THE IMPACTS OF DEVELOPMENTAL DYSLEXIA ON THE PRACTICE OF SECOND LANGUAGE DYSLEXIC TEACHERS

OS IMPACTOS DA DISLEXIA DO DESENVOLVIMENTO NA PRÁTICADOCENTE DE PROFESSORES DE LÍNGUA ESTRANGEIRA COM DISLEXIA

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ABSTRACT: Dyslexia is a learning disorder and a neurobiological condition, which means it affects areas of the brain that process language. Dyslexic teachers carry the struggles caused by dyslexia with them to the workplace. Despite the fact that dyslexia may not be considered a positive characteristic, dyslexic teachers show more empathy towards their pupils with learning disabilities and make use of creative coping strategies, which help them overcome their own learning disability in the classroom. Taking these aspects into consideration, the present article was developed with the purpose of throwing light on dyslexic teachers and the impacts of dyslexia in their practice. The aims of this theoretical study were to (1) to define dyslexia and present an overview on this learning disability, (2) to investigate through bibliographical research how dyslexia affects second language teachers, their classroom practice and workplace, (3) to present strategies teachers can use to cope with dyslexia and (4) to design a leaflet to be used as a guideline for dyslexic teachers.
Keywords: Dyslexia; dyslexic teachers; foreign language learning; learning disabilities.

RESUMO: A dislexia é um transtorno de aprendizagem (TA) e uma condição neurobiológica, o que significa que ela afeta áreas do cérebro que processam a linguagem. Professores disléxicos levam consigo as dificuldades causadas pela dislexia para o ambiente de trabalho. Embora a dislexia possa não ser considerada uma característica positiva, professores disléxicos demonstram mais empatia para com seus alunos que possuem transtornos de aprendizagem e também fazem uso de estratégias criativas para superar o seu próprio transtorno. Levando esses aspectos em consideração, o presente trabalho foi desenvolvido com o intuito de pesquisar os impactos da dislexia na prática de professores disléxicos. Ademais, os objetivos desse artigo foram (1) definir a dislexia, apresentar uma visão geral desse TA, (2) investigar, através de pesquisa bibliográfica demonstrar, como a dislexia afeta professores de uma segunda língua, suas práticas em sala de aula e local de trabalho (3) apresentar algumas estratégias que professores podem utilizar para lidar com a dislexia (4) criar um panfleto para servir como um guia de orientações para professores com dislexia.
Palavras-chave: Dislexia; professores disléxicos; aprendizado de línguas estrangeiras; transtornos de aprendizagem.

1 Introduction

Reading is undoubtedly an extraordinary skill which only humans are privileged to have, although it is not a natural skill to be acquired. It is known that learning to read is different from learning to speak. All languages have a spoken form, but not all languages have a written version (LENT, 2010).

To assume that reading is a natural and easy process is simply untrue. Unfortunately, a great number of children and adults, who are extremely intelligent, struggle significantly when it comes to learning how to read. When this reading difficulty persists, it is crucial to look for professional help. Thankfully, nowadays it has become possible to identify whether a person suffers from dyslexia from an early age.

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Dyslexia is a neurobiological condition most commonly associated with the learning skills of reading and writing, due to problems identifying speech sounds and learning how they relate to letters and words (decoding). Although it may become more evident when a child starts schooling, it occurs since the child is born, since it has neurobiological roots and affects areas of the brain that process language. (DEHAENE, 2012; FAY, 2016).

While the topic of students with dyslexia has been more openly discussed, there is another side to this story: teachers with dyslexia. When I came across the information that there are several teachers who struggle with dyslexia as I do, I felt the urge to study about learning disabilities and how they can affect the lives of second language[35] teachers. Undoubtedly, dyslexia creates suffering for those affected by it. However, most teachers still keep it a secret, since teachers are somehow seen as "models of perfection" and the "source of knowledge". Although teaching and dyslexia may not be commonly associated, it may pointless to turn a blind eye to the matter. It is about time that dyslexic teachers gain a voice.

While reading the article "Supporting Dyslexic Trainees and Teachers" written by the School of Education and Enabling Services at the University of Southampton[36], we learned that there is a law in the United Kingdom called the Equality Act which supports teachers and trainees who deal with their disabilities in the classroom. The law recognizes dyslexia as a disability if it has "a substantial and long-term adverse effect on normal day-to-day activities". Launched in 2010, the law "emphasizes the need for organizations to be proactive in meeting the needs of both disabled pupils and staff"[37]. Even though there is the Brazilian Dyslexia Association, it only offers support to students with this disability. Dyslexic teachers struggle as well and are not taken into consideration. Hopefully, this paper may help teachers who suffer from this learning disability to see their condition as an empowering tool instead of an impairment. Furthermore, hopefully teachers who are somehow ashamed of their condition due to self-criticism and fear of prejudice may be able to tackle the situation more openly, leading to both teachers and pupils to achieve better results in the long run.

Taking these aspects into consideration, this paper aims to analyze, through theoretical investigation, the impacts of dyslexia on teachers of English as a second language. As for the objectives, we intend to: (1) to define dyslexia and present an overview on this learning disability, (2) to investigate through bibliographical research how dyslexia affects second language teachers, their classroom practice and workplace, (3) to present strategies teachers can use to cope with dyslexia and (4) to design a leaflet to be used as a guideline for dyslexic teachers. The present paper is divided in five sections. The first section presents a brief overview of dyslexia, its definition, assessment, and diagnosis. The second section is about dyslexia and its impacts on second language teachers' schooling and practice. The third section is about dyslexia in the workplace, followed by section four, about dyslexic teachers and their practice skills, in which the authors present strategies to cope with dyslexia. The fifth section presents the leaflet designed as a guideline for dyslexic teachers.

2 A brief overview of dyslexia: definition, assessment, and diagnosis

Dyslexia is a learning disability which affects both native (L1) speakers and foreign language (L2) learners. There are many definitions for this condition. According to the definition adopted

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[35] Teaching English as a Foreign Language (EFL) typically takes place in a foreign country, usually with students from the same country. In contrast, English as a Second Language (ESL) classes take place in an English-speaking country, with students from all different backgrounds. In the present paper, we will be using ESL and EFL interchangeably.

