

**DOCTORAL DISSERTATION
THESIS BOOKLET**

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**Dealing with the foreign language anxiety of dyslexic language learners:
A mixed-methods study of teachers' experiences and practices in the
mainstream primary school EFL classroom**

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1 Introduction

The question of how to teach special educational needs (SEN) learners (Sparks et al., 1998; Schneider & Crombie, 2003; Sparks, 2009) or specifically dyslexic learners in the foreign language (FL) classroom has been in the foreground of research for decades (Kormos, 2020; Kormos & Smith, 2012; Košak-Babuder et al., 2019; Nijakowska, 2010; Schneider & Crombie, 2003; Tsakalidou, 2022). Dyslexia is categorized under the broader term of SEN and defined as difficulties in reading, spelling, and language processing (Kormos, 2017), which can negatively affect the social and emotional processes of language learning (Sparks & Ganschow, 1991). One of the key problem areas in the context of foreign language learning is when pupils' anxiety is high. Dealing with anxiety in the classroom (Dewaele & MacIntyre, 2014; Dewaele, Witney, Saito, & Dewaele, 2018; Jin & Dewaele, 2018; Fenyvesi, 2021; Horwitz, 2001, 2010; Inada, 2021; MacIntyre, 1995, 1999; Teimouri, Goetze, & Plonsky, 2019) has received growing attention in research worldwide. Although Sparks and Ganschow (1991) dealt with foreign language classroom anxiety due to challenges related to linguistic coding which encompasses issues in phonology, grammar, and semantics, no specialized model was designed to address both dyslexia and anxiety in the context of foreign language learning. Despite the increase in research projects on the effects of anxiety or dyslexia, there is limited literature on how to handle anxiety in dyslexic language learners. The present research aims to help fill this gap.

The main purpose of the study was to conduct a mixed-methods investigation to gain a deep insight into primary school English as a Foreign Language (EFL) teachers' experiences in the manifestations of language anxiety among dyslexic learners, the signs produced by learners during lessons as reported by teachers, and the instructional interventions used by EFL teachers to help dyslexic students cope with their anxiety and succeed in their language learning process in mainstream primary schools. The research project was conducted in Hungary and consisted of two main strands.

2 Background to the concepts of dyslexia and anxiety

2.1 The concept of dyslexia

It is challenging to formulate a universally accepted definition of dyslexia. Special education, psychology, and neuroscience have all informed the understanding of the concept of dyslexia. The different fields conceptualize the term dyslexia differently; it could be defined as a disorder or a difference. There may be some regional differences in the way dyslexia is

understood; in the US, dyslexia is considered a Learning Disorder (LD) (Snowling et al., 2020). In the UK, viewing dyslexia as a Specific Learning Disability (SpLD) or Specific Learning Difference/ Difficulty (Daloiso, 2017; Kormos, 2017) seem to be the norm. The emergence of work/studies in the neurodiverse paradigm has underlined the notion that dyslexia can be characterized by the distinct wiring of the brain and the underlying differences in producing and using their first language: that is, learners with dyslexia process information differently (Silberman, 2017). Dyslexia is not only associated with processing information differently but with reading challenges and difficulties in accurate or fluent word recognition and spelling (Handler, 2016). In the foreign language context, dyslexics may experience frustration trying to learn a language with varying levels of success due to the lack of receptive language skills (listening) and expressive language skills, phonological skills, including phonemic awareness, as well as rapid naming of letters (Stanovich, 1988). For the purposes of the dissertation, dyslexia will be considered a multidimensional concept, with biological (concerning the brain), cognitive (with slow information processing), behavioural (relating to reading and spelling barriers) and environmental (instructional) aspects that occur on a spectrum, ranging from mild to severe.

2.2 The impact of dyslexia on foreign language learning, the specific situation of dyslexic language learners, and whether all dyslexics experience anxiety

In the 1990s, Shaywitz et al. (1992) published a study on the co-occurrence of dyslexia and anxiety. Anxiety-related signs, such as lack of concentration, distraction, daydreaming, phobias, fear of rejection, insecurity, and withdrawal, have been common findings in research (Willcutt & Pennington, 2000). It is important to note that in most cases, dyslexic students are anxious, and this dissertation is not about a narrow group of dyslexic children who are anxious. Most dyslexics suffer from anxiety (Livingston et al., 2018). Specific learning difficulties have been associated with anxiety and behavioural problems (McNulty, 2003; Siegel, 2016). Anxiety, similarly to other emotional difficulties, arises because of reading, language, or other difficulties (Jordan & Dyer, 2017). In fact, Nelson and Harwood (2010) argue that dyslexic students tend to be more anxious than their non-dyslexic peers in educational and social settings. Livingston, Siegel, and Ribary (2018) found that emotions associated with dyslexia vary. Firstly, the reason behind this is that dyslexia itself occurs on a spectrum ranging from mild to severe, and foreign language anxiety also occurs on a continuum and may change dynamically (Gregersen, 2020). Secondly, students may respond to dyslexia differently (Riddick, 2010), so the anxiety response of dyslexic language learners in an L2 context (MacIntyre, 1999) may be

different (Toth, 2011). Both externalizing (disruptive) behaviours and internalizing (depressive, withdrawn, and anxious) behaviours can occur as manifestations of anxiety.

2.3 The concept of anxiety, its effects, strategies, the role of the teacher and context

Anxiety has been researched extensively in the field of psychology and language pedagogy. From the perspective of psychology, two types of anxiety have been classified: state anxiety and trait anxiety (Spielberger, 1966). Trait anxiety is understood as a personal characteristic of becoming anxious in various circumstances, whereas state anxiety is defined as a temporary negative feeling (Eysenck, 1979). However, as MacIntyre (1999) argues, foreign language anxiety (FLA) experienced in the classroom falls into the third category, which is situation-specific and associated with second language (L2) classroom learning situations.

According to Horwitz et al. (1986), the main components of FLA are communication apprehension (fear of communicating with people), fear of negative evaluation (fear and avoidance of being evaluated by others), and test anxiety (fear of failure in performance). In addition to communication apprehension, test anxiety and fear of negative evaluation, *foreign language anxiety* includes an added unique element: the metacognitive awareness of having to use a language in which learners are not fully competent.

