school so that they may include all students. This includes seasonal school parties, school excursions, and sports – the more activities the better. Moreover, in order to foster better inclusion, these students should be involved in association with their regular class, and not only with their special class, which ends up happening many times.

Regarding Inclusive Education, there are many measures that should be highlighted for future reference.

Starting off by looking towards the first proposed solution (section 7. ***Error! Reference source not found.***), the initial strategy aimed to reach a number of teachers in line with the proposed scenarios. Should the Government choose the realistic option from the three available, it can always be improved, given the existent flaws in the system, which will only be overcome after 2030/2031, when the large drop in teachers due to their retirement is neutralized. It is, therefore, important to recommend a re-evaluation to the Ministry of Education, after the time foreseen by the projections (2030/2031), to understand whether it makes sense to continue with the proposed measures or to change them toward new objectives. Moreover, an ambitious goal for the future could be to try to reach one of the benchmark ratios of Germany and Wales (respectively, 5:1 and 7:1).

By 2030/2031, assuming that the Government would choose the realistic scenario as it is the most feasible one, 1,948 extra SETs are expected to be working, in addition to the ones that would already be added each year, improving the current ratio from 9.9 to 9.2 in the last projected year. However, in the longer term, the Government may opt to match the Portuguese ratio with the Optimal (Wales ratio) and even Ambitious (Germany ratio) ones, depending on the investment allocated to this area. To match the 7:1 and 5:1 ratio, Portugal, which is below in the inclusion of SSEN in comparison with both countries, would need to allocate an additional 2,842 and 5,577 teachers for special education group recruitment, respectively, not counting those already added by 20230/2031. In order to do this, vacancies should be opened up on specialized SEN courses in proportion to this recruitment need. In this sense, in addition to those already established in the main solution, initiatives would be created such as "Spend a day with me in the office", which allows those interested to experience a day of a teacher, in order to understand all the activities they perform throughout the day. This initiative is only suitable in the long term because in the meantime the key problems of attracting teachers would have been solved and it is therefore expected that not only will teachers be more willing to take part in this type of initiative, but that the school organization will be optimized in order to present projects and clubs that teachers are assigned to in addition to their teaching component.

Another identified issue has to do with the attractiveness of the existent career processes. One recommendation proposed has to do with the use of digital tools in these processes, as previously identified as being a best practice and a mismatch for Portugal (section 3. *Current Landscape*). The aim is to centralize both training and career progression on a single platform for individual access. As far as training is concerned, the goal is to further diversify CFAEs' continuous training offer in order to match private institutions in terms of competitiveness. To do this, the questionnaire suggested in the main solution will be used as a resource, in order to provide training in the most requested areas, after those already introduced by 2030/2031. The

experience of registering for training has been criticized for its complexity. Teachers receive training offers by email and confirm their attendance several times during the process. It is therefore essential that the registration process is unique and automatic on the platform, with subsequent information on the grade obtained and completion status, with automatic cross-checking of data for career progression, so that verification of requirements is also easier to validate. On the platform, there should also be a forum for clarifying doubts so that teachers can help each other with questions in the area of SEN, and also a space for important communications, in which it is possible to find out about the existing benefits to be used for continuing training (time off for training) and for specialized courses (sabbatical and unpaid leave and student-worker status), with the respective registration deadlines for any of them.

Regarding career progression, a future recommendation is that the move to the next level is introduced for all teachers with a "Good" rating in their performance evaluation. This measure not only allows for a greater sense of fairness in the process itself, something that teachers indicate is unfulfilled, but also attracts both new teachers and those from the private sector who see one of the obstacles to career progression mitigated, thus making it much more attractive. In addition, in order to promote a wider entry of new talent, specialization in special education after entering the teaching career can reduce one year of service time in the step in which the teacher is situated. It's important to note, however, that this measure is temporary and will end once all the necessary teachers have joined. Finally, as is the case with training, an exclusive page on the criteria for moving up a step should be available on the platform, with a forum for clarifying doubts, so that problems such as unaccredited training don't happen again.

Finally, as a recommendation proposal, all the extra teachers added to the special education recruitment group have to transition to a permanent position, in order to simplify the national competition for teachers, which should only be held for temporary needs, as provided for in the law, and also to reduce the number of vacancies not filled each year.

Moving on to the following and last parameter, some recommendations were also set aiming for Professional Inclusion. The goal of the proposed measures is not to adapt the job market to receive students with SEN, as it leaves the scope of this project, but to guarantee that these students are prepared to enter this new phase in their lives, both psychologically and in by having the actual skills needed to succeed as professionals and self-sufficiency adults.

Referring back to the survey conducted within a sample of families of SSEN, one of the parameters evaluated was how the respondents felt about whether the special education curriculum was the right one to prepare the students for the life post-school. In reply to the question of *Do you feel like your relative is being properly qualified in school, preparing them for inclusion in the labor market?"*, around 80% of the respondents answered "No" or "Partially". Moreover, when asked about whether they believed the current education system was preparing students with SEN to be autonomous, about 74% responded "No" or "Partially". Many participants shared their opinion on the current curriculums (even the adapted ones) being too focused on academic learnings and on theory rather than on practical activities that can indeed help SSEN reach self-sufficiency.

Regarding this topic, some interesting suggestions were given, mostly including the re-evaluation of the current individual programs that result from selective and additional measures, so that they can address the true needs of students with SEN. While it is in fact important to teach them adapted academic learnings, during the school years it is crucial to prepare these students for a possible professional future, and one where they can be autonomous. For example, the inclusion of practical activities in their curriculum, such as horse-riding, sailing, swimming or cooking (all examples that occur in some public Portuguese schools), may be a way of keeping the students happy and motivated while at school, having them learn new activities that help them develop broader skillsets, and possibly helping them to find a new passion that may lead to a career path.

Moreover, an interesting measure could be to teach SSEN to develop basic skills needed for their daily basis as young adults. This could include going to the grocery store; learning how to deal with money; learning how to use the public transportation system, among other things. These are only examples, mostly coming from real suggestions given by relatives of people with SEN, but the actual curriculum could be left to the diagnosis of the Special Needs team, since the basic skills to be acquired depend a lot on the students.

Nevertheless, teaching SSEN this type of skills may be a way of keeping them motivated and providing them with useful learning.

While some of these last examples come from real scenarios in Portugal, the majority of the sample analyzed complains about the schools not having enough resources to actually change their relatives' curriculum, either due to lack of time, teachers or money.

Thus, this recommendation is dependent on the funding that the Ministry of Education gives to Special Needs teams, which could truly benefit from extra resources to fulfill these curriculum adjustments.

Moving on, the next recommendation is the extension of one of the practices that were analyzed as happening in Portugal – the PIT (section 3.2. *National Practices*). While this program is a very practical way of introducing the SSEN to the professional world, many times the result ends up being disappointing, in cases where the internship is not well suited for the student. In order to overcome this obstacle, the ICF has come up with a project, "ComPIT", which consists of a platform that brings together students looking for a PIT internship and companies who wish to receive these students. This allows both for companies to develop their inclusion policies in an impactful way, and for students to find an internship that motivates them and which is well suited to their profile, provided that the scale of the project allows for a big range of options. Therefore, to invest in this project, or even to create a State-owned methodology which fulfills

the same purpose, may be an interesting way of creating a student-internship match that leads to a beneficial experience for both sides.

Lastly, one best practice carried out by the UK which was previously analyzed (section 3.1. *International Benchmark*) has to do with the existence of a support scheme as SSEN transition from school to life after that.