[36] Supporting Dyslexic Trainees and Teachers. Available on: <https://www.patoss-dyslexia.org/write/MediaUploads/Resources/Supportingdyslexictraineesteachers.pdf >

[37] The British Dyslexia Association - The Equality Act 2010. Available on: <https://www.bdadyslexia.org.uk/employer/legislation>
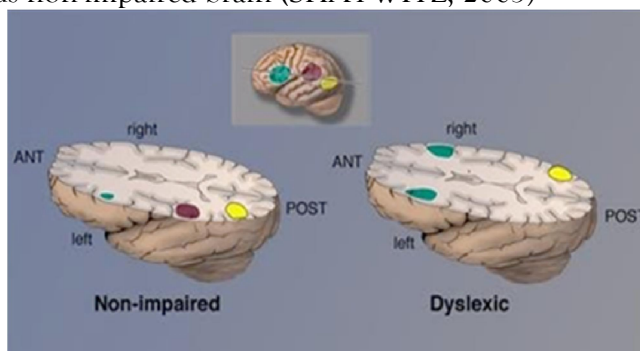
by the International Dyslexia Association in 2002, "Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities."[38] These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondaryconsequences may include problems in reading comprehension, and reduced reading experience that can impede the growth of vocabulary and background knowledge.

The National Institute of Child Health and Human Development conceptualizes dyslexia as a specific learning disability of neurobiological origins instead of a cultural phenomenon (BRENS; HICKMAN, 2014, p. 2). Miles (1993) conceptualizes dyslexia as a spectrum or range of difficulties. Therefore, a dyslexic person may struggle with saying long words, remembering instructions and appointments, copying letters or numbers accurately, and filling things in the correct order (MOODY, 2004). People with this learning disability may also have difficulty when transmitting information clearly to others in speech or writing. Even though these people know what they want to say, they may easily get jumbled.

Due to the advent of functional magnetic resonance imaging or functional (fMRI)[39], it is possible to see exactly which part of the brain is affected and how it is affected by dyslexia. Despite the research and information available, people often do not understand how greatly dyslexia can affect an individual's life and how common it truly is. As previously mentioned, although dyslexia is a neurobiological condition, many still consider it a sociological or education issue; this misconception deeply harms those facing this disability and limits the ability of society as a whole to properly consider and appropriately deal with the needs of this portion of the population.

According to Shaywitz (2006, p. 20), "dyslexia is a complex problem which is rooted in the same cerebral systems which allow someone to understand and express himself via language"[40], as shown in figure 1:

Figure 1: Dyslexic versus non-impaired brain (SHAYWITZ, 2003)

Source: https://www.semanticscholar.org/paper/Paying-attention-to-reading%3A-the-neurobiology-of-Shaywitz-Shaywitz/793fbca229c197721c4b73f66c82c374016b9517/figure/2

As we can see in figure 1, there is reduced activation in parietotemporal and occipitotemporal areas in adults and children with developmental dyslexia compared to controls during reading and reading-related tasks. These patterns of regionally reduced activation have been linked to behavioral impairments of reading-related processes (e.g., phonological skills and rapid automatized naming). The observed functional and behavioral differences in individuals with

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[38] Definition of Dyslexia – International Dyslexia Association. Available on: <https://dyslexiaida.org/definition-of-dyslexia/>

[39] Functional magnetic resonance imaging or functional MRI (fMRI) measures brain activity by detecting changes associated with blood flow. This technique relies on the fact that cerebral blood flow and neuronal activation are coupled. When an area of the brain is in use, blood flow to that region also increases (SHAYWITZ, 2006).

[40] All translations in this paper were made by the authors.

developmental dyslexia have been complemented by reports of reduced gray matter in left parietotemporal, occipitotemporal areas, fusiform and lingual gyrus, and the cerebellum (FAY, 2016; SHAYWITZ, 2006). An important question for education is whether these neural differences are present before reading is taught since developmental dyslexia can only be diagnosed after formal reading education starts.

Neglecting the symptoms of dyslexia does not make the disability go away. Instead, those who suffer from dyslexia are pressured to perform as well as everyone else despite their struggle. Dyslexic people are sometimes depreciated, blamed, and mislabeled, instead of receiving the necessary support and patience in order to improve these people's learning development. That is why diagnosis is so important: it leads to intervention. According to IDA, "an effective evaluation documents the history of a student's learning disability"[41]. This documentation is necessary to ensure eligibility for special services such as special education and appropriate accommodations "on college entrance exams (ACT, SAT), in college, or in the workplace".

Assessment and diagnosis of dyslexia require the complex use of information from both qualitative and quantitative measures (REID; WEARMOUTH, 2009). It is strongly believed that this assessment may be helpful for dyslexic teachers and students so they can look for help and ways of overcoming their difficulties. After all, "self-awareness is key for any teacher assessed as being dyslexic" (ALEXANDER, 2014, p. 4). Even though there is a great offering of professional tests for diagnosing dyslexia, they remain expensive. However, there are several websites which offer free diagnosing tests, such as the *Revised Adult Dyslexia Checklist*, which is available online as a free resource. This test requests answers to a variety of questions designed to identify common traits of dyslexia, such as difficulties with directions and recalling phone numbers (BEATTY; MCTAGGART, 2009, p. 5). The test available online is shown in figure 2:

Figure 2: A Revised Adult Dyslexia Checklist (VINEGRAD, 1994)

Source: http://beta.dyslexia-international.org/content/Checklists/DyslexiaCheckAdultsVinegrad.pdf

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[41] Testing and Evaluation – International Dyslexia Association. Available on: <https://dyslexiaida.org/testing-and-evaluation/>.

The Dyslexic Advantage is a "non-profit charitable organization whose mission is to promote positive identity, community, and achievement focusing on dyslexic strengths"[42]. Its website also offers an online test for those who suspect they are dyslexic[43]. The information given on the test reinforces that the best way to make a formal determination, as well as to identify strengths and weaknesses, is through a test done by a qualified group of professionals (speech therapists, psychologists, neurologists, and linguists). These professionals are then able to recommend accommodations and assistive technology tools as practical strategies. They inform that the checklist was originally developed by Ian Smythe and John Everett (2001)[44] and that there are three possible outcomes which are: unlikely to be dyslexic; mild-to-moderate dyslexic; and moderate-to-severe dyslexic.