Foreign language anxiety is examined in terms of its effects on academic performance (Dewaele et al., 2018; MacIntyre, 1999; Sparks & Ganschow, 1993a; 1993b), cognition (Tobias & Everson, 1997), social participation (MacIntyre, 1999), and personal impacts: self-concept (Şimşek & Dörnyei, 2017). Studies show that foreign language anxiety correlates negatively with language achievement and performance (Horwitz, Horwitz & Cope, 1986; Young, 1991).

Research on teaching foreign languages to dyslexic learners focuses on reducing anxiety by using multisensory teaching methods, differentiated instruction, and altering assessment practices (Kormos & Smith, 2012; Kormos, 2017; Nijakowska, 2010). Strategies that can be taught by teachers to cope with anxiety, such as coping strategies (Lazarus, 1993; Oláh, 2005), metacognitive strategies, and affective strategies (Griffiths, 2013; O'Malley & Chamot, 1990; Oxford, 1990) have also been discussed in previous studies.

The role of the teacher (Piniel, 2006) and the classroom context are important in addressing students' foreign language anxiety. Kormos et al. (2009) found that a teacher's empathic attitude toward dyslexic students, teacher support, and creating a pleasant atmosphere in the FL classroom can all contribute to the foreign language learning success of learners with special educational needs. Creating a supportive environment (Alrabai, 2014) through peer relationships (Jin & Dewaele, 2018) can also help. While research has examined dyslexia and

anxiety separately, there is a lack of research that specifically addresses how teachers manage both dyslexia and anxiety simultaneously in the classroom.

2.4 Research niche and rationale for the study

There has been some research regarding the foreign language education of dyslexic learners in Hungarian schools (Kormos & Kontra, 2008; Sarkadi, 2009) as well as projects dealing with anxiety (Piniel, 2009; Tóth, 2008, 2011, 2017). It is difficult to find studies that focus on how teachers deal with the anxiety of dyslexic EFL learners. Kormos et al. (2009) have pointed out that different methodological approaches to mistakes make a difference in the level of anxiety dyslexic students experience, and Piechurska-Kuciel (2008) found the effects of FLCA seem to worsen the foreign language learning of dyslexic learners.

However, previous studies have not examined what language professionals, school management and parents can do to minimize the barriers that anxious dyslexic learners face in primary school, where they first experience foreign language learning in a formal context. To fill this gap, I conducted a mixed-methods investigation to gain a deep insight into the experiences of primary school EFL teachers on the manifestations of language anxiety among dyslexic learners, the signs produced by learners during lessons as reported by teachers, and the instructional interventions used by EFL teachers to help dyslexic students so that they can cope with their anxiety and succeed in their language learning process in mainstream primary schools.

The study I designed was divided into two strands. The two strands occur one after the other chronologically: the quantitative inquiry is followed by the more emphatic qualitative investigation (quan→QUAL). The context of the investigation is Hungary, where pupils start learning their first foreign language at the age of 10, and the challenges become apparent soon after they start learning a foreign language in a formal school environment. The above niche provided the rationale for me to explore the role of teachers in managing the FLA of dyslexic teenage learners of English in the mainstream primary school context. After reviewing the relevant literature on dyslexia, anxiety, and the role of the teacher in managing dyslexic learners' anxiety, I focus on EFL teachers' perspectives and experiences of dyslexic learners' anxiety using a two-stage mixed methods research design.

First, there is an absence of studies on anxiety and dyslexia. Second, in addition to a gap in research on dyslexia and anxiety, my research interest was fueled by personal experience.

Breaking the vicious circle caused by repeated failures and refraining from participating in language learning activities has been a considerable challenge for a family member. The dynamic nature of anxiety levels in the presence of language barriers intensified the language challenges. Literature also confirms the relationship between individual differences and foreign language learning (David & Gyarmathy, 2023; Kontra, 2019; Piechurska-Kuciel, 2008). Foreign language anxiety is one of the individual differences that may lead to differential success on the part of the language learner.

Thirdly, I was motivated to establish a model of teaching anxious dyslexic students through grounded theory. Several studies have explored specific learning differences and constructed models of dyslexia and foreign language classroom anxiety. One example is the Linguistic Coding Differences Hypothesis model (LCDH) by Sparks and Ganschow (1991). This model proposed that foreign language classroom anxiety is a result of linguistic coding issues such as phonology, grammar, and semantics. However, there is currently no model specifically designed to address dyslexia and foreign language classroom anxiety together.

There are various models available to address foreign language classroom anxiety. The model of Lazarus (1993) is particularly relevant to show how situation-specific, foreign language classroom anxiety can be managed through (1) problem-focused coping, or (2) emotion-focused coping. A teacher-focused model needs to be devised, which can then be applied in primary school contexts. This model may also be implemented in other learning contexts, for example, in secondary grammar schools or even in higher education, both in Hungary and internationally. Moreover, the model may inform language pedagogy. By exploring the relationship between the students' needs and the approaches and strategies used by EFL teachers within a specific context, and examining these elements through the lens of anxiety, a grounded theory approach could be used to construct such a model.

Therefore, the aim of my investigation was twofold. Firstly, in Strand 1, I aimed to provide an overview of EFL teachers' attitudes towards handling the anxiety of dyslexic students. Secondly, in Strand 2, I sought to gain a deeper understanding of participants' experience by using a combination of qualitative and quantitative research methods (Dörnyei, 2007) in both Strand 1 and 2. According to Dörnyei (2007, p.11), mixed methods studies entail "[t]he combined use of qualitative and quantitative methods with the hope of offering the best of both worlds". This suggests that a combination of quantitative data from questionnaires and qualitative data from interviews and observations can be effective in answering the research questions.

3 Research Design and Methods

Having identified a niche, my dissertation research aims to answer the following main research questions:

RQ1a What manifestations of dyslexic primary school students' foreign language anxiety are language teachers aware of?

RQ1b What factors can be used to describe teachers' attitude to the signs of anxiety exhibited by their dyslexic learners and ways of dealing with them?

RQ1c What factors can be used to describe teachers' perceptions about the signs of anxiety exhibited by their dyslexic learners and ways of dealing with them?

RQ1d What is the relationship among these factors?

RQ2a How does anxiety affect the L2 learning process for students with dyslexia or dyslexia-like problems based on the experience of language teachers in mainstream primary schools?