All in all, the path towards an increasingly inclusive society towards PwD is not a clear one. There are many grey areas, which require Governments to put a real effort into the matter, in order to come up with feasible and innovative solutions. This Work Project had as its goal the creation of a model to empower regular teachers to deal with inclusion, which was addressed in the two proposed solutions (section 7. ***Error! Reference source not found.*** and section 8. ***Error! Reference source not found.***), both through an increase of the number of SET, to support regular teachers, and through an increase in regular teacher training in SEN. Moreover, both solutions were analyzed regarding their impact, so that a prediction of the costs and returns is kept in mind. However, in order for Portugal to follow the countries targeted as examples, not only must this be considered, but also the recommendations highlighted in this last section.

As referred to in the Introduction of this project, to dream of a fully inclusive society might be utopian in the mind of many. However, even if said is true, the progress that leads a country towards the closest place to this ideal comes from the will of those who do not cease to believe in such reality. As such, on an ending note, the final recommendation that arises from this Work Project is that the Portuguese Government risks to believe in reality as well, and uses this belief as a motivation to keep on pursuing an inclusive society, where everyone is welcomed.

7. Bibliography

Aruma. n.d. "Types of Disabilities." Aruma. Accessed September 2023. https://www.aruma.com.au/about-us/about-disability/types-of-disabilities/.

Associação dos Trabalhadores da Educação. (n.d.). "Docentes – Distribuição de Serviço." Ate. Accessed October 21, 2023. https://www.ate.pt/trabalhadores-da-educacao/docentes-distribuicao-servico/#1509922928854-86b3015d-eea3.

Associazione Italiana Dislessia. 2020. Dislessia Amica Livello Avanzato - Ufficio Scolastico Regionale per l ... Ministero dell'Istruzione e del Merito. November 13, 2020. https://www.istruzioneer.gov.it/wp-content/uploads/2019/09/presentazione_dislessia_amica_livello_avanzato.pdf.

Associazione Italiana Dislessia. n.d. "Cosa FACCIAMO." AID Italia. Accessed November 25, 2023. https://www.aiditalia.org/cosa-facciamo-progetti.

BMBF. n.d. "Table 2.3.25 - BMBF's Data Portal." Data Portal of Federal Ministry of Education and Research - BMBF. https://www.datenportal.bmbf.de/portal/en/Table-2.3.25.html?qw=special&qw=education#content.

Caixa Geral Depósitos 2023. "TSU: como ter isenção ou redução na Taxa Social Única?" Caixa Geral de Depósitos. February 7, 2023. https://www.cgd.pt/Site/Saldo-Positivo/negocios/Pages/isencao-tsu.aspx.

CALL Scotland. n.d. "How Can Technology Help?" CALL Scotland. Accessed November 2, 2023. https://www.callscotland.org.uk/information/autism-spectrum-disorder/how-technology-can-help/.

CNN Portugal. July 15, 2023. "Portugal tem a classe docente mais envelhecida da UE. E não está a formar professores suficientes".

https://cnnportugal.iol.pt/professores/envelhecimento/portugal-tem-a-classe-docente-mais-envelhecida-da-ue-e-nao-esta-a-formar-professores-suficientes/20230615/648abb8bd34ef47b8754ea9c

Conselho Nacional de Educação. 2021. Estado da Educação em 2020. Lisbon: CNE. https://www.cnedu.pt/content/edicoes/estado_da_educacao/EE2020_WEB_04.pdf

Cristo, Alexandre. 2017. "De quantos professores precisam as escolas?" Observador. May 2, 2017. https://observador.pt/especiais/de-quantos-professores-precisam-as-escolas/.

Dar+. 2023. "Curso de Formação em Necessidades Educativas Especiais" December, 2023. https://www.darmais.pt/servicos/formacao/e-learning/28-educacao/formacao-continua/165-curso-de-formacao-em-necessidades-educativas-especiais#pagamento

Decreto-Lei n.º 176/2012. D.R. I Série. 149(12-08-02) 4068-4071. https://diariodarepublica.pt/dr/detalhe/decreto-lei/176-2012-179057

Decreto-Lei n.º 22/2014. D.R. I Série. 29(14-02-01) 1286-1291. https://diariodarepublica.pt/dr/detalhe/decreto-lei/22-2014-570766

Decreto-Lei n.º 32-A/2023. D.R. I Série. 88(23-05-08) 2-27. https://files.dre.pt/1s/2023/05/08801/0000200027.pdf

Decreto-Lei n.º 41/2012. D.R. I Série. 37(12-02-21) 850-852. https://diariodarepublica.pt/dr/detalhe/decreto-lei/41-2012-542994

Decreto-Lei n.º 54/2018. D.R. I Série. 129(10-07-06) 2918-2928. https://diariodarepublica.pt/dr/detalhe/decreto-lei/54-2018-115652961

Decreto-Lei n.º 79/2014. D.R. I Série. 92(14/05/14). https://diariodarepublica.pt/dr/legislacao-consolidada/decreto-lei/2014-73250886

Decreto-lei n.º 95/97. D.R. I-A Série. 95(97-04-23) 1832-1833. https://diariodarepublica.pt/dr/detalhe/decreto-lei/95-1997-476920

Despacho normativo n.º10B/2018 D.R. II Série. 129(18-07-06). 2-7. https://diariodarepublica.pt/dr/detalhe/despacho-normativo/10-b-2018-115652972

DGAE, DSGRHF, and EGAF. (n.d.). *Relatório da Formação Contínua 2019/2020*. Lisbon: DGAE. https://www.dgae.medu.pt/download/gestrechumanos/pessoal-docente/formacao/relatorios-2/relatorio-da-formacao-docente-2019-20.pdf

DGAE. 2018. "Grupo Recrutamento". DGAE. August 8, 2018. https://www.dgae.medu.pt/download/gestrechumanos/pessoal_docente/qualificacoes/profissional/20180808_grh_QualProfGuia_GrupoRecrutamento.pdf

DGAE. 2019. *Reserva de Recrutamento 2018/19.* Lisbon: DGAE https://www.dgae.medu.pt/informacao-consolidada/reserva-de-recrutamento/reserva-de-recrutamento-201819

DGAE. 2023. "Reserva de Recrutamento 2023/2024 n.o13 - Candidatos à Contratação - Lista Definitiva de Não Colocação - Grupo de Recrutamento 910 - Educação Especial 1.". DGAE. November 11, 2023. https://www.dgae.medu.pt/download/rr13-2324/nao-colocacao-rr13-2324-2/grupo-910-educacao-especial-1-125574.pdf

DGEEC and DSEE. (n.d.). Estatísticas da Educação 2021/2022. Lisbon: DGEEC. https://pessoas2030.gov.pt/wp-content/uploads/sites/19/2023/06/DGEEC_DSEE_2023_EE20212022-1.pdf

DGEEC and Nova Kowledge Center. 2021. "Estudo de diagnóstico de necessidades docentes de 2021 a 2030"

https://www.dgeec.mec.pt/np4/506/%7B$clientServletPath%7D/?newsId=1305&fileName=DGEEC_Estudo_Diagnostico_de_Necessidade_.pdf

DGEEC. (n.d.). Estatísticas da Educação 2021/2022: Principais Resultados. Lisbon: DGEEC. https://pessoas2030.gov.pt/wp-content/uploads/sites/19/2023/06/EE2022_Principais_resultados-1.pdf

DGEEC. 2022a. "Educação Inclusiva 2020/2021 – Apoio à aprendizagem e à inclusão, escolas públicas de rede do Ministério da Educação" https://www.dgeec.mec.pt/np4/1363.html

DGEEC. 2022b. Regiões em Números 2020/2021: Educação. Volume I-V. Lisbon: DGEEC. https://www.dgeec.mec.pt/np4/1573.html

DGEEC. 2023. "Dados e Estatísticas de Cursos Superiores - Edição 2023." DGEEC. Accessed November 30, 2023. https://infocursos.medu.pt/

Diário da República. 2022. "Regulamento n.o 861/2022." Diário da República. September 6, 2022. https://www.fmh.ulisboa.pt/docman/alunos/alunos-regulamentos/1418-regulamento-de-propinas/file

