



REPUBLIC OF TÜRKİYE
ÇANAKKALE ONSEKİZ MART UNIVERSITY
SCHOOL OF GRADUATE STUDIES

DEPARTMENT OF FOREIGN LANGUAGE EDUCATION

**AN INVESTIGATION INTO PRE-SERVICE ENGLISH LANGUAGE
TEACHERS' PERCEPTIONS ABOUT AND ATTITUDES
TOWARDS TEACHING STUDENTS WITH DYSLEXIA:
THE ROLE OF YEAR OF EDUCATION**

MASTER'S THESIS

SELİN CENGİZ YEŞİL

SUPERVISOR
ASSOC. PROF. DR. SEVİM İNAL

ÇANAKKALE - 2025



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T.C.
ÇANAKKALE ONSEKİZ MART ÜNİVERSİTESİ
LİSANSÜSTÜ EĞİTİM ENSTİTÜSÜ



Selin CENGİZ YEŞİL tarafından Doç. Dr. Sevim İNAL yönetiminde hazırlanan ve 22/08/2025 tarihinde aşağıdaki jüri karşısında sunulan “**An Investigation Into Pre-Service English Language Teachers’ Perceptions About and Attitudes Towards Teaching Students with Dyslexia: The Role of Year of Education**” başlıklı çalışma, Çanakkale Onsekiz Mart Üniversitesi Lisansüstü Eğitim Enstitüsü **Yabancı Diller Eğitimi Anabilim Dalı**’nda **YÜKSEK LİSANS TEZİ** olarak oy birliği ile kabul edilmiştir.

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ETİK BEYAN

Çanakkale Onsekiz Mart Üniversitesi Lisansüstü Eğitim Enstitüsü Tez Yazım Kuralları'na uygun olarak hazırladığım bu tez çalışmasında; tez içinde sunduğum verileri, bilgileri ve dokümanları akademik ve etik kurallar çerçevesinde elde ettiğimi, tüm bilgi, belge, değerlendirme ve sonuçları bilimsel etik ve ahlak kurallarına uygun olarak sunduğumu, tez çalışmasında yararlandığım eserlerin tümüne uygun atıfta bulunarak kaynak gösterdiğimi, kullanılan verilerde herhangi bir değişiklik yapmadığımı, bu tezde sunduğum çalışmanın özgün olduğunu, bildirir, aksi bir durumda aleyhime doğabilecek tüm hak kayıplarını kabullendiğimi taahhüt ve beyan ederim.

DECLARATION OF ETHICS

In this thesis, which I have prepared in accordance with the Çanakkale Onsekiz Mart University Graduate Education Institute Thesis Writing Guidelines, I hereby declare and undertake that I have obtained the data, information, and documents presented within the thesis in line with academic and ethical principles; that I have presented all information, documents, evaluations, and results in compliance with scientific ethical and moral standards; that I have properly cited all the works I have benefited from; that I have not made any alterations to the data used; and that the study I present in this thesis is original. I also accept all possible legal consequences that may arise against me in the event of any contrary situation.

Selin CENGİZ YEŞİL

22/08/2025

TEŞEKKÜR

Bu tez, yalnızca akademik bir çalışma değil; aynı zamanda köklerini kalbimde yaşattığım kıymetli mesleğimin bir yansıması ve her seferinde farklı heyecanla girdiğim sınıflarımda öğrencilerimin iyi hissetmelerini sağlamak amacıyla gerçekleştirilmiş bir çalışmadır. Aynı zamanda, bana inanan, eşlik eden ve destekleyen kıymetli insanlarla birlikte çıktığım uzun bir yolculuğun meyvesidir.

Öncelikle, çalışma sürecim boyunca gece gündüz her anlamda yanımda olan, sorularıma sabırla yanıt veren, fikirlerimi özgürce ifade edebilmeme olanak tanıyan ve bilgi ve deneyimleriyle bana rehberlik eden değerli tez danışmanım Doç. Dr. Sevim İNAL'a gönülden teşekkür ederim.

Hayatım boyunca desteklerini her daim hissettiren; bu tez sürecinde de sabırları, fedakârlıkları ve varlıklarıyla bana güç veren sevgili anneme, babama ve abime; ayrıca, koşulsuz sevgisiyle her zaman yanımda olan ve tüm zorlukları hafifleten kıymetli eşime minnettarım.

Akademik hayatım boyunca bana ilham veren ve katkı sunan tüm hocalarıma ve öğrencilerime, moral ve destekleriyle yanımda olan tüm arkadaşlarıma en içten şükranlarımı sunarım.

Araştırmama katkı sağlayan tüm katılımcılara, veri toplama sürecinde destek olan hocalarıma, öğretmen adaylarına ve bu çalışmanın gerçekleşmesine imkân tanıyan kurumlara da teşekkür ederim.

Son olarak bu çalışma sayesinde daha farklı bir birey olduğum şüphesiz. Bu süreçte iyisiyle kötüsüyle yaşadığım tüm duygulara şükrediyorum. Emek veren, katkı sağlayan, dualarıyla yanımda olan herkese sonsuz teşekkür ediyorum.

Selin CENGİZ YEŞİL
Çanakkale, Ağustos 2025

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This thesis is not only an academic study, but also a reflection of my cherished profession, which I hold close to my heart, and an effort to ensure that my students feel good in the classrooms I enter each time with renewed excitement. It is also the result of a long journey undertaken together with the valuable people who believed in me, supported me, and accompanied me throughout.