RQ2b How do language teachers reflect on their experience dealing with the foreign language anxiety of dyslexic language learners?

RQ2c How do participating language teachers in mainstream primary schools view the use of different methods in dealing with the foreign language anxiety of dyslexic learners or students with dyslexia-like symptoms?

RQ3 What characterizes teachers' practices in dealing with their dyslexic learners' foreign language anxiety?

RQ4 What are participating language teachers' perceptions on success in dealing with the foreign language anxiety of dyslexic students

RQ5 What teaching practices are perceived to contribute to the success of dealing with dyslexic students' foreign language anxiety in EFL classes in Hungary?

To answer the research questions most effectively, the project used a mixed-methods approach that incorporated both quantitative and qualitative methods (Creswell, 2009). The dissertation research project was conducted in two strands. Table 1 presents a comprehensive summary of the research questions, aims, methods, and data analysis procedures.

Table 1

A summary of research questions, aims, methods, and data analysis

<i>Quantitative inquiry (January–November 2020)</i>	<i>Qualitative inquiry (January–December 2021)</i>			
Teachers' awareness of foreign language anxiety among dyslexic language learners	Teachers' reported experience on dealing with the foreign language anxiety of dyslexic language learners	Teachers' actual practice	Teachers' perceptions on dealing with the foreign language anxiety of dyslexic language learners	Comparison of teachers' reported experience, perceptions, and actual practice
RQ1a What manifestations of dyslexic primary school students' foreign language anxiety are language teachers aware of?	RQ2a How does anxiety affect the L2 learning process for students with dyslexia or dyslexia-like barriers based on the experience of language teachers in mainstream primary schools?	RQ3 What characterizes teachers' practices in dealing with their dyslexic learners' foreign language anxiety?	RQ4 What are participating language teachers' perceptions on success in dealing with the foreign language anxiety of dyslexic students?	RQ5 What teaching practices appear to /are perceived to contribute to the success of dealing with dyslexic students' foreign language anxiety in EFL classes in Hungary?
RQ1b What factors can be used to describe teachers' attitude to the signs of anxiety exhibited by their dyslexic learners and ways of dealing with them?	RQ2b How do language teachers reflect on their experience dealing with the foreign language anxiety of dyslexic language learners?			
RQ1c What factors can be used to describe teachers' perceptions about the signs of anxiety exhibited by their dyslexic learners and ways of dealing with them?	RQ2c How do participating language teachers in mainstream primary schools view the use of different methods in dealing with the foreign language anxiety of dyslexic learners or students			
RQ1d What is the relationship among these factors?				

Aim: To get an overall picture of 1.) the participating primary school EFL teachers' awareness of their dyslexic learners' foreign language anxiety. 2.) the participating teachers' awareness about the ways dealing with their learners' foreign language anxiety.	with dyslexia-like symptoms? Aim: To gain insights into 1.) teachers' reported experience on how the dyslexic learner's FLA affects the L2 learning processes. 2.) into participating teachers' reported experience in dealing with their learners' foreign language anxiety.	Aim: To explore how teachers' perceptions on dealing with their dyslexic learners' foreign language anxiety manifest themselves in actual EFL teaching practices	Aim: To gain insights into participating teachers' perceptions on success in dealing with their learners' foreign language anxiety.	Aim: 1.) to contrast and compare teachers' perceptions on dealing with their dyslexic learners' foreign language anxiety with teachers' actual practice 2.) to construct a 'theoretical framework' of the elements on how the teacher can advance the development of approaches and strategies to deal with dyslexic learners' anxiety
Method: Large-scale questionnaire study: Questionnaires ($N = 245$ (think aloud: 2, pilot: 52))	Method: Semi-structured interviews with teachers of English ($N = 8$), with 3 deputy headmasters + 4 support staff: 2 speech therapists, 1 school psychologist, 1 developmental specialist ($N7$) = ($N15$)	Method: Semi-structured non-participant observations: 27 EFL lessons with teachers of English ($N = 9$)	Method: Semi-structured interviews with teachers of English ($N = 8$), with 3 deputy headmasters + 4 support staff: 2 speech therapists, 1 school psychologist, 1 developmental specialist ($N7$) = ($N15$)	Method: observation notes are triangulated with interview data
Data analysis: statistical analysis using SPSS (e.g., descriptive statistics)	Data analysis: constant comparative method	Data analysis: constant comparative method	Data analysis: constant comparative method	Data analysis: grounded theory

As can be seen in Table 1 (Strand 1), I conducted a questionnaire study with 245 (think-aloud: 2, pilot: 52) teachers of English to investigate the participating primary school EFL teachers' awareness regarding their dyslexic learners' foreign language anxiety and the strategies

that can be implemented to manage it. In selecting the sample, I aimed to collect data from three different types of schools from as many municipalities as possible in different parts of the country through school management. The schools were randomly selected from a list called 'kir_mukodo_intezmenyek', which was downloaded from Oktatási Hivatal. The selection was made by type of school (primary school only, primary school with specialization, primary and secondary school), type of municipality (Budapest, county town, other town, village) and the regions of the country (Budapest, Pest county, North Hungary, North Transdanubia, South Transdanubia, East Hungary, South Great Plain). The selection process ensured that teachers from schools across different parts of the country were contacted evenly.

The purpose of the questionnaire study was to find answers to the following research questions:

RQ1a What manifestations of dyslexic primary school students' foreign language anxiety are language teachers aware of?

RQ1b What factors can be used to describe teachers' attitude to the signs of anxiety exhibited by their dyslexic learners and ways of dealing with them?

RQ1c What factors can be used to describe teachers' perceptions about the signs of anxiety exhibited by their dyslexic learners and ways of dealing with them?

RQ1d What is the relationship among these factors?

The data gained from the questionnaires were submitted to descriptive statistical analysis as well as inferential statistical analysis with the help of SPSS 22.

In Strand 2, qualitative data were collected via interviews involving 8 teachers of English. I chose these teachers intentionally to investigate why those who had received dyslexia training in the first strand were not more likely to teach anxiety-reducing strategies than their colleagues. The group included 3 deputy headmasters, and 4 support staff: 2 speech therapists, 1 school psychologist, and 1 developmental specialist, who were available for the study. The study attempted to explore the following questions:

- RQ2a How does anxiety affect the L2 learning process for students with dyslexia or dyslexia-like problems based on the experience of language teachers in mainstream primary schools?
- RQ2b How do language teachers reflect on their experience dealing with the foreign language anxiety of dyslexic language learners?