Although dyslexia is commonly described as a "hidden disability" (SHAYWITZ, 2005; BELL; BURNS, 2010b, p. 530), it affects one in every five students in classrooms all over the world. Therefore, raising awareness will reduce the impacts in the long run, as well as decrease the misleading idea that dyslexic students are lazy and not intelligent.

Davis and Braun wrote a book called *The Gift of Dyslexia – Why Some of the Smartest People Can't Read and How They Can Learn* (1994) which states that being dyslexic has nothing to do with lack of intelligence. The book is a must-read for everyone who questions a dyslexic person's intelligence. The authors start the book by sharing a story that called our attention the most: one of the authors had been invited to talk about the positive side of dyslexia on a television show. He listed a number of people diagnosed as dyslexics who were famous and geniuses. The hostess of the show was surprised that these people were geniuses "in spite of their dyslexia" (BRAUN; DAVIS, 1994, p. 17). In response, he says that "their genius didn't occur *in spite of* their dyslexia, but *because* of it!" (BRAUN; DAVIS, 1994, p. 17). Some famous people who are known to be dyslexic are Leonardo da Vinci, Walt Disney, Jim Carey, Albert Einstein, John Lennon, Pablo Picasso, and so on.[45]

According to Braun and Davis (1994), the dyslexic learning style has shown that dyslexic people have an intuitive way of seeing how things work. Dyslexic individuals also have the innate ability for doing tasks "which require the ability to visualize something in creative or different ways" (BRAUN; DAVIS, 1994, p. 7).

In conclusion, although dyslexia is still seen as a setback by many, to dyslexic people it may be considered a gift due to how differently their brains are wired to process information. Being curious and creative are qualities that make them resourceful and able to simplify things in order to see the bigger picture. We are also able to conclude that, although there are several ways to define dyslexia, it is vital to bear in mind that it is a neurobiological condition. It is neither a sociological nor an educational issue.

In the following section, we will demonstrate how dyslexia impacts the schooling and practice of second language teachers based on research done by authors such as Riddick (2003) and Bell and Burns (2010a), as well as testimonials collected by a study led by Dale and Glazzard (2013).

3 Dyslexia and its impacts on second language teachers' schooling and practice

Dyslexic teachers struggle with learning an L2 as much as their L1. However, due to the coping mechanisms adopted in order to do so, they are successful in their literacy development in

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[42] The Dyslexic Advantage Contextualization. Available on: <https://www.dyslexicadvantage.org/about-us/>

[43] The Dyslexic Advantage: Dyslexia Checklist. Available on: <https://www.dyslexicadvantage.org/dyslexia-test/>

[44] The Dyslexia Association: Adult Checklist. Copyright Ian Smythe and John Everett, 2001. Available on: <https://www.dyslexia.uk.net/wp-content/uploads/2016/09/Adult-checklist-TDA-headed.pdf>

[45] Famous Dyslexics (ARKELL, c2015). Available on: <https://www.helenarkell.org.uk/about-dyslexia/famous-dyslexics.php>

a foreign language, which may end up being a motivating factor to pursue the profession of an educator. After all, their struggle and mistreatment should not be experienced by their pupils, giving them a better experience in terms of education.

Dale and Glazzard (2013) led a study which aimed to explore how personal experiences of dyslexia during schooling could shape teachers' self-concepts and professional diagnosis. The research was done with two female undergraduate students who were dyslexic and intended to become teachers. We believe it is important to share Emanuel and Julie's testimonials and how the diagnosis influenced their lives.

> Emanuel: "I really enjoyed my time with my friends, but the schoolwork overshadowed this. I found schoolwork so hard. I hated the feeling that I wanted to do better, but everything felt like a huge mountain to climb. I was always at the bottom of this mountain, just waiting to climb up. I never got very far." (DALE; GLAZZARD, 2013, p. 29)

For Emanuel, it was only at the university where she truly received support to deal with her problems. Once she was diagnosed, she was given tools, such as software and a laptop, to help with her learning, which helped her get better grades. Emanuel mentioned she was even offered a tutor who could help her with planning and structuring her written work. She shares that having been diagnosed was not disturbing for her and that she was able to carry on normally. However, Emanuel recognizes that dyslexia was a negative factor when her grades were not good enough to apply for a traditional university since the admissions tutors solely took into consideration her grades instead of trying to find out about her practical skills. Emanuel calls attention to the fact that people should not be dismissed because of their written capabilities alone. Despite it all, no amount of resentment kept her from achieving her aim in life of becoming a teacher.

Julie was the second interviewee and her position towards dyslexia is quite inspiring.

> Julie: "Dyslexia is not life-threatening. It is not a disability. It is not a disease. Those who have it do not require huge amounts of resources to support them. It is a fairly common condition, which makes reading, and some other skills, more difficult. Early diagnosis, understanding on the part of professionals, and some fairly simple strategies can help children with dyslexia to avoid the experiences I had. Despite this, I believe that thousands of people have suffered similar experiences to me and that some children continue to suffer today." (DALE; GLAZZARD, 2013, p. 31)

Julie learned from her diagnosis that she needs more preparation. She might take longer to organize her thoughts in her head in order to write them down, which causes frustration at times, for she is not able to do it as fast as she would like to. Julie learned that she needs time to double-check her written work in order to assure appropriate punctuation and accuracy. Additionally, that she needs to make sure that what she wants to say is correctly transmitted through her writing. Julie thinks that having been diagnosed helped shape her professionalism. She introduced strategies into her life which helped her cope with her condition, such as software that reads back to her. Julie acknowledges that understanding what she reads takes a lot of time and she feels that it slows down her writing process capacity. Julie points out that "reading is the key to all areas of education" (DALE; GLAZZARD, 2013, p. 33), but that given enough time, she can do it. She shares that dyslexic labs do not make her feel different about herself. It has merely helped her understand how her brain works and that she needs to develop coping strategies to make her life easier.

Through Riddick's study (2003), she discovered that most of the teachers – most of whom were dyslexic – decided to become teachers because they wanted children to have a better school

experience than they had. Most of them shared that they thought of their dyslexia as an advantage to their teaching practice. However, some of them were unhappy with the fact that they need to work harder and that they feel insecure while teaching. Because some of them felt angry about having been underestimated and allowed to underachieve while they were in school, they feel empathetic towards children with the same disabilities, yet they do not expect any less of them than the rest of the group. This expectancy allows us to infer that having high expectations for these children will only encourage them to try harder and do their best, instead of allowing them to develop learned helplessness.