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ÖZET

İNGİLİZCE ÖĞRETMEN ADAYLARININ DİSLEKSİYE YÖNELİK ALGI VE TUTUMLARININ İNCELENMESİ: EĞİTİM YILININ ROLÜ

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Disleksi, okuma, yazma ve dinleme gibi temel beceriler yanında, zaman yönetimi ile sosyal etkileşim gibi ilişkili becerileri etkileyen dil temelli yaygın bir öğrenme güçlüğüdür. Böylece öğrencilerin akademik başarıları ve öz güvenleri olumsuz yönde etkilenebilmektedir. Belirtiler, öğrencilerin okumayı ve yazmayı öğrenmeye başladığı ilkokul yıllarında daha belirgin hale gelmektedir. Bu nedenle öğretmenlerin disleksiye tanımlayabilmeleri, kapsayıcı sınıflar oluşturabilmeleri için bilgiye, farkındalığa, olumlu tutuma ve donanımına sahip olmaları gerekmektedir.

İngilizce eğitimi erken yaşta başladığından, İngilizce öğretmenleri de bu sürece sınıf öğretmenleri gibi dahil olmaktadır. İngilizce öğretmenleri, üniversite eğitimi süresince disleksiye yönelik olumlu tutumlarının, bilgi ve becerilerinin geliştirilmesine yönelik bir eğitim aldıktan sonra disleksiye sahip öğrencilerin ihtiyaçlarını belirleyerek onlara destek sağlayabilirler.

Mevcut çalışma İngilizce öğretmeni adaylarının disleksiye yönelik algılarını ve tutumlarını ortaya koymaktadır. Çalışmaya 226 İngilizce öğretmeni aday katılmıştır. Veriler, 20 maddelik bir anket, beş açık uçlu ve bir likert tipi soru aracılığıyla toplanmıştır. Tanımlayıcı, Kuder-Richardson 21 formülü (KR-21), Ki-Kare, çapraz tablo ve nitel içerik analizleri yapılmıştır. Çalışma sonucunda, İngilizce öğretmeni adaylarının disleksiye yönelik olumlu tutuma sahip oldukları, destekleyici yaklaşımları ve iş birliğinin öneminin farkında oldukları sonucuna varılmıştır. Ancak disleksinin kesin tanımının yapılamaması,

İngilizce öğretmen adaylarının disleksiye sahip öğrencilerin eğitiminde yer alma konusunda hazır hissetmemeleri veya yeterli tecrübe ve profesyonel eğitim hakkında yetersiz olmaları verilen cevapların analizi sonucunda anlaşılmıştır.

Anahtar Kelimeler: Disleksi, Özel Eğitim, İngilizce Öğretmen Adayları, Öğretmen Eğitimi, Bireyselleştirilmiş Öğretim, Kapsayıcı Eğitim.



ABSTRACT

AN INVESTIGATION INTO PRE-SERVICE ENGLISH LANGUAGE TEACHERS' PERCEPTIONS ABOUT AND ATTITUDES TOWARDS TEACHING STUDENTS WITH DYSLEXIA: THE ROLE OF YEAR OF EDUCATION

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Master's Thesis in the Department of Foreign Language Education

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Dyslexia is a language-based learning difficulty that affects not only core skills such as reading, writing, and listening but also related skills like time management and social interaction. Therefore, students' academic achievement and self-confidence may be negatively influenced. The symptoms become more apparent during the early years of primary school, when students begin learning to read and write. Thus, teachers must possess sufficient knowledge, awareness, positive attitudes, and competence to identify dyslexia and create inclusive classrooms.

Since English language education starts at an early age, English teachers are also involved in this process similarly to primary school teachers. After receiving training during their university education that enhances their knowledge, attitudes, and skills towards dyslexia, English teachers can identify the needs of students with dyslexia and provide them with appropriate support.

The present study aims to reveal English pre-service teachers' perceptions and attitudes towards dyslexia. A total of 226 English pre-service teachers participated in the study. Data was collected through a 20-item questionnaire, five open-ended questions, and one Likert-type question. Descriptive statistics, Kuder-Richardson Formula 21 (KR-21), Chi-Square tests, cross-tabulations, and qualitative content analyses were conducted. The

results indicated that English pre-service teachers hold positive attitudes towards dyslexia and are aware of the significance of supportive approaches and collaboration. However, the analyses also revealed that they did not provide precise definitions of dyslexia and did not feel adequately prepared or sufficiently trained to work with students with dyslexia.

Keywords: Dyslexia, Special Education, Pre-service English Teachers, Teacher Education, Individualized Instruction, Inclusive Education.



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LIST OF ABBREVIATIONS

ADHD	Attention Deficit Hyperactivity Disorder
ECTS	European Credit Transfer System
EFL	English as a Foreign Language
ELT	English Language Teaching
IDA	International Dyslexia Association
IQ	Intelligence Quotient
KR-21	Kuder–Richardson Formula 21
SLL	Second Language Learning
SpLLDs	Special Language Learning Difficulties

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CHAPTER ONE

INTRODUCTION

1.1. Introduction

This chapter introduces the current study's background, statement of the problem, purpose, and research questions. Additionally, it underlines the study's significance, assumptions, and limitations.

1.2. Background of The Study

Learning is a significant and life-long process that plays a central role in human development. Individuals constantly observe their surroundings, engage in experiences, and acquire new knowledge from these interactions. Nevertheless, everyone has different ways of learning and process of their learning may vary because of their unique characteristics and personal needs and wants. For instance, during the school years or at times when students meet a completely different context including peers, teachers, or written language, they may have various experiences that effect their learning path. During this path, although students display individual strengths, they may experience specific challenges that influence their learning process negatively. Therefore, in case of experiencing challenges, learning may change direction for a learner including internal and external issues such as absence of motivation, guidance or presence of learning difficulties. The presence of learning difficulties may affect individuals' lives starting from their childhood and diagnosed – probably – at the early years of their education, however, not all the challenges may be a clinical issue. These challenges may affect various learning and development domains and range in type and intensity. For instance, students may have various learning difficulties such as autism, attention deficit hyperactivity disorder (ADHD), dyscalculia, or dyslexia.