- RQ2c How do participating language teachers in mainstream primary schools view the use of different methods in dealing with the foreign language anxiety of dyslexic learners or students with dyslexia-like symptoms?
- RQ3 What characterizes teachers' practices in dealing with their dyslexic learners' foreign language anxiety?
- RQ4 What are participating language teachers' perceptions on success in dealing with the foreign language anxiety of dyslexic students?
- RQ5 What teaching practices contribute to the success of dealing with dyslexic students' foreign language anxiety in EFL classes in Hungary?

In Strand 2, I also made classroom observations to collect qualitative data. Altogether 27 EFL lesson observations were made with 9 teachers of English, most of whom were the same EFL colleagues I had interviewed together with some other professionals, who only joined us for the observations. The observations were conducted to explore how teachers' perceptions on dealing with their dyslexic learners' foreign language anxiety manifest themselves in actual EFL teaching practices to be able to answer the following research question:

- RQ3 What characterizes teachers' practices in dealing with their dyslexic learners' foreign language anxiety?
- RQ4 What are participating language teachers' perceptions on success in dealing with the foreign language anxiety of dyslexic students?

The observation notes were triangulated with interview data from the 15 participating EFL teachers. In addition, semi-structured interviews were also conducted with 4 support staff: 2 speech therapists, 1 school psychologist, and 1 developmental specialist. Apart from these sources of data, language course material, student test, notes, student exercise books, as well as the schools' planning boards were used as data to answer the research questions.

Given that the COVID pandemic hindered the implementation of the Dissertation project, the data collection was delayed. Figure 1 shows the Strands in the order of their implementation.

Figure 1

The Research Design and Timeline of the Dissertation Project

The mixed-method study can be broken down into two strands:

Strand 1: quantitative inquiry (January–November 2020)

Description, (pilot survey) (January–June 2020)

(piloted survey, June–August 2020) (conducting a piloted survey, September–October 2020)

- 245 primary school language teachers (random sampling), with an average of 18 years of experience
- questionnaire survey (multi-item scales, 5-point Likert scales)
- descriptive statistical analysis and inferential statistical analyses

Strand 2: qualitative inquiry (Jan–December 2021)

Description, (interview guide development, observation guide development) (January–Feb 2021)

- Participant triangulation: 3 deputy headmasters + 4 support staff+ 12 teachers from 10 different schools by type of school and settlement
- Interviews conducted (March 2021– August 2021)
 - participant triangulation: 3 deputy headmasters + 4 support staff: 2 speech therapists, 1 school psychologist, 1 developmental specialist + 8 EFL teachers (purposive sampling, snowball sampling, convenience sampling)
 - instrument triangulation: semi-structured interviews, examination of student work products, and classroom observations
- Classroom observations (September 2021– December 2021)
 - participant triangulation: 27 EFL lessons +9 EFL teachers (purposive sampling, snowball sampling, convenience sampling)
 - qualitative constant comparative analysis

4 Main Results

4.1 Strand 1: Quantitative inquiry

- RQ1. What factors can be used to describe teachers' attitudes to and perceptions about the signs of anxiety exhibited by their dyslexic learners and ways of dealing with them?
- RQ1a What manifestations of dyslexic primary school students' foreign language anxiety are language teachers primarily aware of?
- RQ1b What factors can be used to describe teachers' attitudes to the signs of anxiety exhibited by their dyslexic learners and ways of dealing with them?
- RQ1c What factors can be used to describe teachers' perceptions about the signs of anxiety exhibited by their dyslexic learners and ways of dealing with them?
- RQ1d What is the relationship among these factors?

The first set of research questions aimed to gain a general idea of how aware the participating primary school English teachers are of their dyslexic students' foreign language anxiety and how aware the participating teachers are of how they manage their students' foreign

language anxiety. The questionnaire designed for this purpose was based on the literature (Kormos, 2017; Kormos & Smith, 2012; Piechurska-Kuciel, 2008; Piniel, 2009; Sarkadi, 2009; Schneider & Crombie, 2003; Sparks & Miller, 2000; Tomlinson & Allan, 2000; Tomlinson, 2014, Tóth, 2017) Having reviewed the literature, I collected and formulated the statements for the scales. The Cronbach's alpha internal consistency reliability coefficients were calculated for the multi-item scales, which yielded acceptable or near-acceptable internal consistencies with α values between 0.66 and 0.87 (Cronbach's alpha: *Identification of anxious dyslexic learners*: 0.81, *Manifestations of dyslexic primary school students' foreign language anxiety*: 0.87, *Views on how to deal with dyslexic students' anxiety*: 0.73 *Teaching methods used*: 0.68, *Learning environment*: 0.66, *Teaching anxiety-reducing strategies*: 0.74). After conducting the Principal Component Analysis, it was found that the *Teaching methods used*: 0.68 and *Learning environment*: 0.66 did not reach the required 0.7 Cronbach's alpha internal consistency reliability coefficient, and the constructs fell into several dimensions. Therefore, they were removed from the analysis.

The constructs that were used to describe teachers' attitudes to and perceptions about the signs of anxiety exhibited by their dyslexic learners and ways of managing their anxiety were the following: *Identification of anxious dyslexic learners* (M=4.09, SD=0.66), *Manifestations of dyslexic primary school students' foreign language anxiety* (M=3.60, SD=0.86), *Views on how to deal with dyslexic students' anxiety* (M=3.69, SD=0.76), *Teaching anxiety-reducing strategies* (M=4.19, SD=0.61) and the relationship between these factors.

Overall, teachers reported using *Teaching anxiety-reducing strategies* (M=4.19, SD=0.61), which aligned with the findings of studies investigating foreign language classroom anxiety from a classroom perspective (see e.g., Piniel, 2006; Nyikes, 2019), yet their general level of awareness of the *Manifestations of dyslexic primary school students' foreign language anxiety* was not particularly high (M=3.60). Significant correlations were found between *Views on how to deal with dyslexic students' anxiety* and *Teaching anxiety-reducing strategies* ($r=.653$; $p<.0.01$). Moreover, *Teaching anxiety-reducing strategies* also correlated significantly with the construct of *Identification of anxious dyslexic learners* ($r=.462$; $p<.0.01$). Presumably, teachers who recognize dyslexic students with anxiety and feel it is their job to reduce their level of anxiety, are also pedagogically equipped to do so and to reduce the Foreign Language Classroom Anxiety (FLCA) of dyslexic learners.