Bell's and Burns' study (2010a) on the professional identities of dyslexic teachers led them to conclude that the experience of dyslexia was a positive aspect of teachers' identities. They found that teachers used dyslexia as an enabling tool to succeed professionally. Through the study, they identified the dyslexic teachers as empathetic, especially with children with behavioral issues, and that these teachers were also able to build meaningful relationships with their students due to their honesty about their disability. Although it was not always easy to acknowledge their weaknesses, they were conscious of their strengths, which they used to enrich their practice skills. Persistency and compensatory strategies were spotted as strengths to overcome the struggles related to dyslexia.

The School of Education and Enabling Services at the University of Southampton interviewed dyslexic teachers and trainees in order to collect data for their study in 2014. The outcome of the study was a dyslexic-friendly brochure, due to its colors, font, and layout that shows the reports from the people interviewed. These people were asked whether they think dyslexia gives them any advantages as a teacher. Besides the fact that the majority of responses were positive with dyslexic teachers, the respondents shared how they have turned what could be seen as weaknesses in areas of strength. By being aware of their disability, they had to come up with different teaching approaches. They also shared that telling their students that they are dyslexic may be a positive experience because it humanizes the teacher.

Dyslexic teachers may struggle in several ways, such as in spelling; writing on a whiteboard; report writing; recalling students' names, staff, and parents; remembering dates; organization and time management; lesson planning; checking written work, and reading documents (ALEXANDER, 2014). When called on by their students', these teachers may feel stressed out or ashamed of themselves or of their disability. However, this stress could be avoided by disclosing to their students about their disability. If they were to accept and embrace it, it would make it easier for them to share the truth with their coworkers and students.

Some students may have the misconception that their teachers are flawless. Therefore, when teachers expose their weaknesses, they show their students that they also make mistakes and that they are not perfect. Besides, students who are dyslexic will not feel left out because they will know that if their teacher is dyslexic, it means that if they work hard enough, they can also achieve their dreams. Most importantly, disclosing to students allows teachers to identify, understand, and support their dyslexic students. Therefore, instead of facing the disability as an excuse for failure, teachers can learn together how to use it as a reason to try harder and accomplish just as much as any other student or teacher.

Disclosing to students can also help the teachers' practice. When writing on the board, dyslexic teachers may misspell or repeat words often. If the students are aware of their teacher's disability, they may assist in spotting possible mistakes. It may also be a way of avoiding embarrassing moments in the classroom when the teacher struggles to translate a word into the students' L1. When switching from the English language to the L1 becomes too challenging, students may help by trying to understand the explanations and definitions given within the context to translate the words themselves.

However, having said that, disclosure may not be easy for everyone. It may cause insecurity and provoke low self-esteem. The chances of being misunderstood are significant due to people's

lack of knowledge towards this disability. If more people were aware of its effects on an individual, they could be more understanding and helpful.

In the following section, we will expose the way dyslexic people deal with their disability in the workplace, from the challenges of being undiagnosed and unaided to being eligible to accommodations in the workplace due to a professional diagnosis.

4 Dyslexia in the workplace

Due to the fact that most adults with dyslexia are unaware of their learning disability, they end up taking it into their workplace without mitigating it. They may be seen as employees who are difficult to work with and the workplace can become quite unfriendly due to criticism and discrimination (HAGAN, 2005). Most of them may think that maybe they are not smart enough or may think that they are too easily distracted. Their self-esteem and confidence may be shaken up and they may not be able to excel or be as good as a professional they could be. In the United Kingdom, the Equality Act 2010 protects dyslexic employees from discriminatory treatment, in order to avoid any sort of injustice, giving that some practices and working environments may be challenging for people with dyslexia. As stated previously, professional diagnosis should be done from an early age in order to avoid stressful and demotivating feelings when facing the workload and the lack of support from the working environment.

Although the understanding of dyslexia has increased, it is important to bear in mind that dyslexic difficulties may not be only about literacy difficulties, but also "weaknesses in short-term memory, information processing and perceptual, spatial, and motor skills" (HAGAN, 2005, p. 6). According to the author, these weaknesses may cause problems with time management, organization or even performance.

Diagnosed or not, disclosing about dyslexia in the workplace may seem threatening due to the risk of losing jobs because of the market conditions or even because of the fear of being mistreated or even victimized by their coworkers. However, these people tend to be harmed by the lack of reasonable adjustments which could be implemented in the workplace, given that in most cases their coworkers are unaware of their condition. In 1996, the article called Dyslexia[46] was so informative about the discussion of why intelligent people struggled with reading that it gave room to people from different professions and places of the world to speak up and share their stories about their lives with dyslexia (SHAYWITZ, 2006). This statement illustrates how dyslexia is present in many people's lives and how it is not an impairment, especially when we learn that diplomats, scientists, and CEO's have found in themselves the strength to overcome their learning disability.

Moody (2004) writes about the fact that although dyslexia is more commonly associated with problems with literacy, dyslexia actually embraces several different issues such as "weakness in short-term memory and information processing, and in perceptual, spatial and motor skills" (MOODY, 2004, p. 11).

Dyslexic people may struggle with the spatial/temporal senses, memory difficulties, motor control, reading, spelling, listening, and writing. Dyslexia varies in terms of degree, varying from mild to severe, as stated previously. Given this information, we can infer that dyslexic people feel distressed when put under the spotlight. Such distress can result in disorganization; poor management of time; struggle to recall important information, among other problems. Therefore, dyslexic people may be seen as inefficient when actually all they may need is for their issues to be addressed. Meanwhile, they may feel trapped when faced with fast-thinking answers or solutions to problems in a meeting, for instance, or even planning a class or writing reports in case of teachers.