Dyslexia is a language-based learning difficulty that has a neurobiological origin. It is defined by poor spelling and decoding skills as well as difficulties in accurate and fluent word recognition (International Dyslexia Association, 2012; Lyon et al., 2003). In society, the first sign of dyslexia may be identified as lettering reversal but an issue about coordination of visual and phonological components of the language (Lachmann and Geyer,

2003). It is sometimes difficult to link letters to their matching sounds because of the trouble at processing sounds, which is significant for reading and spelling failure (Blau et al., 2009). For instance, individuals may find it difficult to combine sounds to form words or to break words down into smaller sounds.

Dyslexia is not caused by lack of intelligence or willingness. Every intelligence and intelligence type may experience dyslexia (International Dyslexia Association, 2020; Balçı, 2017). Even though the causes of dyslexia are not clear precisely, brain anatomy and imaging results indicate that the brains of individuals with dyslexia operate differently (Munzer, et al., 2020). Moreover, a genetic mutation may affect the reading parts of the brain and may be hereditary (Corona et al., 2012). Symptoms of dyslexia may be seen in various forms such as decoding, spelling, word recognition, line-skipping, mixing letters, comprehension or writing etc. Most of them struggle with distinguishing the speech sounds that make up a word (Share, 2021). These symptoms may be observed during the early years of their education and may cause differences among their peers in terms of cognitive processes. Although dyslexia may be observable during education, individuals may show some symptoms such as being confused about finding out left or right, telling the time, and being easily disoriented (Adubasim and Nganji, 2017) in addition, forgetfulness, poor numeracy, organization, and difficulty in communication may be observed additionally (Stevani and Tarigan, 2022) even before they start to school or to learn read and write.

The effects of dyslexia are not visible only in students' language development or academic life. Also, it affects students' social and emotional development which underlines the need for individualized and multifaceted teaching. As a result of the difficulties students experience, they may acquire some negative personality traits, such as low self-esteem and self-confidence, anxiety, depression, or lack of motivation. These traits cause students to hold back instead of taking initiative or experiencing the limit of their vision. Effective educational and psychological support may accentuate their lives. For instance, psychotherapy is a significant type of treatment for students with dyslexia having anxiety or depression (Schulte-Körne, 2010).

Teachers have an essential responsibility to enlighten the students' strengths and empower their weaknesses. Because the early diagnosis has a significant effect, interventions may be done in time and challenges may be foreseen. To support their students, language teachers should identify learning challenges early and implement inclusive teaching strategies. It is important for language teachers to fully understand the challenges as well as inclusive ways of teaching. In other words, teacher training increases teachers' knowledge and inclusion and they may develop positive attitudes and improve their self-efficacy (Bimali, 2019).

As a result of being a language-based difficulty English language teachers play a critical role in diagnosing, supporting psychologically and providing an effective way of teaching to students with dyslexia during their language learning as English is taught as the first foreign language. The difficulties in reading and writing may become particularly evident which should be recognized early and provided appropriate interventions as English is a new language for students. Creating supportive and motivating environment is essential because a proper environment can boost their self-confidence, motivation, and learning efficiency as positive psychology concentrates on (Abu Omar, et al., 2024). Thus, effective teaching strategies or proper approaches towards these difficulties foster individual growth, academic success, and learning efficiency (Tarjiah et al., 2023). English teachers need to be well-equipped to intervene. They need to be qualified with appropriate teaching tools, resources, and coping strategies. So that, students not only learn a new language but also overcome the difficulties caused by dyslexia with the help of their English teachers.

English teachers need to be aware of students' cognitive, emotional and educational demands. Identifying the current competencies and needs of pre-service English teachers and providing targeted training during undergraduate education are some of the essential steps in ensuring they are ready to support students with dyslexia. Then, raising awareness about dyslexia positively affects both the students and the teachers so that effective intervention plans for extending teacher education may be provided. On the other hand, students may significantly enhance their learning experiences with the help of appropriate approaches implemented by their English teachers. Otherwise, misunderstandings, misdirection or mistreatment may occur because of the lack of information and experience

and cause students to struggle academically and emotionally. For this reason, it is essential that initial teacher education provides the necessary skills.

1.3. Purpose of the Study

The purpose of the study is to examine the pre-service English language teachers' perceptions, attitudes, and preparedness regarding dyslexia. By evaluating their perceptions, attitudes and preparedness, this study aims to provide an evidence-based understanding of the existing strengths and weaknesses as well as gaps and misconceptions in teacher education programs. Raising awareness among English language teachers and highlighting the necessity of the regulation in the teacher education program may be beneficial to experience real-life teaching practices, to improve their coping strategies, and to create inclusive learning environments. Afterwards, students with dyslexia will be included in the English language classrooms with the help of the supportive and inclusive teaching strategies.

Explaining the significance of these findings for upcoming teacher education policies and practices is equally crucial to support the purpose of the study. Aligned with its purpose, the study seeks to find answers to the following research questions (RQs):

- How do the perceptions and attitudes of pre-service English teachers regarding dyslexia distribute?
- Is there any difference among the perceptions and attitudes of pre-service English teachers regarding dyslexia in terms of their gender?
- Is there any difference among the perceptions and attitudes of pre-service English teachers regarding dyslexia in terms of their year of education?
- Is there any difference among the preparedness of pre-service English teachers regarding dyslexia in terms of their gender?
- Is there any difference among the preparedness of pre-service English teachers regarding dyslexia in terms of their year of education?

- What are pre-service English teachers' conceptual understanding of dyslexia?
- What prior experiences have pre-service English teachers had with individuals with dyslexia, and how do they describe these experiences?
- Which school practitioner do pre-service English teachers perceive as holding the greatest responsibility for supporting students with dyslexia, and why?
- To what extent do pre-service English teachers believe they are prepared, through their teacher education program, to support students with dyslexia?

1.4. Significance of Study

This study aims to underline the critical gap in the field of identifying the needs of teacher education in Türkiye. Balcı (2019) indicates that English language teachers in Türkiye limited awareness and knowledge of dyslexia. Although dyslexia is one of the most prevalent learning difficulties and may exist in any classroom, there is limited research on how prepared pre-service English teachers are, particularly in relation to their year of education before graduation. This study offers insights into their perceptions, attitudes and preparedness and assumptions on how to enhance teacher education.