When we take a closer look at Teachers' perceptions of FLCA management in connection with biographical data, the investigation led to some interesting relationships. The biographical data consisted of data such as the classes/years participating EFL teachers teach,

the age of participants, years of teaching experience, type of school (primary school, primary school with language or other specializations, primary and secondary school), type of settlement (capital, county seat, city, municipality), and participation in dyslexia training,

One-way analysis of variance ANOVA was conducted to examine the relationship between the scales. Results showed that there were no significant between-group differences on any of the dependent variables except for the type of school: primary school, primary school with language or other specializations, as well as primary and secondary school. The one-way ANOVA revealed a significant difference ($p < .02$) for the primary school with language or other specializations where the means were the highest ($M = 4.30$, $SD = .50393$) in identifying anxious students with dyslexia and ($M = 4.46$, $SD = .64269$) for *Teaching anxiety-reducing strategies*. This was significantly higher than for teachers in all primary school types overall. Primary schools with language or other specializations stand out from the other schools in identifying anxious dyslexic students and effectively addressing the FL anxiety of these students. Teachers and students from primary schools with language or other specializations may spend more time together and learn about each other in the EFL classroom.

The one-way analysis of variance ANOVA was also used to determine whether there were any statistically significant differences between the means of the four scales: *Identification of anxious dyslexic learners*, *Manifestations of dyslexic primary school students' foreign language anxiety*, *Views on how to deal with dyslexic students' anxiety*, *Teaching anxiety-reducing strategies*, and *participation in a dyslexia training*. The last item on the list was the independent or grouping variable. The participants were asked whether they had participated in dyslexia training. My goal was to investigate whether participation in dyslexia training can be associated with certain characteristics more than others. The ANOVA analysis revealed that *participation in dyslexia training* was significant in the cases of *Identification of anxious dyslexic learners* [$F(15.309) = 5.495$, $p < .000$] and *Views on how to deal with dyslexic students' anxiety* [$F(7.680) = 4.360$, $p < .006$]. It can be inferred that the EFL teachers who participated in dyslexia training are more likely to be able to *identify anxious dyslexic learners*. EFL teachers' participation in dyslexia training appears to correlate with increasing their ability to identify dyslexic learners with anxiety.

Finally, it must be noted that the one-way analysis of variance ANOVA did not identify significant differences between the *participation in dyslexia training* and the *Teaching anxiety-reducing strategies* scales. The mean of the *Teaching anxiety-reducing strategies* scale is not significantly different from the *participation in dyslexia training*. Interestingly, the findings reflect that dyslexia training does not necessarily make teachers more likely to teach anxiety-

reducing strategies to anxious dyslexic students. This may be because training focuses on teaching methods used for dyslexic students and does not necessarily address the foreign language anxiety that dyslexic students experience. The second strand, the qualitative part of my inquiry may shed some light on why participants who have undergone dyslexia training are not more likely to teach anxiety-reducing strategies as compared to those who have not received such training.

This suggests that trainers may not sufficiently address the affective factors associated with neurodiversity in dyslexia training, how anxiety impacts FL learning, and what useful strategies can be employed to control learners' anxiety. Dyslexia trainers may not link the affective differences in foreign language learning to the cognitive aspects of the barriers experienced by dyslexic students. Training may draw attention to language-related barriers, such as lack of age-appropriate literacy skills, weak verbal memory, processing impairment and speed, however, the affective factors may receive less attention.

4.2 Strand 2: qualitative inquiry

- RQ2a How does anxiety affect the L2 learning process for students with dyslexia or dyslexia-like problems based on the experience of language teachers in mainstream primary schools?
- RQ2b How do language teachers reflect on their experience dealing with the foreign language anxiety of dyslexic language learners?
- RQ2c How do participating language teachers in mainstream primary schools view the use of different methods in dealing with the foreign language anxiety of dyslexic learners or students with dyslexia-like symptoms?
- RQ3 What characterizes teachers' practices in dealing with their dyslexic learners' foreign language anxiety?
- RQ4 What are participating language teachers' perceptions on success in dealing with the foreign language anxiety of dyslexic students?
- RQ5 What teaching practices contribute to the success of dealing with dyslexic students' foreign language anxiety in EFL classes in Hungary?

Data collected from interviews and observations were analyzed with the help of the constant comparative method (Maykut & Morehouse, 1994; Dörnyei, 2007). An initial reading of the transcripts resulted in 63 coding categories, which could then be grouped into 15 larger categories. After repeatedly reviewing the data and reaching a point of saturation, 33 categories

remained. To ensure the quality of data analysis and interpretation, member-checks and peer-debriefing were used involving the participants, their teachers as well as another researcher.

The qualitative phase of the study found several emerging themes reduced to seven main areas on how dyslexic language learners' FLA could be minimized. To answer the research questions and to present the emerging model of teaching anxious dyslexic learners, I used an exploratory approach to investigate participants' perceptions to consider the following key elements: anxious dyslexic learners, the EFL teachers' methodological choices, assessment practices, motivating anxious dyslexic learners, the classroom environment, the language teaching context, and cooperation with colleagues and parents.

4.3 Teachers' perceptions of anxious dyslexic learners

Both qualitative and quantitative data indicate that anxious dyslexic learners experience barriers when learning a foreign language. This was evident in all interviews and in the trends that emerged from the survey data. This aligns with a number of published reports, which have shown that learners with dyslexia may struggle with age-appropriate literacy skills, weak verbal memory, or other difficulties (Kontra et al., 2015; Kormos, 2017; Kormos & Csizér, 2009; Kormos & Kontra, 2008; Kormos & Smith, 2012; Schneider & Crombie, 2003 and that dyslexia can negatively impact foreign language learning. Specific learning difficulties have been associated with anxiety and behavioural problems (McNulty, 2003; Siegel, 2016).