Diário de Notícias and Lusa. 2022. "110 mil alunos não terão professor a pelo menos uma disciplina dentro de um ano. Saiba porquê". Diário de Notícias. May 18, 2022. https://www.dn.pt/sociedade/100-mil-alunos-nao-terao-professor-a-pelo-menos-uma-disciplina-dentro-de-um-ano-saiba-porque-14868340.html

Diário de Notícias. 2005. "Portugal investe pouco na educação." DN. September 13, 2005. https://www.dn.pt/arquivo/2005/portugal-investe-pouco-na-educacao-622414.html

Direção-Geral de Estatísticas da Educação e Ciência. 2022. "Estatísticas da Educação 2021/2022." https://estatisticas-educacao.dgeec.medu.pt/eef/2022/inicio.asp

Edkid. 2023. “Curso Necessidades Educativas Especiais” December, 2023. https://new.edkid.pt/curso-necessidades-educativas-especiais-4/

EDUSTAT. 2020. “Perfil de educadores e docentes do ensino básico, secundário e superior” EDUSTAT. July 2020. https://www.edustat.pt/detalhes-infostat?ID=4

EDUSTAT. 2023. “Necessidades Especiais de Educação.” July 31, 2023. https://www.edustat.pt/informacao-indicador-powerbi?indicatorid=424

European Central Bank. 2023. “ECB Euro Reference Exchange Rate: US Dollar (USD).” European Central Bank. November 2023. https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/eurofxref-graph-usd.en.html

European Commission. 2023. “Funding in Education.” European Commission. November 23, 2023. https://eurydice.eacea.ec.europa.eu/national-education-systems/portugal/funding-education

Evolui. December 2023. “Inclusão e Necessidades Educativas Especiais” https://www.evolui.com/curso-online/inclusao-necessidades-educativas-especiais

Ferreira, Joana. 2023. “Portugal tem a classe docente mais envelhecida da EU. E não está a formar professores suficientes.” Trabalho by eco. June 15, 2023. https://eco.sapo.pt/2023/06/15/portugal-tem-a-classe-docente-mais-envelhecida-da-ue-e-nao-esta-a-formar-professores-suficientes/

Forum Estudante. 2023. “Qual é o estado da educação em Portugal?” Forum Estudante. January 30, 2023. https://forum.pt/escolas/qual-e-o-estado-da-educacao-em-portugal

Gaintza, Zuri, Leire Darretxe Urrutxi, and Christopher Boyle. 2020. “Understanding Inclusive Education in the Basque Country.” Research Gate. Brill. June 18, 2020.

https://www.researchgate.net/publication/343194510_Understanding_Inclusive_Education_in_the_Basque_Country

GOV.WALES. n.d. “Schools’ Census Results: February 2022.” GOV.WALES. Accessed November 30, 2023. https://www.gov.wales/schools-census-results-february-2022-html

Hoteit, Leila, Félix Bejarano, Sergio Figuerola, and Antonio Herranz. 2022. “What a Multicountry Study Reveals about K–12 Education Models for Students with Disabilities.” BCG Global. BCG Global. January 17, 2022. https://www.bcg.com/publications/2022/inclusive-education-for-students-with-disabilities-analysis

I9Project. 2023. “Inclusão na Diferença - Necessidades Educativas Especiais – eLearning” December, 2023. https://www.i9project.net/formacao/necessidades-educativas-especiais

Inclusive Community Forum. n.d.a. Apresentação. Accessed October 14, 2023. https://www.novasbe.unl.pt/pt/comunidade/labs-hubs-foruns/inclusive-community-forum/apresentacao

Inclusive Community Forum. n.d.b. Educação. Accessed October 18, 2023. https://www.novasbe.unl.pt/pt/comunidade/labs-hubs-foruns/inclusive-community-forum/educacao/apresentacao

Inclusive Community Forum. n.d.c. Jornada Para a Inclusão. Accessed October 18, 2023. https://www.novasbe.unl.pt/pt/comunidade/labs-hubs-foruns/inclusive-community-forum/empregabilidade/jornada-para-a-inclusao

INR. n.d.a. “Concurso ‘Escola Alerta!’ 2023/2024 (20.a Edição).” Prémio Concurso Escola Alerta! - INR, I.P. Accessed November 5, 2023. https://www.inr.pt/escola-alerta

INR. n.d.b. “Estratégia Nacional Para a Inclusão Das Pessoas Com Deficiência 2021-2025.” INR. Accessed November 2, 2023. https://www.inr.pt/documents/11309/284924/ENIPD.pdf/5bce7969-0918-4013-b95d-2a5a35a870c5

INR. n.d.c. “O INR.” Instituto Nacional para a Reabilitação. Accessed November 3, 2023. https://www.inr.pt/inr.

Instituto Europeu de Estudos Superiores Portugal. n.d. “Emolumentos” Accessed November 30, 2023. https://iees.pt/oferta-formativa/emolumentos/.

Instituto Nacional de Estatística. 2022. “Censos 2021 - O que nos dizem os Censos sobre as dificuldades sentidas pelas pessoas com incapacidades”. December 12, 2022. https://www.ine.pt/xurl/pub/66200373

Instituto Superior de Ciências da Informação e da Administração. 2023. “Pós Graduação Educação Especial Domínio Cognitivo e Motor”. https://iscia.edu.pt/pg-educacao-especial-dominio-cognitivo-e-motor/

Instituto Superior de Educação e Ciências. 2023.“PÓS-GRADUAÇÃO EDUCAÇÃO ESPECIAL: DOMÍNIO COGNITIVO E MOTOR 11.ª EDIÇÃO”. https://www.iseclisboa.pt/index.php/pt/cursos/posgraduacoes/eedh/educacao-especial-dominio-cognitivo-e-motor

Instituto Superior de Gestão e Administração de Santarém. 2023. “PROPINAS DE CURSOS DE PÓSGRADUAÇÃO/MBA Ano letivo 2023/2024”. February 16,2023. https://www.islasantarem.pt/pt/ensino/consulte-ainda/emolumentos-e-propinas/category/37-ano-letivo-2023-24?download=537:propinas-pg-mba-ano-letivo-2023-2024

Kotowicz, Ana. 2019. “Relatório da OCDE. Na próxima década, 1 em cada 2 professores tem de ser substituído.” Observador. June 19, 2019. https://observador.pt/2019/06/19/relatorio-da-ocde-durante-a-proxima-decada-1-em-cada-2-professores-tem-de-ser-substituido/

Kotowicz, Ana. 2023. “Novas regras. Governo quer que professores com habilitação própria possam fazer mestrado mais curto e quer estagiários a receber.” Observador. October 2, 2023. https://observador.pt/2023/10/02/novas-regras-para-quem-quer-ser-professor-quem-tem-habilitacao-propria-podera-fazer-mestrado-mais-curto-se-ja-der-aulas-ha-4-anos/

Lázaro, Catarina. 2023. “Há cada vez mais alunos em educação especial, mas faltam professores.” SIC Notícias. November 6, 2023. https://sicnoticias.pt/pais/2023-11-06-Ha-cada-vez-mais-alunos-em-educacao-especial-mas-faltam-professores-f79dec7c

Lei n.º 46/86. D.R. I Série. 237(86-10-14) 3067-3081. https://diariodarepublica.pt/dr/detalhe/lei/46-1986-222418?_ts=1702509714256

Lemos, Ângela. 2023. “Pós-Graduação em Educação Especial – Domínio Cognitivo e Motor 2023-2024” 2023. Instituto Politécnico de Setúbal Escola Superior de Educação. 2023. https://www.si.ips.pt/ips_si_uk/conteudos_service.conteudos_cont?pct_id=19822&pv_cod=44HawaT7aaas

Lusa. 2023. “Portugal gasta com cada aluno menos 14% do que a média da OCDE.” PÚBLICO. September 12, 2023. https://www.publico.pt/2023/09/12/sociedade/noticia/portugal-gasta-aluno-menos-14-media-ocde-2063032