Because recognizing these gaps enables focused adjustments in curricula and teacher training, their significance directly relates to the previously stated aim. According to the results of the study, the needs of pre-service English teachers may be identified, and their education program may be supported with appropriate regulations. To enhance English language teachers' knowledge and awareness, inclusive practices may be integrated into pre-service teacher education training or additional professional training for in-service English teachers. Well-equipped English teachers may positively affect students' educational and social life by using effective personalized teaching methods aiming at students' individual weaknesses or strengths. This may be helpful for students with dyslexia to overcome the challenges they experience. Teachers with high awareness can intervene at an early stage helping students to improve their personal and educational challenges caused by dyslexia.

1.5. Assumptions of the Study

This study is based on several key assumptions:

This study assumes that the participants provide honest and accurate responses during the data collection process representing their perceptions and attitudes. It also assumes that data collection instruments are sufficiently clear and comprehensible. Additionally, the study assumes that teacher education programs in Türkiye are represented by the participants in the study. As these assumptions establish the parameters of the investigation, they also serve as a link to the reasoning, clarifying the necessity and timeliness of this inquiry.

1.6. Rationale of the Study

Dyslexia has a significant impact on students' literacy skills and achieving their academic potential. In context, such as Türkiye where English is taught as a first foreign language starting at 2nd grade, the challenges experienced by students are compounded with other learning hardships such as learning how to read, write and calculate which are learned almost the same age with learning English. Thus, they need to learn how to process and produce linguistic structures that are different from their mother language. Therefore, English language teachers have an essential responsibility because they both facilitate second language acquisition and ensure creating inclusive and supportive learning environments. With this respect, English language teachers need to fully understand the concept of dyslexia as well as the needs and wants of the students so that the interventions may be done in time if the challenges may be foreseen. This may be possible with qualified English teachers in this field. Their teacher training programs may be enhanced by additional content on dyslexia. If teacher training increases teachers' perceptions, they may develop positive attitudes (Bimali, 2019) and be effective guides in terms of learning English and overcoming the possible difficulties. Pre-service English teachers occupy a critical position because their professional perceptions, attitudes and instructional strategies are still being shaped during their four-year teacher education programs. This may be an appropriate time to raise awareness of dyslexia, foster new perspectives, and improve inclusive practices and coping strategies. However, during teacher education, there is limited time to observe or

experience real teaching practices for the students with dyslexia. Insufficient teaching content on dyslexia may negatively affect pre-service English teachers' preparedness and cause them to have limited knowledge of how to intervene.

The rationale of the study indicates the necessity of the investigation by explicitly connecting the significance and underlying assumptions to the research goal. It also emphasizes how critical it is to enhance teacher education before pre-service English teachers graduate.

Thus, to overcome these negative effects of dyslexia on students, teachers should be equipped guides. Especially, in Türkiye where English is a second language (SL), English language teachers should be careful about the early signs of dyslexia because they have an opportunity to evaluate students' language learning process and detect the signs of dyslexia. Therefore, since they shape the future of language teaching, pre-service English teachers' perceptions, attitudes, and preparedness are crucial in identifying and improving the needs of students with dyslexia. Thus, this study is based on identifying the perceptions and attitudes of pre-service English teachers and the relationship between preparedness in Türkiye.

1.7. Problem Statement

Since dyslexia is a relatively new idea for educators in Türkiye, and there is a lack of scientific research on dyslexia (Balcı, 2019), the limited systematic focus on preparing English language teachers to work effectively with students with dyslexia remains as an area suggested to be improved. Pre-service English teachers receive limited instruction about dyslexia, which may result in insufficient knowledge, inadequate coping strategies, and negative attitudes towards English to the students with dyslexia.

The absence of research conducted is another indication of this lack of preparation. These gaps demonstrate the importance that teacher education needs to be linked to the practical classroom realities. Studies indicate that there is a need for more research about dyslexia in English language context and it is necessary to add empirical investigations in this field revealing the current level of perceptions and attitudes of pre-service English

teachers (Atar and Amir, 2023). In other words, it becomes challenging to create policies that address the real issues experienced by teachers in the absence of reliable data. Thus, the number of studies makes it difficult to identify whether teacher education meets the needs and demands of inclusive education.

Awareness of dyslexia in Türkiye is still not at a sufficient level, and teachers continue to receive insufficient support and training on how to differentiate instruction for students with dyslexia (Altındağ Kumaş and Yıldırım, 2023). This absence of institutional support highlights the urgency of revising teacher education curricula.

Balcı (2017) suggests that more research should be conducted to clarify the concept of Dyslexia, its' causes, forms and consequences. Additionally, relevant knowledge regarding dyslexia should be implemented in practical settings and integrated into existing courses. Also, prospective teachers should participate in formal and informal fieldwork opportunities to observe or tutor students with dyslexia (Özçelik and Elverici, 2024).

Consequently, dyslexia is a significant language-based learning difficulty and lack of research on identifying to what extent pre-service English teachers in Türkiye are prepared to teach English to students with dyslexia or what are their perceptions about ad attitudes towards it cause a significant obstacle in this field. Therefore, to improve teacher education programs and help future English language teachers become equipped to support students with dyslexia academically, emotionally and pedagogically, further research is essential. Although more research and curriculum development are necessary, the current study also recognizes numerous methodological limitations that should be considered.

1.8. Limitations of The Study

This study has certain limitations:

Criteria for Group Selection: The implementation group was selected through convenience sampling. The study was conducted in the English Language Teaching departments of three state university in Türkiye that were accessible to the researcher (University A, University B, and University C). Therefore, the results of the study might

have varied if the sample had been larger. As a result, the findings should be evaluated with caution, as they represent the responses of a certain participant group.