As for the characteristics of anxious dyslexic learners, some of their strengths were reported to include creativity, and often good speaking skills when they were not being tested. Their weaknesses, however, were reported to be associated with handwriting, knowing that they would have to write by hand and their writing would not be legible, and worrying that they would not be able to finish their assignment in time. Moreover, as reported by teachers, their weaknesses were also linked to losing motivation, having language barriers, and reading in front of others. The difficulties that students experience in their mother tongue transfer to a foreign language. The difficulties in reading and grammar skills are associated with anxiety when they are transferred to a foreign language.

To understand the data, it was investigated how anxious dyslexic learners are identified in EFL language classes, and what characteristics impact the process of language learning. There is a gap between the theory of creating inclusive education and its implementation in EFL classrooms. While EFL teachers, based on the data collected from the questionnaire, mostly agree with the statements about teaching anxiety-reducing strategies, data collected

from the interviews and observations show that they do not necessarily teach such strategies to their students. Although EFL teachers and colleagues can identify anxious dyslexic students, and based on the quantitative data collected, address these barriers by establishing classroom rules, using technology, allowing for mistakes, adopting caring attitudes and providing practice opportunities using appropriate strategies, the qualitative data provided further insight into how to deal with anxious dyslexia students.

It turned out that students could have been better involved in EFL classes. Based on the interview and observations data, participating EFL teachers reported using anxiety-reducing strategies to minimize the stress and apprehension of their dyslexic learners and utilized such strategies during the classes observed. Instead of teachers just reducing the anxiety of dyslexic learners, they should also teach students strategies, so that they can learn to manage their anxiety on their own. Involving anxious dyslexic learners in language classes was a challenge for EFL teachers, as the EFL teachers in the sample felt unprepared for the job. Where EFL teachers were prepared and knew what adjustments would work for anxious dyslexic learners, their work was more successful, which is consistent with the literature (Sztatker, 2011).

4.4 The EFL teachers' methodological choices

Data revealed that teaching qualifications and training failed to prepare EFL teachers to deal with anxious dyslexic learners. While, in some cases, language barriers were minimized when training courses were reported to address literacy challenges, participating EFL teachers did not report any preparatory courses on how language professionals should deal with the anxiety that accompanies language-related barriers.

The methodological choices, techniques, and activities used by EFL teachers were investigated from the perspective of meeting the needs of anxious dyslexic learners in an EFL teaching context. Based on the data collected from classroom observation, most classroom activities promoted reading and writing skills as well as grammar exercises. This particular pedagogical approach rarely supported the needs of anxious dyslexic learners. Rather than using a multisensory approach and techniques of differentiation, teachers sometimes fell back on traditional reading and grammar-translation in a frontal teaching mode. However, more pair and group work with chatty partners was observed in one of the classes. Furthermore, as suggested in the literature (Schneider & Crombie 2003), some positive examples of creating learning opportunities through explicit teaching of learning strategies, the use of ICT and other

technologies, music, humour, and visual aids such as flashcards, may be particularly helpful for teaching vocabulary, have been used in other classrooms observed.

4.5 Assessment practices

Concerning the assessment practices, the EFL classes observed were dominated by summative assessment practices, in the form of grammar and vocabulary tests, even though formative assessment might have been more suitable for anxious dyslexic learners. In addition to the limited number of formative assessment examples, differentiation techniques were used on several occasions. Either shorter tests or word tests with reversed language tasks were administered; instead of asking for the English equivalent of the terms, the tests asked these students to provide the vocabulary items in their mother tongue.

The EFL teachers' reports were consistent with the classroom observation experiences. Forms of assessment that would have provided insight into the personal development of students were not recorded in the classes observed. The personal development of anxious dyslexic students measured against their own performance throughout the language learning journey was barely visible. The attitudes of EFL teachers towards exempting students from language learning activities varied greatly. Some believed in completely removing the anxiety from students' EFL learning activities, while others allowed for complete withdrawal from language learning activities. However, most EFL teachers agreed to refuse full exemption from language learning in line with the literature, according to which dyslexic learners should not be exempted from FL education (Sztatzker, 2011)

4.6 Motivating anxious dyslexic learners to become successful language learners

The issue of motivating anxious dyslexic learners was neglected in the quantitative part of the inquiry. However, motivation emerged right at the beginning of the qualitative part of the inquiry when a speech therapist colleague (Bogi, 97-99) stated that the successful integration/inclusion of anxious dyslexic students depended on several factors, including the motivation of these students. Conversely, qualitative data showed that EFL classroom practices consisted of several activities that discouraged anxious dyslexic students from participating in the language learning lessons, for example by making anxious dyslexic students read in front of their non-dyslexic peers one after the other or calling them to the blackboard.

Few teachers managed to motivate their anxious dyslexic students to become successful learners or at least avoid failures. Data reported by teachers also revealed that dyslexic students

repeatedly failed in their language learning, making them stop learning. The definitions of success for anxious dyslexic students may range from objective criteria, such as passing exams, to subjective criteria, such as positive experiences, not dropping out of the foreign language course, or not being partially or fully exempted from language learning. It was also highlighted that for dyslexic students, success may be short-lived. EFL teachers also note that some anxious dyslexic students brought encouragement from home. Motivating family support could lead to successful integration/inclusion, even if EFL teachers' classroom practices lack motivation or peer motivation. According to data reported by EFL teachers, some peers laugh at or ridicule anxious dyslexic students, and consider them a nuisance. Meaningful and engaging tasks, however, improved students' performance and prevented their withdrawal from classroom activities in line with the recommendations of Kontra (2019).

4.7 The classroom environment

EFL teachers gave a detailed account of their efforts to create a welcoming and supportive classroom environment. Data also revealed that positive teacher-learner relationships as well as peer relationships contributed to a language-teaching atmosphere that emotionally served the needs of anxious dyslexic learners. This finding aligns with the literature (Jin & Dewaele, 2018). Thus, the "learning environment" is primarily a result of the relationship between the learners and the EFL teacher. The participating teachers reported that they were able to manage the anxiety levels of their students in the EFL classroom by various methods; either by doing exercise or using breathing techniques. Starting the lesson by clarifying the rules of interaction, having firm, fair, and consistent classroom management, organizing group and pair work as well as classroom layout, and EFL teachers not being afraid to use the mother tongue when deemed necessary, were all rated highly and conducive to language teaching, as reported by teachers. In one school, the administration provided new furniture or flooring for one classroom per year. Most institutions, however, could not report such school-level support.