Lynn, Richard, and Gerhard Meisenberg. 2010. “National Iqs Calculated and Validated for 108 Nations - Ucoz.” Science Direct. June 2, 2010. https://khosachonline.ucoz.com/_ld/1/130_national-iqs-ca.pdf

Machado, Carmo. 2023. "*Professores contratados: Dois pesos e duas medidas*". Visão. February 02, 2023. https://visao.pt/opiniao/bolsa-de-especialistas/2023-02-08-professores-contratados-dois-pesos-e-duas-medidas/

Merton Council. 2017. "Supporting Young People with SEN or Disabilities into Adulthood - Transition." 2017. https://directories.merton.gov.uk/kb5/merton/directory/advice.page?id=oRA5oZJqwes

Ministère de l'Education Nationale et de La Jeunesse. 2020. "International Perspectives on Inclusive Education." . February 2020. https://www.education.gouv.fr/international-perspectives-inclusive-education-9734

Muller, Cynthia, and Cynthia English. 2021. "Europeans Most Open to Those with Intellectual Disabilities." Gallup.Com. Gallup. May 7, 2021. https://news.gallup.com/poll/148253/europeans-open-intellectual-disabilities.aspx#2

National Council for Special Education. n.d. "About Cat-GLD and Guidelines for Use | National Council for Special ..." NCSE Support. Accessed November 6, 2023. https://www.sess.ie/about-cat-gld-and-guidelines-use

Observatório da Deficiência e Direitos Humanos. 2021. "Pessoas com Deficiência em Portugal – Indicadores de Direitos Humanos 2021". http://oddh.iscsp.ulisboa.pt/index.php/pt/2013-04-24-18-50-23/publicacoes-dos-investigadores-oddh/item/557-relatorio-oddh-2021

Observatório da Deficiência e Direitos Humanos. December 13, 2022. "Pessoas com Deficiência em Portugal – Indicadores de Direitos Humanos 2022". http://oddh.iscsp.ulisboa.pt/index.php/pt/2013-04-24-18-50-23/publicacoes-dos-investigadores-oddh/item/600-relatorio-oddh-2022

OECD. 2020. “Private Schools and School Choice.” OECD iLibrary. October 8, 2020. https://www.oecd-ilibrary.org/education/pisa-2018-results-volume-v_14bbef20-en

OECD. 2023. “Education at a Glance.” OECD iLibrary. 2023. https://www.oecd-ilibrary.org/education/education-at-a-glance-2023_e13bef63-en

OECD. n.d.a. “Education Resources – Public Spending on Education - OECD Data.” OECD.Data. Accessed October 21, 2023. https://data.oecd.org/eduresource/education-spending.htm#indicator-chart

OECD. n.d.b. “Population Data.” OECD.Stat. Accessed October 21, 2023. https://stats.oecd.org/Index.aspx?DataSetCode=EDU_DEM

OECD. n.d.c. “Students - Enrolment Rate in Early Childhood Education - OECD Data.” OECD.Data. Accessed October 21, 2023. https://data.oecd.org/students/enrolment-rate-in-early-childhood-education.htm#indicator-chart

Paula Frassineti Escola Superior de Educação. 2023. “PROPINAS 23/24”. April 3, 2023. https://esepf.pt/precario/

Pereira, Filomena, Alexandra Crespo, Ana Rosa Trindade, Ariana Cosme, Fernanda Croca, Graça Breia, Graça Franco, et al. 2018. Para Uma Educação Inclusiva: Manual de Apoio à Prática. Edited by Ministério da Educação. 2018. https://www.dge.mec.pt/sites/default/files/EEspecial/manual_de_apoio_a_pratica.pdf

PORDATA. 2023. “Docentes Em Exercício Nos Ensinos Pré-Escolar, Básico e Secundário Público: Total E Por Nível de Ensino.” Pordata - Estatísticas Sobre Portugal e Europa. June 30, 2023. https://www.pordata.pt/portugal/docentes+em+exercicio+nos+ensinos+pre+escolar++basico+e+secundario+publico+total+e+por+nivel+de+ensino-241

Pordata. n.d. “Despesas Das Administrações Públicas Em Educação.” Pordata. Accessed October 18, 2023. https://www.pordata.pt/portugal/despesas+das+administracoes+publicas+em+educacao-866

Portaria n.º 212/2009. D.R. I Série 37(09-02-03) 1261-1264. https://diariodarepublica.pt/dr/detalhe/portaria/212-2009-602028

Portaria n.º 350/2008. D.R. I Série. 86(08-05-05) 2478-2479. https://diariodarepublica.pt/dr/analise-juridica/portaria/350-2008-249531

Qvortrup, Ane, and Lars Qvortrup. 1970. “Inclusion: Dimensions of Inclusion in Education.” University of Southern Denmark. International Journal of Inclusive Education. January 1, 1970. https://portal.findresearcher.sdu.dk/en/publications/inclusion-dimensions-of-inclusion-in-education

Reis, Catarina. 2019. “Pelo Menos 30% Das Escolas Admitem Não Estar a Aplicar Lei Sobre Educação Inclusiva.” Diário de Notícias. December 5, 2019. https://www.dn.pt/vida-e-futuro/pelo-menos-30-das-escolas-admitem-nao-estar-a-aplicar-lei-sobre-educacao-inclusiva-11586156.html

Ribeiro, Marta Sofia, and Tiago Sousa. 2022. “Três Anos de Regime de Educação Inclusiva: ‘A Inclusão É Um Processo, Não Acontece Por Decreto.’” JPN. JPN. January 6, 2022. https://www.jpn.up.pt/2022/01/06/tres-anos-de-regime-de-educacao-inclusiva-a-inclusao-e-um-processo-nao-acontece-por-decreto/

Santos, João. 2019. “Redução de Alunos Por Turma.” Incluso. May 8, 2019. https://inclusaoaquilino.blogspot.com/2019/05/reducao-de-alunos-por-turma.html

Scotland, Education. 2019. “Call Scotland: The Use of Inclusive Digital Technologies to Raise Attainment for Learners Who Require Additional Support (Additional Support Needs).” Resources | National Improvement Hub. February 4, 2019. https://education.gov.scot/resources/call-scotland/

Sindicato dos Professores do Norte 2023. “Carreira docente / Vencimentos 2023”. Sindicato dos Professores do Norte. 2023. https://www.spn.pt/Media/Default/Info/10000/400/70/1/SPN%20%E2%80%94%20Vencimentos%202023.pdf

Sindicato dos Professores do Norte. 2023a. “*Tabelas de remunerações dos docentes da educação pré-escolar e dos ensinos básico e secundário.*” Sindicato dos Professores do Norte. Accessed November 04, 2023. https://www.spn.pt/Media/Default/Info/10000/400/70/1/SPN%20%E2%80%94%20Vencimentos%202023.pdf

Sindicato dos Professores do Norte. 2023b. “*Concurso Externo Vinculação Dinâmica 2023/2024.*” Sindicato dos Professores do Norte. Accessed November 04, 2023. https://www.spn.pt/Media/Default/Info/56000/300/40/6/SPN%20FAQ%20%E2%80%94%20Concurso%20externo%20vincula%C3%A7%C3%A3o%20din%C3%A2mica%202023.pdf

Sinerconsult. December 2023. “Apoio a crianças com necessidades educativas especiais” https://www.sinerconsult.pt/siner-advanced/curso-apoio-a-criancas-com-necessidades-educativas-especiais/

SNIPI. n.d. “Quem Somos.” SNIPI. Accessed November 5, 2023. https://snipi.gov.pt/quem-somos#no-back

SNS 24. n.d. “Atestado Médico de Incapacidade Multiuso.” SNS24. Accessed October 18, 2023. https://www.sns24.gov.pt/servico/atestado-medico-de-incapacidade-multiuso/#o-que-e-o-atestado-medico-de-incapacidade-multiuso