Limited Generalizability: The study was conducted with a relatively small number of pre-service English teachers ($N = 235$). Larger and more diverse groups could give different results. Therefore, to capture a wider range of perspectives, future studies should expand the sample size and diversity.



CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction to Dyslexia

Dyslexia derives from “dys” standing for “difficulty” and “lexis” which means language or words in Greek language (Adamu and Soykan, 2019). It affects the recognition of the speech sounds and understanding of how they relate to letters and words (Stevani and Tarigan, 2022) even though it may be defined as a lack of ability to read and write or a sign of low intelligence. However, there is no direct relationship between dyslexia and intelligence (Balci, 2016). Both children with below and below-average intelligence may have dyslexia (Salman, et al., 2016). Also, students with dyslexia are not unable to read and write. They have some difficulties which are overcome with effective guidance. Additionally, it is not a medical condition or a psychological issue (Corona, et al., 2012); These difficulties are not only basic difficulties in learning but are neurological in nature, however, dyslexia affects students emotionally and they experience some challenges because it causes persistent challenges not only in reading but also in writing resulting in demotivation or inability to learn. Thus, they may have low self-esteem, self-confidence, motivation, or anxiety, and academic success.

Every student is unique and learns differently; however, when a student has a special learning difficulty including ADHD, dysgraphia, dyscalculia, autism, and dyslexia, processing the information may be challenging. Understanding the differences between the various manifestations of special learning difficulties helps to point out the difficulties experienced by students with dyslexia. Special learning difficulties include dyscalculia, dysgraphia, dyspraxia, and struggle with math computations (Vouglanis, 2023). Dyslexia affects the way students learn or process a language while other learning difficulties affect different areas. To make this clearer, a brief description of these conditions provides beneficial context before focusing again on dyslexia. ADHD (Attention Deficit and Hyperactivity Disorder) is inattention that is persistent and/or hyperactivity and impulsivity that affects the functioning in two areas at least (at home, school, or work) (National Institute of Mental Health, 2024). Autism is characterized by limited, repetitive behavior patterns, interests, or activities in addition to continuous challenges in social communication and

relationships (Joon, et al., 2021). Dyscalculia is a math difficulty; and dysgraphia is a written expression difficulty (Salman, et al., 2016). The learning difficulty that is most encountered is dyslexia (Balci, 2017). In other words, it is a prevalent learning difficulty and Dyslexia Association (IDA) (2022) states that approximately 1 in 10 individuals have dyslexia, and this may go undiagnosed throughout their lives. Balci (2019) found that around 14.8% of primary and secondary school students were diagnosed with dyslexia in Turkey. Although it has varied effects on language development, dyslexia is not a disease (Altuntaş, 2010).

After underlining the frequency of dyslexia, it's essential to devote attention to its distinct features. Altuntaş (2010) defines characteristics of dyslexia as challenges with sound recognition, analysis, letter-sound translation, visual short-term memory, and quick naming. It is categorized as language -based learning difficulty (Yüksel and Özcan, 2025). On the other hand, Lyon et. al (2003) state that dyslexia has constitutional origin and can be characterized by challenges in single-word decoding caused by weak phonological processing. Also, some experts state that vowel-consonant rule mistakes and lack of phonological awareness are two of the main causes while some state that dyslexia occurs the inability to discriminate between successive sounds (Salman, et al., 2016). These coding problems may be unexpected in terms of individuals age, cognitive or academical skills, however; it can be inferred that they are not the result of developmental delay or sensory problems (International Dyslexia Association, 2002). In other words, students with dyslexia may show some differences in learning among their peers. The early years of formal education are when this difference is most noticeable (Ferrer et al., 2015). This difference may be identified when they start their formal education at school because dyslexia effects reading; children with dyslexia struggle with reading fluently and they may also struggle with writing, spelling, and reading comprehension (Adamu and Soykan, 2019) and during the process of learning how to read and write the traits of students with dyslexia may be observable. Their reading proficiency is below the level of their age and academic situation (Adubasim and Nganji, 2017).

When dyslexia is defined there may be some misunderstandings that cause dyslexia to be defined as affecting only the reading ability of the students. However, dyslexia involves the inability to process the written language, and this may show up as orthographic or phonological processes depending on the language's structure (Balci, 2017). It has been

noted that dyslexia is a particular type of spoken and written language learning impairment that mostly manifests in reading and spelling and is highly visible throughout the learning process (Vouglanis, 2023). Also, word recognition issues and phonological decoding deficiencies follow that are noticeable when trying to read new words (Rack, et al., 1992 as cited in Snowling, 2013). Students with dyslexia have difficulty in interpreting symbolic information which is an obstacle in their learning a language using symbols to process and impart knowledge (Vouglanis, 2023). They struggle with receiving, recognizing, storing, decoding or reproducing the information on demand (Adubasim and Nganji, 2017). Dyslexia not only affects spelling and writing, but also comprehension abilities because of the inability to read properly. Thus, to pave a way to better comprehension, it's critical to diagnose and put methods in place to help them develop their reading skills early because it's not a learning handicap they will outgrow (Philipps, 2022). Dyslexia may not be the only learning difficulty that students may experience. Sometimes, other learning difficulties affecting attention, memory, coordination, and auditory or lateral processing may coexist with dyslexia. It causes some issues with speech expressions besides reading, writing, and spelling (Vouglanis, 2023). Thus, teachers have a crucial role to identify these difficulties and enrich their lesson plan in accordance with the needs of the students.