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[46] Scientific American 275 (1996), p.98-104. Available on:
<https://pdfs.semanticscholar.org/7157/547b634271320754b48bacc277d6b368df4b.pdf>

These professionals may also struggle with meeting deadlines and keeping focused after long periods of time. Written and spoken instructions are also a challenge to dyslexic people who may get lost and lose track of what they are supposed to do, especially when they have to rely on recalling these instructions later on. In spite of its stressful results, most dyslexic workers do not feel trapped by their disability. Instead, they are able to reduce its impacts or even overcome them. However, if given the opportunity to have their strengths and difficulties outlined by the appropriate diagnosis as well as adjustments made in the workplace, it would be easier for them to showcase their creative and problem-solving skills in a way everyone would possibly benefit from. After all, these people are so eager and determined to overcome their condition that they work twice as hard, which should be praised and acknowledged, instead of frowned upon or misjudged.

Performance problems caused by dyslexia could easily be solved from awareness of the issue. In this case, the Work Needs Assessment (WNA) is vital in order to assess the condition and to help improve coping mechanisms for the dyslexic workers. According to Hagan (2005), "a WNA should:

> "analyze the employee's diagnostic assessment(s); analyze the employee's job description/ role profile; identify areas in the job description likely to be affected by the difficulties identified in the diagnostic assessment through discussion with the client and their line manager; identify and prioritize performance problems and consider the role dyslexia and/or associated difficulties might play in causing these; recommend reasonable adjustments to mitigate the employee's difficulties and improve overall work performance; recommend specific skills training and assistive technology training programs, and make specific recommendations for trainers who are experienced in working with people with dyslexia and associated difficulties; recommend other equipment and different ways of working that will have a positive impact; provide assistance with planning and implementing the adjustments; provide detailed information on resources about dyslexia and associated difficulties in the workplace, including specific HR advice; provide detailed information on how to make a workplace dyslexia-friendly; and discuss the applicability of the Equality Act 2010." (HAGAN, 2005, p. 16)

In case employers suspect that there are dyslexic workers among their staff, they may suggest that these people take a screening test for dyslexia[47], which does not substitute a full assessment, but it can be used as a preliminary step before further investigation, especially because is budget-friendly in comparison with the full assessment. Then, the employer should provide a diagnostic assessment report for the employees who need one, being one of the reasonable adjustments that should be implemented in the workplace (HAGAN, 2005). Like any sort of test, the assessment may cause the employee stress and anxiety due to the uncertainty of the results. Therefore, it is important to remind the dyslexic employees that the assessment is merely a tool to explain and keep a record of their condition, to provide them with adjustments that will improve their performance in the workplace and that will be beneficial for all parts.

The assessment should be done as soon as possible so that the employee does not fall behind when learning about the job they are expected to do and that they are not misevaluated in terms of competence. With early assessment, employees would be able to develop their coping strategies earlier so as to be at the same pace as their peers. Another reason is for them not to face incorrect assumptions of inefficiency, commonly associated with dyslexic employees.

As we move towards a new era of inclusion, it is vital that teachers who struggle with dyslexia are also involved in this inclusion. The strength within dyslexic teachers who develop coping

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[47] The British Dyslexia Association - Screening Tools available on: <https://www.bdadyslexia.org.uk/screening>

strategies in the classroom in order for their condition not to be an impairment should be recognized. Given the fact that dyslexic teachers have experienced literacy difficulties themselves, it may influence the way they teach, especially when it comes to students with learning disabilities. The use of effective coping strategies allows dyslexic teachers to balance the advantages of being dyslexic, which outweighs the disadvantages in several ways – from creativity to empathy.

Dyslexic teachers may take their negative school experiences as a strong motivation to not only overcome their difficulties and prove everyone wrong but also to provide their students with a better educational experience than their own. Despite the increase in terms of inclusive education culture, teachers with dyslexia should be offered a more enabling and fair attitude in the workplace.

In conclusion, in order to break the unfair cycle of misjudgment and suffering, the assessment in the workplace is key to an improvement in both the employee's performance and confidence.

In the following section, we will present some coping strategies and tools which dyslexic teachers can use in order to facilitate their practice.

5 Dyslexic teachers and their practice skills: strategies to cope with dyslexia

Due to the novelty and lack of research in the area, there is not much information and theoretical material on dyslexic teachers and their practice skills yet. Therefore, we used data collected from several website and news, all of which are mentioned in footnotes as they appear.

Given the fact that dyslexia may vary from mild to severe, it is safe to affirm that it does not have the same negative impact on all dyslexic teachers' practice. Undoubtedly, strategies to cope with the disability are developed when necessary. As mentioned before, teachers with dyslexia may struggle to remember facts, sequences, and lists; they may easily get distracted while teaching, and they may suffer from anxiety when overloaded by instructions. While it may seem like a handful to become an educator, one of the most meaningful gifts provided by dyslexia is creativity and intuition, which is due to the fact that dyslexic people are always seeking different ways of doing something. Once again, being aware of their strengths and weaknesses could be helpful for these teachers' practice.

Among the positive strategies to cope with dyslexia, the organization is probably one of the most significant ones. Being organized makes it possible to see things clearer in order to come up with solutions. Despite the fact that dyslexic people may need to work harder, it is imperative to avoid assuming failure before trying. Keeping in mind the great number of technological devices available that may be helpful, it is easier to have a positive attitude towards new challenges. Among them, there are Voice Recognition Programs, Mind Mapping software, Text/Screen Readers software, and Accessibility Programs[48].

Voice Recognition Programs are types of software which enable speaking to the computer instead of typing into it. On September 21, 2017, Gavin Graham posted a list of the five best voice recognition software & dictation apps 2017[49]. The top five were: Dragon Naturally Speaking which was chosen as the "best overall dictation and voice recognition software"; Google Docs Voice Typing, which is "web-based dictation for Google Docs"; Google Now, which is available for Android mobile devices; Siri, which is available for iOS mobile devices, and Cortana, which is available for Windows devices.