SPGL. 2020. “Dispensas para formação.” SPGL. March 6, 2020. https://www.spgl.pt/dispensas-para-formacao

Statista. 2023. “Topic: Gross Domestic Product (GDP) Worldwide.” Economy. 2023. https://www.statista.com/topics/7747/gross-domestic-product-gdp-worldwide/#topicOverview

Torben Næsby, T. (2014). Kvalitet i dagtilbud: Om pædagogisk kvalitet og udvikling af pædagogens professionelle komeptencer. Aalborg Universitetsforlag. (Ph.d.-serien for Det Samfundsvidenskabelige Fakultet, Aalborg Universitet). DOI: 10.5278/vbn.phd.socsci.00019

Training House. 2023. “Necessidades Educativas Especiais |40h” December, 2023. https://traininghouse.pt/cursos/necessidades-educativas-especiais-40h/

Universidade de Lisboa. 2021. Inquérito à empregabilidade dos diplomados da ULisboa no ano 2018/19. Lisboa: Universidade de Lisboa. https://www.ulisboa.pt/sites/ulisboa.pt/files/basicpage/docs/sintese_empregabilidade_2021.pdf

Valente, Cynthia. 2023a. “Alunos do Ensino Especial sem acessos aos apoios previstos.” Diário de Notícias. April 30, 2023. https://www.dn.pt/sociedade/alunos-do-ensino-especial-sem-acesso-aos-apoios-previstos-16267815.html

Valente, Cynthia. 2023b. “Ano letivo começa com milhares de alunos sem professor e centenas de aposentações.” Diário de Notícias. September 12, 2023.

https://www.dn.pt/sociedade/ano-letivo-comeca-com-milhares-de-alunos-sem-professor-e-centenas-de-aposentacoes--17006116.html

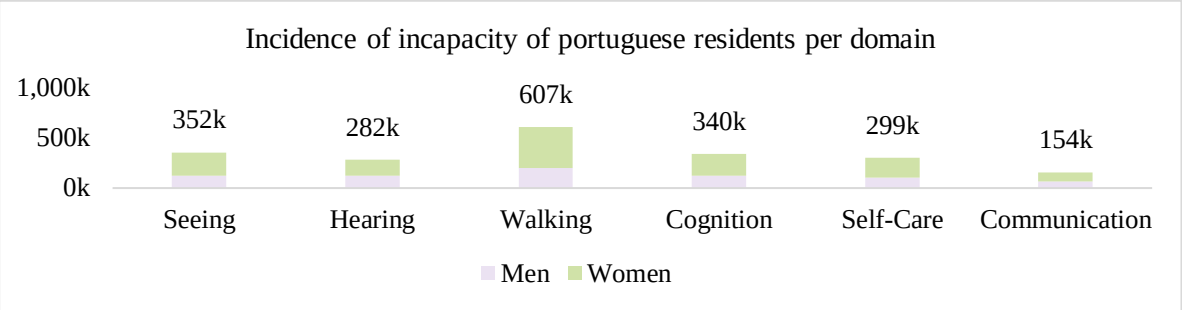
Washington Group on Disability Statistics. October 2022. “The Washington Group Short Set on Functioning (WG-SS)”. https://www.washingtongroup-disability.com/fileadmin/uploads/wg/Washington_Group_Questionnaire__1_-_WG_Short_Set_on_Functioning__October_2022_.pdf

World Statistics. n.d. “International Statistics.” World Statistics. Accessed October 20, 2023. https://world-statistics.org/index-res.php?code=SE.PRM.ENRL%3Fname#top-result

Young, Simon N. 2008. “The Neurobiology of Human Social Behaviour: An Important but Neglected Topic.” Journal of Psychiatry & Neuroscience : JPN. U.S. National Library of Medicine. September 2008. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2527715/

8. Appendixes

Appendix 1 – Incidence of incapacity of Portuguese residents, per domain, in 2021



Legend: The most prevalent difficulty is in the domain of walking.

Appendix 2 – Number of SSEN enrolled in public schools in the top OECD countries

Students with SEN Enrolled in Public Schools				
Top OECD Countries	**Total Number of Students**	**% Enrolled in Public Schools**	**Total Number of Students Enrolled in Public Schools**	**Total Number of Students with SEN**
Luxembourg	106,180	82.3	87,386	**6,105**
United States	56,408,920	93.0	52,460,296	**3,665,243**
Denmark	1,166,783	72.0	840,083	**58,694**
Canada	6,116,521	91.8	5,614,966	**392,301**
Austria	1,269,351	87.6	1,111,952	**77,689**
Germany	12,132,123	96.1	11,658,971	**814,577**
Sweden	2,169,850	80.7	1,751,069	**122,342**
Netherlands	3,279,163	36.5	1,196,895	**83,623**
Belgium	2,390,381	81.9	1,957,722	**136,780**
Ireland	1,203,337	81.9	985,533	**68,856**
United Kingdom	13,465,969	34.0	4,578,429	**319,881**
New Zealand	1,088,585	94.2	1,025,447	**71,645**
Spain	7,739,658	81.9	6,338,780	**442,871**
Portugal	1,490,507	75.2	1,120,243	**78,268**

Appendix 3 – Total number of students enrolled in pre-school in the top OECD countries

Total Number of Students Enrolled in Pre-school							
	Total Population Size per Age Group			**Enrollment Rate in Pre-school per Age Group**			
Top OECD Countries	**3 Years Old**	**4 Years Old**	**5 Years Old**	**3 Years Old**	**4 Years Old**	**5 Years Old**	**Total**
Luxembourg	6,653	6,724	6,837	71.41%	97.93%	98.80%	**18,091**
United States	3,989,074	4,036,943	4,045,023	40.00%	40.00%	84.00%	**6,608,226**
Denmark	62,697	59,661	58,993	96.43%	98.02%	98.32%	**176,942**
Canada	393,930	399,957	403,705	77.05%	89.89%	95.76%	**1,049,644**
Austria	89,726	87,091	86,533	77.85%	93.93%	97.75%	**236,243**
Germany	807,816	782,143	771,479	90.02%	94.55%	96.57%	**2,211,721**
Sweden	124,681	122,848	124,569	93.90%	95.17%	95.79%	**353,313**
Netherlands	175,319	174,787	179,581	80.72%	95.11%	98.96%	**485,476**
Belgium	124,527	126,012	129,536	97.87%	98.27%	98.64%	**373,477**
Ireland	63,704	63,564	64,874	95.63%	100.00%	100.00%	**189,357**
United Kingdom	793,405	805,541	808,852	100.00%	100.00%	100.00%	**2,407,798**
New Zealand	62,620	62,960	63,940	81.28%	86.93%	97.72%	**168,110**
Spain	428,395	440,044	447,314	96.19%	97.47%	98.02%	**1,279,458**

Appendix 4 – Investment in special education in the top OECD countries

Investment in Special Education				
Top OECD Countries	**Investment in Education (% of GDP 2020)**	**GDP 2021 Billion Euros**	**Investment in Education Billion Euros**	**Investment in Special Education in Euros**
Luxembourg	3.3	84.25	2.81	**120,681,078.06**
United States	3.5	23,315.08	811.36	**34,795,906,269.64**
Denmark	4.7	387.05	18.20	**780,652,259.20**
Canada	4.2	2,026.90	85.21	**3,654,322,037.65**
Austria	3.7	535.82	19.71	**845,389,082.54**
Germany	3.9	4,913.17	192.45	**8,253,287,957.84**
Sweden	5.8	629.08	36.65	**1,571,769,620.79**
Netherlands	3.5	1,130.68	39.10	**1,676,789,558.87**
Belgium	4.9	689.48	33.78	**1,448,869,151.76**
Ireland	2.2	546.18	12.13	**520,000,794.79**
United Kingdom	3.9	3,375.53	132.96	**5,702,165,821.63**
New Zealand	4.2	245.36	10.31	**441,948,956.89**
Spain	3.9	1,952.70	76.44	**3,278,025,858.61**
Portugal	-	380.60	7.02	**301,256,503.00**