Students with dyslexia make reading and writing errors (horizontally or vertically) because of similar shapes and sounds such as b, p, and d (Lachmann and Geyer, 2003). They may see the effects of mirror writing. They may read and write backwards. Also, they struggle with writing, and they have poor punctuation choices (Salman, et al., 2016). When presented with comparable graphemes and phonemes during primary school years most students with dyslexia experience visual and/or auditory disorientation. They make mistakes with word inversion, word additions and omissions, letter-syllable correspondences, and affixes (Adubasim and Nganji, 2017). Students' reading comprehension who struggle with dyslexia, may also be impacted by writing and decoding issues. Because of the challenges students with dyslexia experience in reading, comprehending, recalling texts, and understanding the meaning of words. They may not be able to form a general picture, to comprehend concepts and symbols, to identify key ideas, and to determine meaning while reading. Also, they read slowly, lose attention, and struggle with memorizing the information (Vouglanis, 2023). These difficulties may be experienced in mother language, and they may struggle with learning a second language.

Despite these challenges, dyslexia does not prevent students from succeeding in other areas. Even though learning a language is challenging for them, they may excel in numerical sciences, visual arts, or computer-related industries (Salman, et al., 2016). The difficulties students with dyslexia experience are related to their age, level of schooling, motivation, emotional regulation, attention, and health. Other difficulties that students experience are listed below (International Dyslexia Association, 2018):

Reading:

- learning to read,
- having trouble recognizing or creating rhymes
- having trouble counting syllables

Writing:

- Trouble articulating thoughts on paper,
- Spelling errors,
- Performing well on spelling exams but making mistakes in everyday work,
- Having trouble with proofreading.

Teachers, parents or students should be motivated to overcome difficulties because dyslexia doesn't show intellectual incapacity or issues with vision or hearing. Balcı (2017) states that having dyslexia doesn't mean that students can't be successful or they can't learn at school. They can still learn, be successful in their academic life, and have good careers with tolerant and peaceful teaching approaches.

The challenges students with dyslexia experience are not brought on by a lack of knowledge, verbal intelligence, or sensory deficiencies (Corona, et al., 2012). Conversely, students with dyslexia frequently possess above-average intelligence. They can master a variety of cognitive domains when they acquire a decent and supportive education (Balci, 2017).

As a conclusion, dyslexia is a complex learning difficulty that is caused by a variety of neurological, cognitive, and linguistic factors instead of low intelligence or sensory deficiencies. Understanding this complexity is critical for developing early interventions and inclusive teaching methods.

2.2. Types of Dyslexia

To better understand the various signs of dyslexia, researchers have long tried to categorize this complex learning difficulty into several categories. Numerous frameworks, with varying focuses are presented in the literature ranging from observable reading behaviors to cognitive and etiological components. The explanation of these is beneficial for both diagnostic and educational intervention.

One of the early attempts at classification is defined according to Boder (1973) dyslexia has three types (Salman, et al., 2016). The types of Dyslexia that Boder identified consist of Mixed type, Dyseidetic (visual dyslexia), and Dysphonetic (auditory dyslexia). Dyseidetic (visual dyslexia) is the inability to read as a whole and involves trouble recalling what has been seen. This type is about visual processing, preventing the brain from fully processing what the eyes see (Philipps, 2022). It may also be defined as a disruption in the rear of the brain, which leads to problems with perception and visual memory. Students with dyslexia may write similarly shaped letters upside down, such as “m” and “w” (Knapp, 2004). Dysphonetic (auditory dyslexia), which is an impaired letter-sound relationship. Auditory dyslexia may be caused by disruptions in visual-auditory connections. However, visual perception and spoken language are strong points (Knapp, 2004).

Expanding Boder's framework (1973), Philipps (2022) identifies other types of dyslexia. First one is Phonological Dyslexia which is a dyslexia type that addresses the challenges of decoding linguistic sounds and associating sounds with symbols. Also, it is difficult to read novel words (non-words) while reading familiar words is easy (Tree and Kay, 2006). Students with dyslexia have challenge in decoding or sounding out words. In individuals with phonological dyslexia, it has been observed that they have difficulty reading nonsensical words, but do not struggle when reading regular (the words with straightforward sound-letter encoding) and irregular (the words difficult to establish a sound-letter correspondence) words (Balci, 2017). Another type identified by Philipps (2022) is rapid naming dyslexia is having trouble in quickly naming letters, numbers, and colors. Reading speed and processing speed are related to the rapid naming dyslexia. A phonological processing for the cognitive process underlying delayed rapid naming is insufficient to explain the finding that dyslexia can arise in the absence of a pronounced phonological processing impairment; however, in the presence of a rapid naming loss (Araújo et al., 2011). Double Deficit Dyslexia includes naming speed and word sound recognition and combines phonological and rapid naming. Surface dyslexia is struggling with sounding new words and identifying existing words by sight. It is a difficulty in the lexical pathway that causes individuals to read by converting graphemes to phonemes (Friedmann and Lukov, 2008). The brain is unable to identify the word's appearance. In this type, individuals do not have significant problems in phonological processes, but they struggle with visual analysis (Balci, 2017). Additionally, individuals with surface dyslexia have difficulty reading irregular (the words difficult to establish a sound-letter correspondence) words; however, reading nonsensical words is normal. It is having trouble placing newly encountered words into the mental lexicon and they can decode the word phonologically by breaking down into sounds. Linguistic or verbal dyslexia may be characterized as auditory perception difficulties or difficulties in discriminating, causing students to spell and locate words or sentences (Knapp, 2004).

Some scholars classify dyslexia based on its causes in addition to typological models. Accordingly, Philipps (2022) highlights the four types of dyslexia listed below:

- Developmental Dyslexia is inherited or present from birth.
- Primary dyslexia is a genetically inherited. A child may have dyslexia if both of their parents have dyslexia.
- Secondary Dyslexia is about the issues with brain development in the early stages of pregnancy lead.
- Acquired Dyslexia may occur because of a sickness or traumatic brain injury affecting the brain's language processing areas.

Diverse classification of dyslexia should be considered complementary instead of contradictory. Suitable interventions may be done in accordance with the category and the difficulties individuals experience.