Mind Mapping is a tool present in numerous software packages, which "helps with planning and organizing thoughts, and with developing ideas quickly". It is helpful for those who struggle

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with getting started, with sequencing, or with organizing thoughts. The Finances Online[50] released a list of the best twenty mind mapping software of 2018. The top five were: (1) Canva, which is "equipped with ready-to-use images, photo filters, icons, shapes, and fonts". Therefore, this free tool[51] enables visually appealing organization of thoughts; (2) Free Mind, which is free of charge, can be used to "keep track of projects, create a knowledge base, brainstorm, and more"; (3) Padlet, which is "a collaborative mind mapping tool that lets you create boards, documents, and web pages" in an intuitive interface with universal reach, which enables the organization of ideas in "a secure space that can be accessed on both mobile and desktop devices"; (4) MindMeister, which is "great for brainstorming, planning, note-taking, and meeting management", free of charge as long as the intention is to support only three mind maps at a time; and (5) Lucidchart, which is "an online diagram creation application" that allows users to "create a wide range of data presentations, from simple flowcharts to complex technical diagrams [...]", free and paid version with advanced features. An example of the last and the authors' favorite is shown in figure 3:

Figure 3: Mind Mapping Software: Lucidchart (Finances Online, 2018)

Source: https://financesonline.com/mind-mapping/#lucidchart
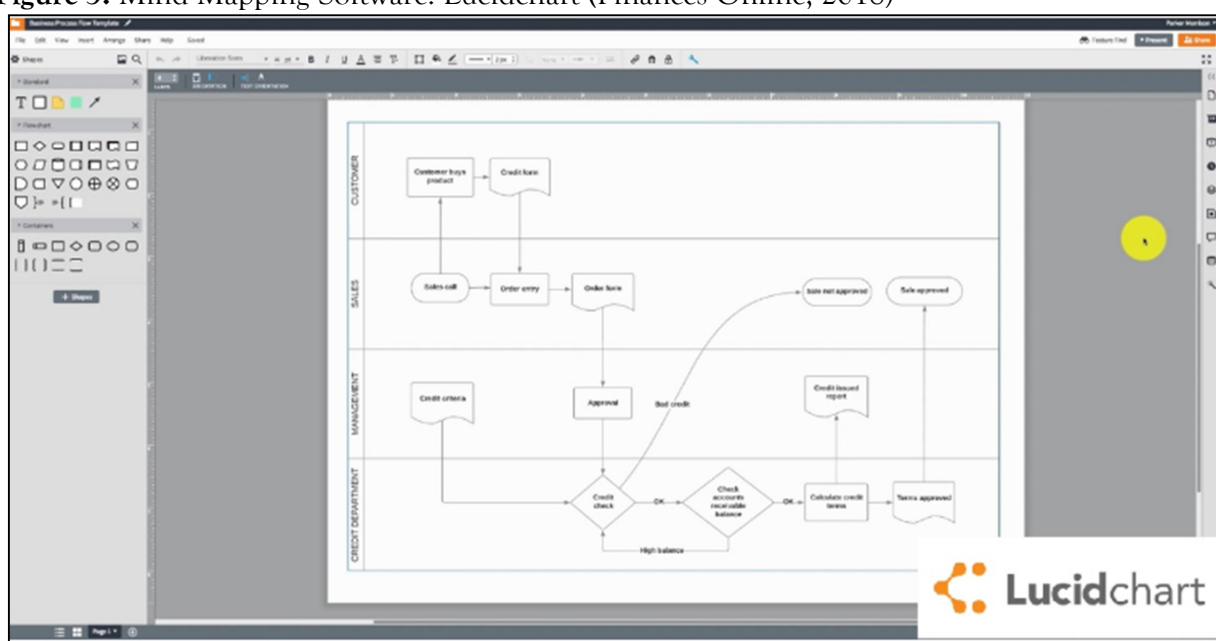
Text/Screen Readers are software that "reads the words off of a computer screen aloud for you" which can be helpful for those with reading problems. According to the Freedom Scientific website[52], the Job Access With Speech (JAWS) is "the world's most popular screen reader, developed for computer users whose vision loss prevents them from seeing screen content or navigating with a mouse". Despite its original purpose, dyslexic people can use the tool to help with the comprehension of texts without the need to read them.

Lastly, Accessibility Programs "provide accessibility options such as changing font, text, size, and color of the information presented on-screen, to make it as easy to use as possible". These programs may cover all levels of disability, "including auditory, physical, speech, cognitive and

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[50] Finances Online - Best 20 Mind Mapping Software of 2018 according to the Finances Online. Available on: <https://financesonline.com/mind-mapping/>

[51] Most resources of the software are available for free. The tool also has a Premium feature which is paid for.

[52] Freedom Scientific. Available on: <https://www.freedomscientific.com/Products/Blindness/JAWS>

neurological"[53]. Most gadgets offer the accessibility option, including cell phones, tablets, and laptops.

Nelson Lauver[54], who is an award-winning author of the memoir called Most Un-Likely to Succeed, is also active in several areas, such as a voice-over artist, co-founder of the Jane and Nelson Lauver Foundation[55], keynote speaker, and humorist. He shared his experience with Grammarly, on an article available online[56]. The tool is demonstrated in figure 4:

Figure 4: Document demonstration (GRAMMARLY, 2018)