Appendix 5 – Total investment per SSEN in the top OECD countries

Investment per Students with SEN			
Top OECD Countries	**Investment In Standard Education**	**Investment in Special Education**	**Total**
Portugal	6,001.72	3,849.04	**9,850.76**
New Zealand	9,618.57	6,168.60	**15,787.18**
Spain	11,541.40	7,401.75	**18,943.16**
Ireland	11,775.65	7,551.98	**19,327.63**
Canada	14,524.84	9,315.10	**23,839.95**
United States	14,802.98	9,493.48	**24,296.46**
Germany	15,798.60	10,131.99	**25,930.59**
Belgium	16,516.95	10,592.69	**27,109.64**
Austria	16,967.68	10,881.75	**27,849.43**
Sweden	20,032.61	12,847.35	**32,879.96**
Denmark	20,738.96	13,300.35	**34,039.32**
United Kingdom	27,795.54	17,825.89	**45,621.44**
Luxembourg	30,821.20	19,766.31	**50,587.51**
Netherlands	31,266.16	20,051.68	**51,317.84**

Appendix 6 - Inclusion Matrix, Denmark

The Inclusion Matrix

		Types of inclusion		
		Physical inclusion	Social inclusion	Mental inclusion
Communities	Formal, Professionally managed learning and development communities			
	Adult-child communities (interpersonal communities)			
	Informal, adult organized communities (relating to the institution)			
	Self-organized communities (relating to the institution)			
	Child-child communities (interpersonal communities)			

Appendix 7 – Best practices sorted out into the three Pyramid Framework parameters

Best Practices sorted out into the three Pyramid Framework parameters.		
SOCIAL INCLUSION	**INCLUSIVE EDUCATION**	**PROFESSIONAL INCLUSION**
Mainstreaming as predominant model. Social skills included in curriculum. Social inclusion plays a role in the overall well-being of the child (inclusion matrix concept)	Training for inclusion included in curriculum of every teacher's formation. Special education teachers receive training on how to support regular teachers. E-learning platforms Digital tools (Assistive Technology) Personal plan for every SwD Allowance to stay longer than 18yo in school. Multidisciplinary approach combining different specialists.	Support during school time (career guidance) Systems to support transition to adulthood

Appendix 8 – Tiers of investment per SSEN and the corresponding countries and best practices

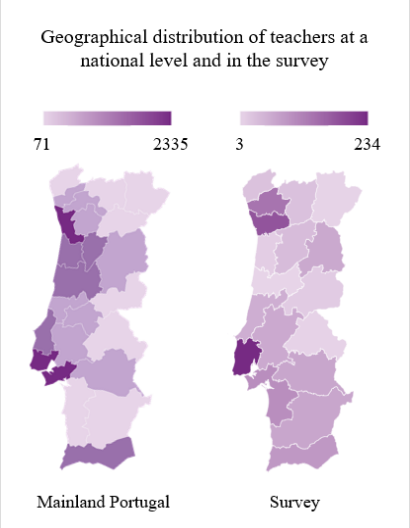
Investment per SSEN	**Countries**	**Best Practices based on the conference on inclusive education held by the French Ministry of Education**
Tier I: ≥30,000€	· Netherlands · Luxembourg · United Kingdom · Denmark · Sweden	Social Inclusion · **Mainstreaming** as predominant model · Social Inclusion plays a role in the overall well-being of the child (**inclusion matrix concept**) Inclusive Education · Digital tools (Assistive Technology, online platforms Professional Inclusion · Systems to support **transition to adulthood**
Tier II: 20,000€ > x > 30,000	· Austria · Belgium · Germany · USA · Canada	Social Inclusion · **Mainstreaming** as predominant model Inclusive Education · Training for inclusion included in curriculum of every teacher's formation · Special education teachers receive training on how to support regular teachers · Multidisciplinary approach combining different specialists
Tier III: 10,000€ > x > 20,000€	· Ireland · Spain · New Zealand	Social Inclusion · **Mainstreaming** as predominant model · **Social skills** included in curriculum Inclusive Education · **Personal plan** for every student with SEN · Allowance to **stay longer than 18yo in school**
Tier IIII: ≤10,000€	· Portugal	-

Appendix 9 – Survey made to teachers: characterization of sample used.

Questions	Answers		Number of Respondents	Percentage of total
"Which gender do you identify with?"	Female		994	84.7%
	Male		177	15.1%
	I would rather not answer		3	0.3%
	Total		1174	100.0%
"What age group do you belong to?"	18-24		3	0.3%
	25-34		42	3.6%
	35-44		211	18.0%
	45-54		475	40.5%
	55-64		408	34.8%
	65 +		35	3.0%
	Total		1174	100.0%
"In which distric or autonomous region do you work?"	Aveiro		12	1.0%
	Beja		66	5.6%
	Braga		133	11.3%
	Bragança		5	0.4%
	Castelo Branco		15	1.3%
	Coimbra		3	0.3%
	Évora		66	5.6%
	Faro		85	7.2%
	Guarda		62	5.3%
	Leiria		54	4.6%
	Lisboa		234	19.9%
	Portalegre		10	0.9%
	Porto		177	15.1%
	Santarém		61	5.2%
	Setúbal		98	8.3%
	Viana do Castelo		28	2.4%
	Vila Real		29	2.5%
	Viseu		36	3.1%
	Total		1174	100.00%
"What education cycle do you work with?"*	Preschool		233	14.8%
	1st Cycle		297	18.8%
	2nd Cycle		257	16.3%
	3rd Cycle		430	27.2%
	Secundary		362	22.9%
	Total		1579	100.0%
"Do you currently work as a special education teacher?	Yes - 910		166	14.1%
	Yes - 920		4	0.3%
	Yes - 930		2	0.2%
	No		1002	85.3%
	Total		1174	100.0%
"Do you teach in a public or in a private school?"	Public		1002	85.3%
	Private		129	11.0%
	Public and Private		29	2.5%
	Other	Professional School	2	0.2%
		IPSS	10	0.9%
		Blank	2	0.2%
	Total		1174	100.0%

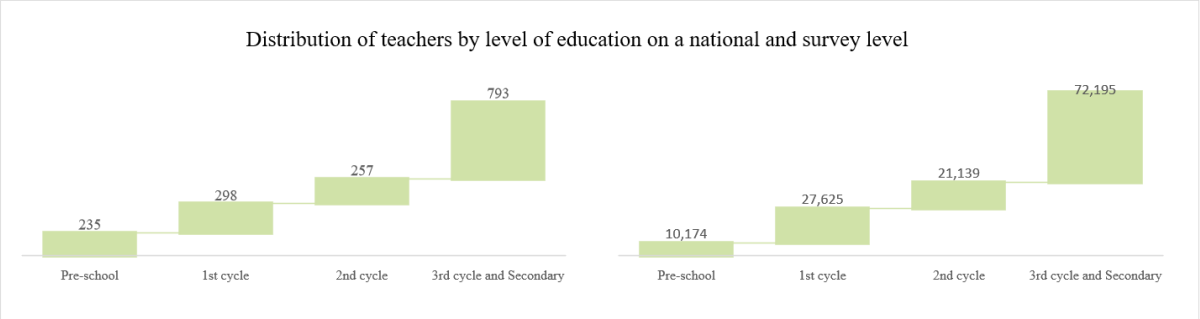
**Note:* this number exceeds the total sample one since there might be an overlap, caused by teachers who work with different levels of education

Appendix 10 – Geographical distribution of teachers at a national level and in the survey