2.3. Neurological Basis of Dyslexia

Individuals' language and literacy issues may be a result of an immaturity or impairment in the learning mechanisms assisting in deriving structure from a diverse linguistic environment (Krishnan, et al., 2016). Dyslexia is a language-based learning difficulty, and it has cognitive, neurological, and genetic roots (Acar, 2018). Even though dyslexia has genetic reasons, the causes are still a matter of debate. Thus, it may not be possible to identify that dyslexia is a completely hereditary difficulty (Balci, 2017). Although there are debates on this topic, it may be stated there is a substantial hereditary component.

In addition to its hereditary elements, dyslexia also appears in cognitive areas such as working memory, inhibition, and attention. Also, linguistic difficulties such as phonological processing, semantics, and morphosyntax are exhibited (López-Zamora et al., 2025). It includes issues with reading, word recognition, writing, and spelling and challenges with language processing, phonological awareness, and decoding written materials (Björklund, 2011). It is characterized by poor spelling and decoding, and challenges with

accurate/fluent word recognition (Lyon, et al., 2003). Reading is not automatic for people with dyslexia and needs a lot of effort to decode a written sentence (Björklund, 2011).

Neurological studies also highlight these difficulties. Results showed that students with dyslexia have negative functional connectivity between the motor and control areas of the brain. This is not present in students with dyslexia suggesting a less distinct distinction between the motor and control networks, which could impede the development of automatic handwriting (Yang et al., 2022). Learning difficulties affect neurological processing impairment caused by malfunctioning in brain. As a result, impaired four-skills, spelling and numeracy skills are observed. Intelligence is not a determiner and can be experienced by individuals with both ordinary and above average intelligence Both individuals with average and above-average intelligence can experience it. Malfunctioning occurs in terms of brain's ability to convert visual and auditory information into comprehensible information. It is not mental retardation, brain damage or a sign of low IQ (Intelligence Quotient) (Zeenat, 2023). Students with dyslexia have reduced activation in some of the brain regions related to sensory-motor and visual processing during handwriting. However, according to MRI results handwriting quality doesn't reveal any differences. It can be concluded that fluency is the main issue rather than the legibility (Yang et al., 2022).

Cognitive processes have a significant role in understanding dyslexia. Dyslexia involves complex interactions between various cognitive processes. Recognizing letters and the sounds is a dynamic process. The coordination of visual, auditory, motor processes, including perception, memory and attention (Chiarenza, et al., 2012). Reading requires to separate and code the sounds in words. This helps individuals decipher the code. After deciphering, individuals can start reading by realizing the letters stand for the sounds making up the spoken language (Balci, 2017). Reading requires a complex mental process, and dyslexia can be experienced in several ways, including struggling with decoding sequentially, poor discrimination of graphemes that are oriented differently in space, differ in small details, or correspond to graphemes (Corona, et al., 2012). The accuracy and fluency in reading are affected by these decoding problems. The relation between handwriting of students with dyslexia challenges and brain activity, particularly in areas related to movement, visual-orthographic processing and cognitive control (Yang, et. al, 2022).

Koifman (2023) states that students with learning difficulties have reduced working memory and phonological awareness, they struggle with processing the language under time pressure, and they may struggle with learning L2 efficiently because of being cognitively difference. The possible effects of developmental dyslexia genes on the brain and function are examined along with the reciprocal and interrelated relationships between these effects and language, reading, cognitive, and sensory abilities (Acar, 2018).

Moreover, there may be some deficiencies students with dyslexia can experience. For instance, deficiency in phonological coding and memory or phonological coding deficiencies have no bearing on retrieval issues. In other point of view, the phonological deficiencies may be caused by auditory processing impairments (Vellutino, et al., 2004).

Consequently, dyslexia's neurological foundation represents the interaction of brain-level, cognitive, and hereditary processes. These results demonstrate that dyslexia is a unique neurodevelopmental difficulty, which requires specialized educational interventions rather than being a question of motivation of IQ.

2.4. Diagnostic Criteria

Dyslexia is a lifelong condition, and even if it is not diagnosed in childhood, an individual may be diagnosed with dyslexia at adulthood stage (Balci, 2016). There may be negative effects to students' academic life if dyslexia is not discovered during the early years of school through assessment by a specialist (Corona, et al., 2012). Therefore, early diagnosis has a significant impact on preventing long-term difficulties and fostering academic success.

Teachers are important stakeholders in the early diagnosis of students with dyslexia because they can observe their learning behaviors and contribute to the reduction and elimination of difficulties they experience (Kana, et al., 2023). In addition, even before children start school, pediatricians may recognize possible early indicators of dyslexia, such as difficulties in telling time or distinguishing left from right. Nevertheless, while pediatricians can identify these signs, they cannot implement educational interventions

alone. Thus, the collaboration of pediatric and educational specialists is crucial to ensure effective support (Sanfilippo et al., 2020).

While diagnosing dyslexia, the first step should be the family history. Negative results need attention, and positive results need careful monitoring (Sanfilippo, et al., 2020). Additionally, diagnostic assessments usually concentrate on accuracy, rapidity, and comprehension during word reading and text comprehension. The performance of students with dyslexia is evaluated in comparison with other students in the same grade (Schulte-Körne, 2010). A comprehensive assessment should cover several areas (International Dyslexia Association, 2018):

Background Data: feedback on development, interventions, and family history.

Oral Language Skills: Individuals with dyslexia have delays in language development; however, advanced language abilities are typically age appropriate when they start school.

Higher-level Language Skills: difficulties need additional speech-language assessment

An assessment collects information to find out the causes of a student's spelling and reading difficulties. Before identifying strengths and weaknesses via exams, background information is gathered from parents and educators. Then, conclusions and suggestions are reported.

To summarize, for the diagnosis of dyslexia, a multidisciplinary strategy involving cooperation between educators, families, and medical and educational specialists is necessary. Early diagnosis is critical for directing effective intervention techniques in addition to lowering the emotional and cognitive difficulties linked to dyslexia. A systematic and collaborative diagnostic process provides that students' needs and demands are accurately identified, and appropriate educational guidance is provided at the earliest possible age.