Source: https://app.grammarly.com/ddocs/20593127
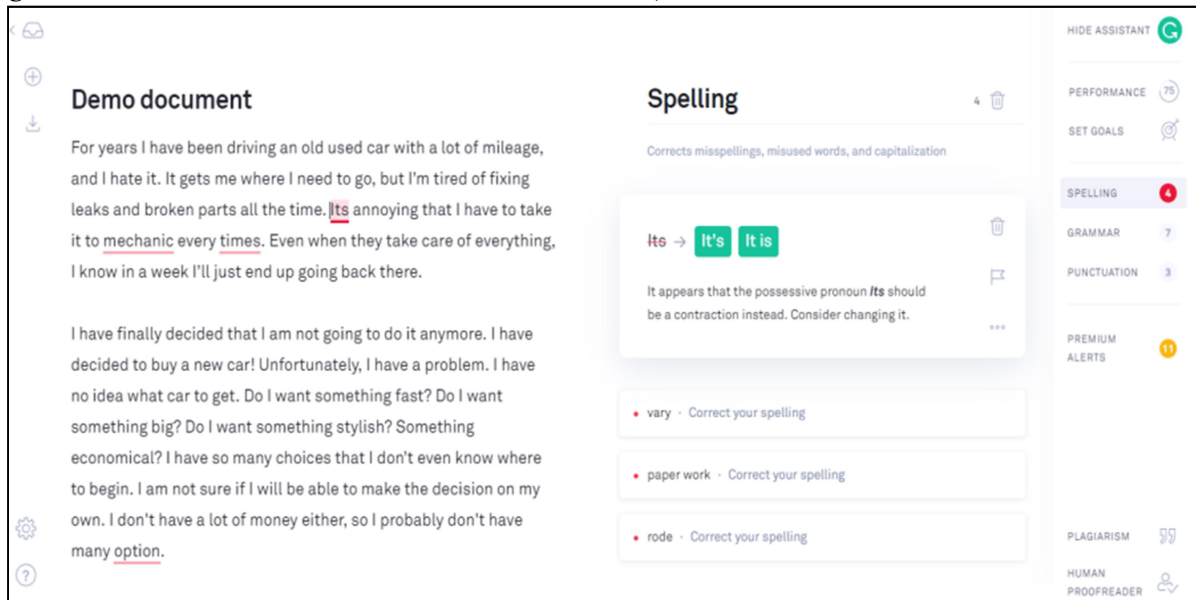
Grammarly is an online grammar checking, spell checking, and plagiarism detection platform developed by Grammarly, Inc., which was released in 2009. In the article, Lauver describes the tool as "an automated, online proofreader and grammar/spelling checker". He affirms that the tool excels in comparison with standard spell-checkers because he considers it to be a friendly tool that makes constructive comments. This tool was used by the authors of this article in order to support them in their writing performance and they find Grammarly to be a must-have for any writer, especially for dyslexic ones. It corrects spelling, punctuation, vocabulary, and grammar. The tool offered for download free of charges is already sufficiently effective, but it also offers a Premium version, which offers more features, which are paid for. "Because it's browser-based, it can help with blog posts, online forms, texting, and more"[57]. The benefits of the tool are many and easy to recognize.

In October of 2018, it was announced that Microsoft had added Dictation to Office web apps in order to help with dyslexia[58]. The goal is to ensure more effective writing for dyslexic people and to help with dysgraphia, which is "a condition that makes it difficult to write coherently", as well as people with mobility issues. According to the article, Dictation should

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[53] Dyno Mapper - Top 25 Awesome Accessibility Testing Tools for Websites. Available on: <https://dynomapper.com/blog/27-accessibility-testing/246-top-25-awesome-accessibility-testing-tools-for-websites>

[54] Nelson's Book - Nelson Lauver's biography. Available on: <https://www.nelsonsbook.com/full-bio>

[55] Nelson Lauver Foundation focuses on projects related to literacy, ESL, learning disabilities, and invisible disabilities.

[56] Grammarly - Nelson Lauver's testimonial of Grammarly. Available on: <https://www.grammarly.com/blog/five-tools-dyslexic-people-can-use-to-improve-their-writing/>

[57] Dyslexic Advantage review of Grammarly. Available on: <https://www.dyslexicadvantage.org/top-dyslexia-app-2016-grammarly/>

[58] Engadget - News regarding the update on Microsoft. Available on: <https://www.engadget.com/2018/10/15/microsoft-office-web-dictation-helps-dyslexia/?fbclid=IwAR1-qdPDWoHYb38BE0Lqb9DwOT2Tm5Q68Dx19ITGtZazlJpGfvxV3Buts>

spread to Excel, Outlook, and PowerPoint sometime in 2019 and improvements in terms of accessibility can be expected soon.

When writing skills are required in tasks such as making lesson plans or writing on the board and students' feedback reports, dyslexic teachers may use a large variety of techniques (ARO; BURNS; POIKKEUS, 2012). One of the techniques to make lesson plans is making visual presentations. Although Bell and Burns (2010a) have identified that dyslexic teachers tend to avoid writing on the board, it can be effectively used with the access to online support of spell-checkers, for instance. When writing students' feedback reports, it is possible to find inspiration from online websites. An example of such website is the ESL Report Builder[59], which is a tool that offers teachers several prewritten comments in their database, from which teachers can choose what they wish to use in order to build comments for the students they need. The tool can be seen in figure 5:

Figure 5: ESL Report Builder: report card comment builder (ESL Report Builder, 2018)

Source: http://eslreports.com/builder/

The tool is available free of charges on the link provided on the footnote. It is an easy tool to work with provided that instructions are clear to understand and follow. The website recognizes that "some schools do not allow negative (honest) comments on their report cards and require teachers to put a positive spin on every student no matter what their attitude or behavior". Therefore, it offers teachers three possibilities: Anything Goes, Mostly Positive, and Only Positive. The first one shows good and "bad" comments. The second shows variable comments. At last, the third shows the comments which teachers will choose to talk about the students who should simply keep up with the effort and good work. Although this tool can be useful for any teacher with any learning condition, the author decided to add it to the list because she believes that it can be helpful when it comes to finding the appropriate way to express yourself.

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[59] ELS Reports - ESL Report Builder website. Available on: <http://eslreports.com/builder/>

The Dyslexia Association of Ireland suggests several coping strategies on their website[60] in terms of (1) reading, (2) writing, (3) memory, and (4) organization and time management. Firstly, when it comes to reading, they point out that dyslexic people feel more pressure when they need to read something for work. Therefore, their advice is to focus on relevant information that will lead to the understanding of important facts. They also suggest that, whenever possible, when reading tasks are necessary, dyslexic people should put comfort first, in terms of having the appropriate light, preferably in a quiet room. It is also suggested to have highlighters and markers to hand. Besides all of these helpful techniques, they introduce a method developed by Francis Robinson in the 1960s, which is called the SQR3 (Scan; Question; and the 3 R's – Read, Remember, Review). The reading strategy known as Scanning is used when we look quickly through a text in order to find keywords and infer what a text is about. To Question means you should wonder what the expected information to retrieve from the text is. To Read means that you should then read the full text. To Remember means you should highlight and take notes of the main points present in the text. At last, to Review means you should reread the texts in order to assure precision in the previous task, which is called Remember.