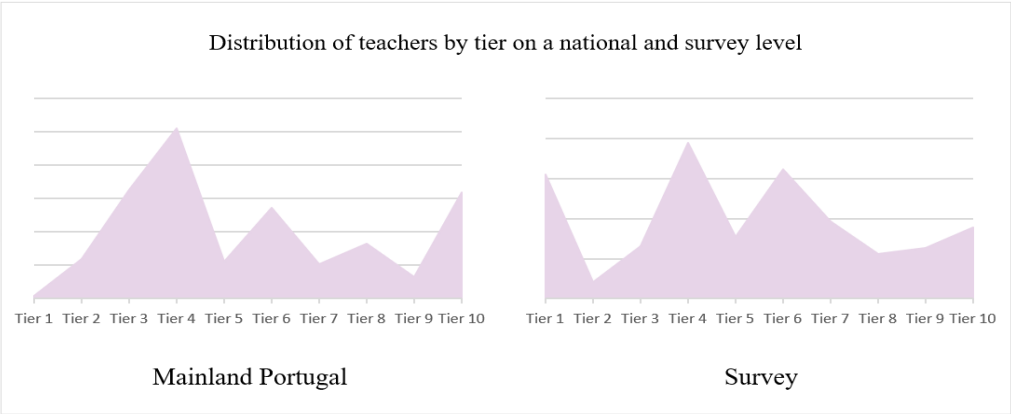
Legend: The distribution is homogeneous between national and survey figures.

Appendix 11 – Distribution of teachers by level of education on a national and survey level



Legend: The third cycle and secondary school are the levels of education with the most SET.

Appendix 12 - Distribution of teachers by tier on a national and survey level



Legend: The tiers with the highest number of teachers are the 4th and 6th.

Appendix 13– Survey made to teachers: question block aimed at evaluating training within special education teachers mostly

Questions	Answers	Number of Respondents	Percentage of total
Do you know that you can meet the training requirment for career advancement through a specialized course (min 250h) in special education?	Yes	453	39%
	No	365	31%
	Blank	356	30%
	Total	1174	100%
During your specialization course in special education, did you continue working? (Only for SET)	Yes	152	88%
	No	7	4%
	Blank	13	8%
	Total	172	100%
Did you have any benefits while working? (To those who answered "Yes" to the previous question)	Yes, Student Worker Bylaws	18	12%
	No	134	88%
	Blank	0	0
	Total	152	100%
Which option best fits your reality? (To those who answered "No")	Sabbatical Leave	1	14%
	Unemployment	3	43%
	Blank	3	43%
	Total	7	100%

Appendix 14 – Average age and length of service of teachers by grade in mainland Portugal in the 2020/2021 school year

	Years expected in each tier	Age	Complete years of service
Tier 1	4	45.4	15.7
Tier 2	4	43.6	17.3
Tier 3	4	45.4	20.5
Tier 4	4	49.9	25.2
Tier 5	2	52.4	28.2
Tier 6	4	55	31
Tier 7	4	56.2	32.7
Tier 8	4	57.5	34.2
Tier 9	4	59.6	36.6
Tier 10	-	60.7	38.6

Appendix 9 – Survey made to teachers: question block aimed at evaluating Career Progression within Public School teachers

Questions	Answers		Number of Respondents	Percentage of total
"What tier are you currently in?"	Tier 1		149	15%
	Tier 2		19	2%
	Tier 3		60	6%
	Tier 4		191	19%
	Tier 5		76	8%
	Tier 6		159	16%
	Tier 7		95	9%
	Tier 8		53	5%
	Tier 9		63	6%
	Tier 10		88	9%
	Blank		49	5%
	Total		1002	100%
"How many years of experience do you have?"	0-2		21	2%
	3-5		22	2%
	6-10		33	3%
	11-20		150	15%
	21-30		380	38%
	+30		396	40%
	Blank		0	0
	Total		1002	100%
"How do you rate compliance with the requirements for career progression?"	Poor Assesment	Unfair Process	565	56%
		Difficult to Comply	125	12%
		Dubious Information	42	4%
	Good Assessment	Easy to Comply	35	3%
		Fair Process	2	0%
	Blank		233	23%
	Total		1002	100%
"Have you always progressed through the tiers in your career?"	Yes		394	39%
	No		454	45%
	Blank		154	15%
	Total		1002	100%

Appendix 16 – Survey made to teachers: cross analysis regarding Career Progression within Public School teachers

Crossed Questions	Answers	Always moved up	Hasn't always moved up	Total that move up
"Have you always progressed through the tiers in your career?" + "What tier are you currently in?"	Tier 1	27	84	5%
	Tier 2	6	8	1%
	Tier 3	24	22	4%
	Tier 4	71	86	12%
	Tier 5	31	34	5%
	Tier 6	75	63	13%
	Tier 7	46	38	8%
	Tier 8	25	24	4%
	Tier 9	40	14	7%
	Tier 10	49	32	8%
	Blank		203	34%
	Total		1002	100%

Appendix 10 – Survey made to teachers: question block aimed at evaluating the lack of resources.

Questions	Answers		Number of Respondents	Percentage of total
"How do you perceive the amount of students with SEN that you are responsible for?"	Regular public school teachers	Adequate number of students	436	50%
		Excessive number of students - I am responsible for too many SSEN	386	44%
		Insufficient number of students - I have space/time to teach more SSEN	49	6%
		(Blank)	1	0%
		Total	872	100%
	Public school SET	Adequate number of students	56	35%
		Excessive number of students - I am responsible for too many SSEN	102	64%
		Insufficient number of students - I have space/time to teach more SSEN	1	1%
		Total	159	100%

Appendix 18 – Survey made to teachers: question block aimed at evaluating the system effectiveness

Questions	Answers	Number of Respondents	Percentage of total
"How would you classify the current system's response to the needs of SSEN?"	0	103	9.99%
	1	260	25.22%
	2	273	26.48%
	3	295	28.61%
	4	70	6.79%
	5	30	2.91%
	Total	1031	100%
	Average	2.06	-
"Do you consider that is created the space for an effective interaction between the intervenients (parents, teachers, medica team, etc.) of the SSEN life?"	No	624	60.52%
	Yes	407	39.48%
	Total	1031	100%
"Do you feel that SSEN leave their cycle properly qualified, considering their reality?"	No	822	79.73%
	I never had a SSEN	12	1.16%
	Yes	197	19.11%
	Total	1031	100%

Appendix 19 – Regular Teachers by NUTS III and respective weights

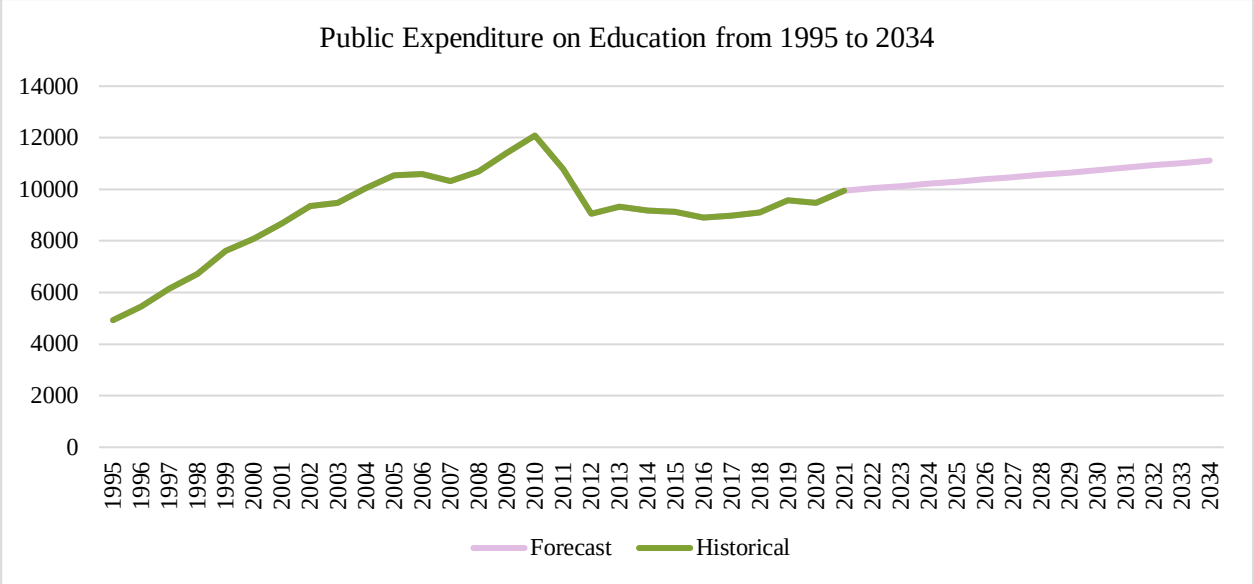
NUTS II (&III)	No. Regular Teachers in the Public system	Weight
Norte	**44 477**	**36,8%**
Alto Minho	3 014	2,5%
Alto Tâmega	1 262	1,0%
A.M Porto	19 913	16,5%
Ave	4 940	4,1%
Cávado	5 347	4,4%
Douro	2 819	2,3%
Tâmega e Sousa	5 532	4,6%
Terras de Trás-os-Montes	1 650	1,4%