4.8 The language teaching context and cooperation with teacher colleagues and support staff

The wider context of language teaching, particularly the school, is one of the main contextual factors. The language teaching context is strongly influenced by the support EFL teachers and support staff receive from the school management. Based on the data reported, the headmaster/deputy headmaster can make school-wide training, such as the 'learning to learn'

program, available to the community, improve the accessibility of the physical environment of the school, and provide a language assistant.

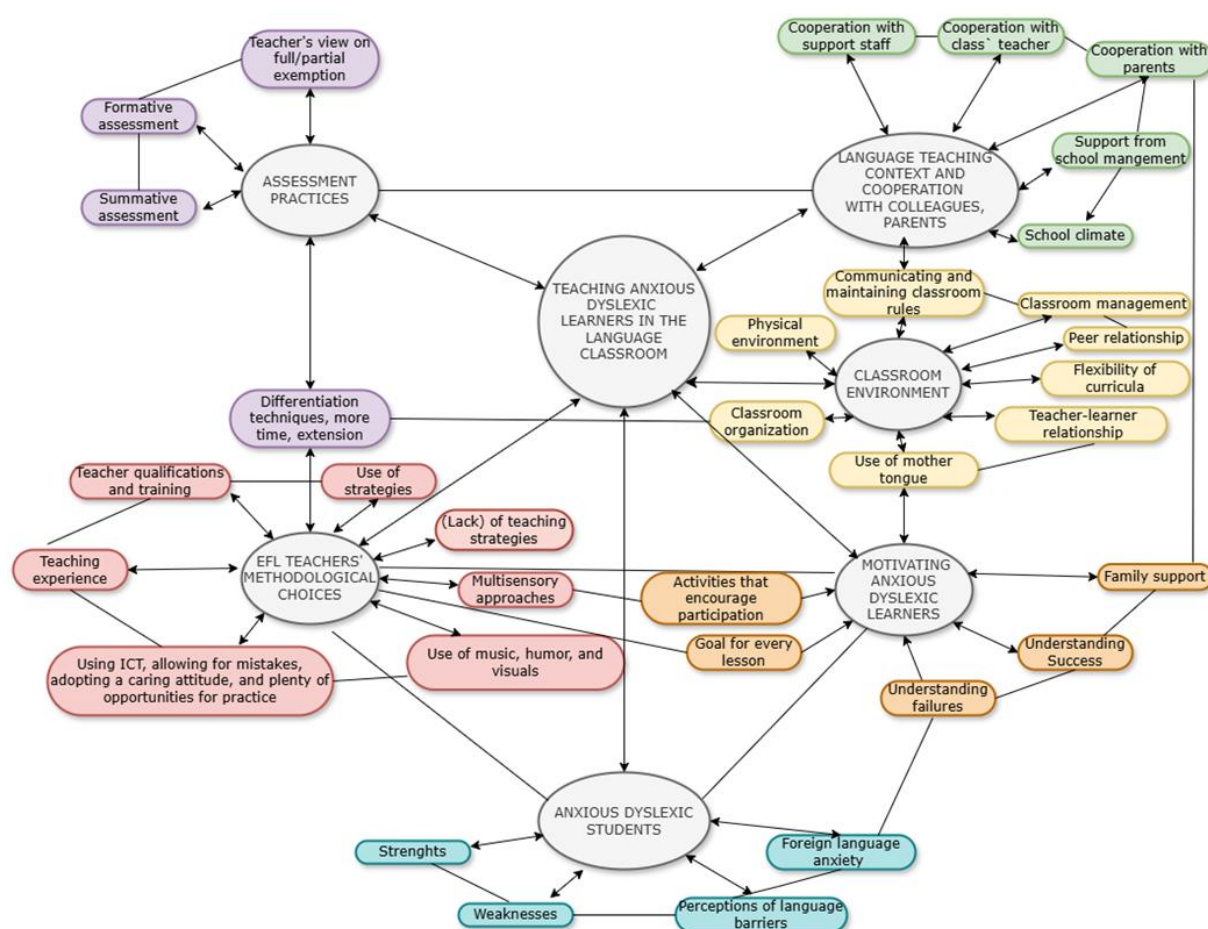
Data shows that while some schools achieve access and inclusion, most have integrative rather than inclusive settings: "Integration is about admitting special needs learners into the existing mainstream classroom settings. Inclusion... the classroom is improved and redesigned in such a way that it can accommodate the needs of all learners"(Nyikes, 2019, p.15). The role of the class teacher is also of paramount importance in creating the language teaching context. In some cases, the class teacher managed to create a community where learners accepted and did not mock each other.

Cooperation between teaching colleagues, supporting staff, and parents is key to teaching dyslexic students and managing their anxiety in successful examples. There is a lack of collaboration among colleagues, and support from parents and school management varies greatly. Aiming to include students with different abilities, such as anxious dyslexic students, could lead to interprofessional cooperation. In two schools, inter- and intra-professional collaboration worked well and strengthened teachers' ability and commitment to provide the appropriate support for students in need without judgement and normalization. This finding aligns with the findings that advocate collaboration with school-based special needs professionals when teaching stressed dyslexic students (Kontráné Hegybíró & Kormos, 2008).

The components listed above characterize the language teaching procedures and constitute the emerging model of foreign language instruction in the context of Hungarian primary schools. The emerging model serves as a visual representation of the complex relationships between the interconnected contextual, cultural, cognitive, affective, and pedagogical aspects of the elements. This visual representation of the emerging model that was drawn up based on the results is shown in Figure 2.

Figure 2

An emerging model of teaching anxious dyslexic learners in the language classroom



The figure illustrates the emerging model of foreign language instruction in Hungarian primary schools. At the center of the diagram is the main topic 'Including and Teaching Anxious Dyslexic Learners in the Language Classroom', with other components surrounding it. These components include the characteristics of anxious dyslexic learners, EFL teachers' methodological choices, assessment practices, motivating anxious dyslexic learners, the classroom environment, the language teaching context, and cooperation with colleagues and parents.

The components described in detail will contribute to a deeper understanding of how teachers can promote the development of approaches and strategies to address the anxiety of dyslexic learners.