Secondly, writing tends to be as challenging as reading to a dyslexic person. Getting started on a writing assignment is possibly the hardest part. Therefore, it is vital to make a plan before writing in order to decide the most relevant points. It is also valid to have enough time for research and reading before writing. Revising is unquestionably important, so setting deadlines could be an interesting technique in order to accomplish the writing tasks. Bear in mind that organizing thoughts could also be quite challenging, therefore trying to use preset formats could be helpful. Since all these steps could result in a longer time to finish an assignment, it could be easier to break the assignment down into steps that can be done one at the time. Spelling and grammar should not be the reason for concern due to the availability of grammar and spelling check software, which has been mentioned before in this present paper. Thirdly, memory [61]is a delicate subject for dyslexic people, especially under stress and anxiety. Therefore, something that is already challenging such as recalling dates, names, and facts may become even harder. Given the fact that some people have an acute visual memory, it is helpful to work with colors and visual images. The ones who have better auditory memory may be considered kinesthetic or active learners, which means they can achieve better results in terms of memory by listening or doing an activity. Given this information, we will look into some of the strategies that could be helpful when recalling information or learning is necessary: choosing the best place which should be quiet and comfortable, and free from distractions; make meaningful connections to details you already have stored; make use of rhymes to help remember information; use small chunks of information in order to store it; use pictures and colors to visualize things better; mind-map key ideas; and, at last, always revise the information you must memorize or recall the most.

Finally, yet importantly, organization and time management can be overwhelmingly hard for dyslexic people, which may end up causing desperation and low self-esteem. Therefore, some of the strategies suggested to cope with such difficulties are to make to-do lists, use week or year planners, and keep papers and files under control.

Firstly, the to-do lists could be divided between personal and work items. Use red to indicate whatever is urgent, yet not before specifying what is truly urgent before, and add new tasks to the list as they come up. Find joy crossing out finished tasks from the to-do list. Secondly, choose a prominent place on your wall and put up a week or year planner on it in order to facilitate access to important dates and events. Post-its could be helpful when it is necessary to remember unusual

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[60] The Dyslexia Association of Ireland - Managing Dyslexia in the Workplace available on: <http://www.dyslexia.ie/information/adults-and-the-workplace/managing-dyslexia-in-the-workplace/>

[61] Mostly working memory, which is a cognitive system with a limited capacity that is responsible for temporarily holding information available for processing. Working memory is important for reasoning and the guidance of decision-making and behavior (ANDERSON, M. C.; BADDELEY, A. D; EYSENCK, M.W., 2011)

or extremely urgent things, as long as there are never too many of them. When there are too many, it is easy to lose focus of each individually. Thirdly, keep papers and files as under control and organized as possible, getting rid of waste whenever possible in order to avoid clutter. Ask for help or flexible deadlines when you feel too overwhelmed or lost.

Bearing in mind all of the strategies mentioned in this section, it is vital that dyslexic teachers know that they do not have to struggle in their practice, given the variety of coping strategies available, which are free of charge. Dyslexic teachers should always use them, acknowledging their importance in order to make their practice better and easier. The coping strategies provided by *The Dyslexia Association of Ireland*, which were mentioned above, were used in the creation of the leaflet that can be used by dyslexic teachers as a guideline.

In the next section, we will expose the methodology, which served as the basis for the present paper, identifying the objectives as well as the questions that guided its development.

6 Leaflet design

The authors used data collected from websites, as well as personal coping strategies as a dyslexic teacher, in order to design the following leaflet. Most of the strategies were gathered from the list of coping strategies provided by The Dyslexia Association of Ireland online page, but the authors of the present paper also added some personal suggestions to the design, which were mentioned in this paper, due to their own experience as an L2 dyslexic teacher.

The idea of the leaflet came up as the authors read about common coping strategies online which they used as well, without knowing for a fact that they were helpful. Through this paper, the authors learned about several other coping strategies which they intend to apply to their life as L2 dyslexic teachers. The leaflet is shown in figure 6:

Figure 6: Dyslexic teachers coping strategies for the workplace guideline

Source: authors

As mentioned before, coping strategies are created as necessity requires. However, with this leaflet and paper, we hope that L2 dyslexic teachers are alerted of their condition, so that they first do the online checklist provided on this paper, followed by a professional diagnosis; and that the guideline makes their practice skills easier and, inevitably, more pleasant.

7 Conclusion

This article was developed aiming to investigate through theoretical examination the impacts of dyslexia on teachers of English as a second language. Our subsidiary aims were to (1) to define dyslexia and present an overview on this learning disability, (2) to investigate through bibliographical research how dyslexia affects second language teachers, their classroom practice and workplace, (3) to present strategies teachers can use to cope with dyslexia and (4) to design a leaflet to be used as a guideline for dyslexic teachers.

The questions which guided this paper led to the definition of dyslexia as a neurobiological condition which lasts throughout a dyslexic person's lifespan. What was first misdiagnosed as visual impairment was then concluded to be verbal blindness, which later was defined as dyslexia.

Next, we tackled the topic of dyslexia in the workplace and we learned that through diagnosis, it is possible to implement measures which could help dyslexic employees to cope better with their disability in the workplace. These measures enable dyslexic employees to perform better and to be fairly treated and supported in their work environment.

Then, we narrowed down to the two main subsidiary goals of this research paper, which were about the impacts of dyslexia on the second language teachers' practice and which skills could be adopted to improve their practice. We concluded that, since L2 dyslexic learners develop coping strategies to improve their literacy development in a foreign language, they may end up being motivated to pursue the profession of an educator. This way, they can make sure that their pupils do not struggle as much nor are mistreated as they possibly were, providing their pupils a better experience in terms of education.

Finally, several strategies were suggested so that dyslexic teachers know that they do not have to struggle in their practice because of the availability of a large variety of coping strategies that are free of charge. The authors highlight the importance of making use of strategies that could make dyslexic teachers' practice better and easier. These strategies were used in the designing of the leaflet, which could be used by dyslexic teachers as a guideline.

We acknowledge that there were limitations to our study, especially the lack of material available that tackles the topic of dyslexic teachers. As previously mentioned, the topic of dyslexia and dyslexic students has its roots in the XIX century, whereas dyslexic teachers is still a topic to be further developed. Through the theoretical investigation done for this article, we were able to find a considerable amount of material about L2 dyslexic learners but not L2 dyslexic teachers. Thus, we concluded that the topic of dyslexia in L2 learners is still not sufficiently explored in Brazil. Additionally, there is not enough material on how L2 dyslexic learners end up becoming educators.

Therefore, we would suggest further research on the topic, in order to help dyslexic professionals, especially in Brazil, and to encourage dyslexics to seek for help in order to overcome the difficulties caused by this disorder, as to see it as an enabling mechanism instead of a setback.

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