Centro	**27 494**	**22,8%**
Beira Baixa	969	0,8%
Beirras e Serra da Estrela	2 743	2,3%
Médio Tejo	2 876	2,4%
Oeste	4 184	3,5%
Região de Aveiro	4 416	3,7%
Região de Coimbra	5 165	4,3%
Região de Leiria	3 296	2,7%
Viseu Dão Lafões	3 845	3,2%
A.M. Lisboa	**32 426**	**26,8%**
A.M Lisboa	32 426	26,8%
Alentejo	**9 809**	**8,1%**
Alentejo Central	2 131	1,8%
Alentejo Litoral	1 178	1,0%
Alto Alentejo	1 602	1,3%
Baixo Alentejo	1 767	1,5%
Lezíria do Tejo	3 131	2,6%
Algarve	**6 636**	**5,5%**
Algarve	6 636	5,5%
Total	120 842	100,0%

Appendix 20 – Survey made to teachers: question block aimed at evaluating the qualifications of regular teachers

Questions	Answers	Number of Respondents	Percentage of total
"Do you feel your base training gave you the necessary competencies to deal with SSEN?" (Only for regular teachers)	No	761	87%
	Yes	111	13%
	Total	872	100%
Have you done any extra training during your career to develope educational skills to deal with SSEN? (Only for regular teachers)	No	355	41%
	Yes	517	59%
	Total	872	100%
"Do you feel that that trainging gave you the skills you were looking for to deal with SSEN?" (Only for regular teachers who answeres "Yes" to the previous question)	No	237	46%
	Yes	280	54%
	Total	517	100%
"Would you be interested in specializing more in the inclusion of SSEN?" (Only for regular teachers)	No	464	53%
	Yes	408	47%
	Total	872	100%
"Why have you not done it yet?" (To those who answered "Yes" to the previous question)	Personal reason	61	8%
	I am not informed	28	4%
	There are no incentives to training (example: workload reduction)	189	26%
	I do not see monetary incentives in doing it	71	10%
	I do not see career progression incentives in doing it	86	12%
	I do not have time (professional) to dedicate to a new training	115	16%
	I do not have time (personal) to dedicate to a new training	112	15%
	I will do it in a close future	27	4%
	Other	43	6%
	Total	732	100%
"Why?" (To those who answered "No" to the "Would you be interested in specializing more in the inclusion of SSEN? " question)	Personal reason	104	13%
	I am not informed	8	1%
	There are no incentives to training (example: workload reduction)	159	20%
	I do not see monetary incentives in doing it	68	9%
	I do not see career progression incentives in doing it	89	11%
	I do not have time (professional) to dedicate to a new training	124	16%
	I do not have time (personal) to dedicate to a new training	99	12%
	I feel like my specialization is enough	48	6%
	Other	95	12%
	Total	794	100%

Appendix 21– Public expenditure on education from 1995 to 2034



Legend: Since 2014, the year marking the end of the external intervention (Troika) in Portugal, the expenditure on education has been gradually recovering.

Appendix 22 – Number of SSEN and special education expenditure from 2020/2021 to 2033/2034

Number of SSEN and special education expenditure from 2020/21 to 2033/34														
Years	2020/21	2021/22	2022/23	2023/24	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**
Number of SSEN	78,268	76,909	75,769	74,590	73,559	72,637	71,774	71,029	70,359	69,788	69,367	69036	68793	68638
growth rate		*-1.74%*	*-1.48%*	*-1.56%*	*-1.38%*	*-1.25%*	*-1.19%*	*-1.04%*	*-0.94%*	*-0.81%*	*-0.60%*	*-0.48%*	*-0.35%*	*-0.23%*
Special Education Expenditure (in millions)	301.25 €	303.82 €	306.41 €	309.01 €	311.65 €	314.30 €	316.98 €	319.67 €	322.40 €	325.14 €	327.91 €	330.70 €	333.52 €	336.36 €

Appendix 23 – Investment in special education per SSEN

Investment in Special Education per Student with SEN										
Years	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**
Business-as-usual Scenario	4,237 €	4,327 €	4,416 €	4,501 €	4,582 €	4,659 €	4,727 €	4,790 €	4,848 €	4,900 €
Solution 2 Cost	6 €	8 €	8 €	8 €	8 €	9 €	50 €			
Solution 1 Cost w/ Realistic Scenario	110 €	224 €	341 €	460 €	594 €	728 €	863 €	879 €	906 €	931 €
Solution 1 Extra Cost - Optimistic Scenario	123 €	427 €	738 €	1,055 €	1,392 €	1,751 €	2,111 €	2,154 €	2,207 €	2,275 €
Solution 1 Cost w/ Ambitious Scenario	123 €	612 €	1,112 €	1,622 €	2,155 €	2,732 €	3,311 €	3,380 €	3,458 €	3,567 €
Total Cost w/ Realistic	**4,353 €**	**4,560 €**	**4,766 €**	**4,969 €**	**5,184 €**	**5,396 €**	**5,640 €**	**5,670 €**	**5,754 €**	**5,832 €**
Total Cost w/ Optimistic	**4,366 €**	**4,762 €**	**5,163 €**	**5,564 €**	**5,983 €**	**6,419 €**	**6,888 €**	**6,944 €**	**7,055 €**	**7,175 €**
Total Cost w/ Ambitious	**4,366 €**	**4,947 €**	**5,537 €**	**6,131 €**	**6,745 €**	**7,399 €**	**8,089 €**	**8,171 €**	**8,306 €**	**8,467 €**

Appendix 12 – Total investment in education per student with SEN

Total Investment per Student with SEN										
Years	**2024/25**	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**
Investment in Standard Education	6,607 €	6,747 €	6,887 €	7,018 €	7,145 €	7,265 €	7,371 €	7,470 €	7,560 €	7,642 €
Total Investment w/ Business-as-usual Scenario	10,843 €	11,074 €	11,303 €	11,519 €	11,727 €	11,924 €	12,099 €	12,260 €	12,408 €	12,542 €
Total Investment w/ Realistic Scenario	10,960 €	11,307 €	11,652 €	11,987 €	12,330 €	12,661 €	13,012 €	13,140 €	13,314 €	13,473 €
Investment in Special Education w/ Optimistic Scenario	10,972 €	11,510 €	12,050 €	12,582 €	13,128 €	13,684 €	14,260 €	14,414 €	14,615 €	14,817 €
Investment in Special Education w/ Ambitious Scenario	10,972 €	11,694 €	12,424 €	13,149 €	13,890 €	14,664 €	15,460 €	15,640 €	15,866 €	16,109 €