5 Conclusion

5.1 Summary of the Main Findings

The results show that there is a discrepancy between the theory of creating an inclusive language teaching environment and its implementation in EFL classrooms. While quantitative data showed that teachers agreed on the use and effectiveness of anxiety-reducing strategies, qualitative data from interviews and observations found that teachers use various strategies to decrease student anxiety, but do not consistently teach strategies to students to manage their own foreign language anxiety. This suggests that participating teachers focus more on dealing with the anxiety of their dyslexic students rather than empowering them with self-management skills so that anxious learners can be helped to build narratives from their experiences to process them and manage anxiety at this narrative level (Şimşek & Dörnyei, 2017).

Data from the questionnaire study showed the strongest correlation between identifying dyslexic learners who experience anxiety and the implementation of strategies aimed at reducing this anxiety, which was supported by qualitative data. Most participating teachers in the interview and observations study who recognized the needs of anxious dyslexic learners, did their best to create supportive learning environments. The findings suggest that EFL teachers create supportive environments by establishing classroom rules and using technology. This is in line with Kormos and Smith (2012), who recommend using technological devices including interactive white boards and other forms of Information and Communications Technology (ICT) for effective and stress-free ways to teach vocabulary and grammar items. Other ways to create supportive environments included allowing for mistakes, adopting caring attitudes, and providing practice opportunities. Challenges faced by EFL teachers included a lack of cooperation with parents and limited support from school management.

Moreover, the study revealed that participants had different levels of understanding of what the definition of success means for anxious dyslexic students. Definitions range from objective criteria such as passing exams, to subjective criteria such as positive student experiences, not dropping out from the foreign language course, or being partially or fully exempted from language learning. It was also highlighted that any success for dyslexic students may be temporary. Another remarkable outcome of the dissertation project is that dyslexia training did not make teachers more capable of teaching anxiety reducing strategies to dyslexic students, which indicates that dyslexia training may not fully address the issue of foreign language learning anxiety.

The findings of the quantitative study showed that the teachers' understanding was informed by different constructs, such as identifying anxious dyslexic students, approaches to addressing their anxiety, and teaching strategies to reduce anxiety. However, the manifestations of foreign language anxiety in dyslexic students did not influence how the participating EFL teachers dealt with their learners' anxiety. The severity of anxiety symptoms did not depend on the factors mentioned above. Once anxiety was recognized in dyslexic learners, the participating teachers provided support for neurodivergent language learners. Both the interviews and observations confirmed that EFL teachers themselves or their colleagues were primarily responsible for identifying students with language barriers.

Overall, the results of the dissertation indicate that there is room for improvement in terms of how teachers address the needs of anxious dyslexic students within mainstream educational settings. The findings of this dissertation research will provide a model for engaging and teaching anxious dyslexic learners and map out areas for future research to better support EFL teachers.

5.2 Pedagogical Implications

The dissertation research project has implications for both teacher training and EFL classroom practices. The findings of this dissertation have the potential to inform language teaching practice, EFL teaching professionals, institutional management, support staff, and policy makers. The results indicate that teachers should be trained in both the cognitive and affective aspects of language teaching and learning. Training is of primary importance on both theoretical and practical levels. Knowledge of individual differences, equality, diversity, and inclusion could be put to good use in language classrooms. Equipped with practical skills to manage learners' emotional experiences could contribute to a more efficient FL learner experience.

A network of collaborating teachers could address the needs of anxious dyslexic learners more effectively than those who cannot turn to their colleagues for help. Cooperation between school support staff and EFL teachers may further improve the inclusion of anxious dyslexic students and help manage their emotional well-being. When school management supports initiatives that empower neurodiverse learners with anxiety, it can lead to full inclusion.

As for classroom management, teachers should understand that anxious dyslexic learners may be shy, quiet, or may opt to withdraw from language learning activities. Teacher

training degree courses are designed to prepare educators to assess the context, weaknesses and strengths, needs, and emotional aspects of teaching a diverse student body. Furthermore, FL teachers should acquire communication skills to effectively communicate with students, parents, and colleagues, and to handle conflicts that may arise during the language teaching process.

To conclude, an understanding of individual differences and the acquisition of methods, techniques, and strategies are crucial to accommodate the needs of dyslexic students with anxiety. The dissertation study has implications for language teachers, school management, as well as researchers. Culturally relevant and inclusive teaching practices may be appreciated by learners.

5.3 Further Research and Limitations

My dissertation research focused on primary schools located in disadvantaged villages, small towns, and prestigious institutions of the Capital, from Western Hungary to Eastern Hungary. Further research could explore other types of schools, not limited to primary schools, to gather richer data on managing the anxiety of dyslexic learners in public education. Instead of collecting data at a specific point in time (cross-sectional data collection), longitudinal research (repeatedly collecting data from the same participants over an extended period) could help to determine if inclusive teaching strategies, methods, and practices can be effective over time in dealing with the emotions associated with foreign language learning.

As with any study, the present research has certain limitations. The primary limitation has to do with the COVID-19 pandemic. Data collection had to be postponed due to the restrictions and lockdowns. Since it was not possible to conduct onsite classroom observations until September 2021, my dissertation research was significantly delayed. Another limitation of my dissertation study is related to the quantitative part. Specifically, two constructs of the measuring survey instrument needed improvement to avoid their removal from the first strand of the research, which is the quantitative part. This limitation of the questionnaire needs to be considered in case it is to be used in further studies.

Further qualitative inquiries are needed to gain insights into the professional development of EFL teachers. The support and training needs of EFL teachers should also be investigated. This dissertation research focused on what the institution and EFL teachers can do to break down barriers for dyslexic learners with anxiety. The focus of the inquiry was on teachers. As for a learner perspective, a questionnaire study involving primary school students

would provide more generalizable information on the impact of anxiety on L2 learning processes, which would broaden the scope of the study. A systematic analysis could be made of the student and parent views, as well as the home environment; the level of support learners receive from home and how it impacts learner performance.

The transferability of the findings is limited due to the unique characteristics of the Hungarian school system and participant demographics. It was challenging to find male EFL teachers willing to participate in the interviews and observations. Therefore, the findings may not be transferable to all school contexts. Nevertheless, they can still be used in the context of foreign language teaching. The data collected provides a comprehensive understanding through complementary qualitative and quantitative perspectives.

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