2.5. Early Signs and Symptoms

Dyslexia may be diagnosed even before entering school. Because children with dyslexia have various symptoms and show early signs during their daily life, early detection may be possible. Individuals with dyslexia may suffer from motor problems. Also, language, articulation, visual-motor, and visual-spatial deficits may be associated with dyslexia. They may have traits such as poor hand dominance, delayed speaking, left-right disorientation, and lack of perspective (Salman, et al., 2016). Some children start to speak later than their peers or have difficulties in speaking. Delays in the development of spoken language may indicate a dyslexia risk (Balci, 2016). Therefore, these early signs highlight the significance of parental awareness and observation before children start school.

2.5.1. General Traits of Dyslexia

Children struggling with dyslexia may show prevalent developmental traits, which differentiate them from peers (Salman, et al., 2016; Yılmaz, 2022 as cited in Çolak and Yılmaz, 2023):

- Speech delay,
- Confusing the similar syllables,
- Left and right hand perplexation,
- Challenges in tying the shoelaces,
- Learning the alphabet's letters, sounds or multiplication table,
- Confusing direction and time
- Reading/writing is inaccurate and slow and there may be no comprehension
- Challenges in Math's

- Punctuation and spelling mistakes
- Confusing letters like "d" and "b," as well as "p" and "b,". Mirroring while reading

Although their level depends on the individuals, these are some of the observable primary indicators of dyslexia.

2.5.2. Early School Years

After children start school, they begin learning how to read and write. At this phase, there may be some differences between students with dyslexia and their peers. Teachers should be careful about the early signs in the classroom. For instance, while writing students may make some mistakes such as additions, omissions, or skipping (Balci, 2017). Students with dyslexia struggle with word retrieval, they omit or switch out word portions or mix up words that sound alike (Chatháin, 2015). Their ability to receive and organize information may be influenced by these issues with accurate and fluent word use because they struggle with building meaningful sentences or creating connections between concepts. They may struggle with making up their minds and responding because they have difficulty in structuring their ideas or learning new material, and this makes it harder to recall later from long-term memory (Chatháin, 2015).

Typical challenges in the early school years include (Simon, 2000):

- Directionality: Mirror writing and confusing opposites (e.g., left/right, vertical/horizontal).
- Phonics principles: Difficulties with spelling, syllabication, decoding, phonemic awareness, and sound-symbol relationships.
- Metalinguistic tasks: misapplication of spelling or structure rules, interpreting instructions, and analyzing grammar.

- Learning and Math: Challenges with learning procedures, problem solving, and math knowledge.

Additional difficulties noted recently include (International Dyslexia Association, 2018):

- Short-term memory and comprehension: difficulty in repeating multi-syllabic words or remembering function words such as "the," "of," or "said"
- Poor time management: Having trouble finishing the tasks in given time.
- Has trouble learning the alphabet, rhyming, blending sounds, and connecting letters to sounds
- Performs better in listening comprehension than reading comprehension

2.5.3. Secondary School Years

Additional signs observed at Secondary Schools include (International Dyslexia Association, 2018):

- Slow and reluctant readers who have trouble with strange or meaningless words; poor spelling, which frequently involves omitting letters, sounds, or entire syllables Slow, poor writing
- Pronunciation errors for everyday terms and difficulties with sophisticated syntax
- Listening comprehension frequently outperforms timed reading comprehension
- Poor understanding and use of vocabulary

If not addressed on time, these issues frequently worsen highlighting the need for continuous observation and individualized interventions during their education.

Consequently, dyslexia can appear through a variety of signs and symptoms throughout the developmental process. Early signs such as speech delay may occur before formal schooling. It gives crucial signs for parents for early detection. During the early school years, they are distinguished by their peers in terms of certain signs. In later school years, persistent challenges with writing, spelling, and vocabulary development, and reading fluency continue to restrict academic success.

2.6. Dyslexia in Education

Because of the challenges students with dyslexia experience, academic life may be frustrating for them. They may feel unmotivated to take an action about this issue. However, these challenges may be overcome with a well-planned teaching program and parents and teachers who are aware of dyslexia. Although the challenges can be reduced, dyslexia does not go away entirely (Balci, 2017). The students need special approaches. Education should have the first place of the treatment in other words it should be considered as a cornerstone. The academic success of the students should be supported by teachers, parents, or counsellors. For instance, according to a study about students who used the recommendation system performed better overall. Also, it demonstrates the recommendation system can assist students with learning disabilities throughout their academic careers (Morciano, et al., 2024).

On the other hand, teachers, especially language teachers, are expected to teach mixed-ability classrooms and provide school-based requirements. They should create an inclusive classroom environment with the appropriate techniques or approaches. However, they are not trained in curriculum or technique (Stevani and Tarigan, 2022), and the traditional curriculum may not be suitable for the students with dyslexia. They are not sufficient to meet needs and demands of students with dyslexia. Thus, classroom regulations and inclusive educational strategies are necessary. One of the effective ways of assisting students is new reading material should be well-defined, organized and set up in advance. Guided brainstorming sessions, creating relevant vocabulary banks, mind maps or wall charts can be given as examples. Moreover, providing several options and let them choose the ones appropriate for them fosters motivation (Chatháin, 2015).

At primary school, students may need more support beyond the alphabet. Working memory-boosting games and exercises can be beneficial, gradually improving text comprehension (Koifman, 2023). Since retrieving the information is frequently challenging, relating to the students' experiences and the subject matter helps students retrieve the text. Introducing music, images or drawings recall the information vocabulary banks, mind maps teaching them how to take notes, cooperative activities or discussion and presentation sessions may be other ways to promote students' academic success (Chatháin, 2015).

Academic barriers that students with dyslexia experience can be overcome and with well-planned and individualized support their motivation can be boosted. However, these are possible with well-guided educational staff. English language teachers who have possibility to teach English in mixed-ability classrooms should be equipped with an ability to create an inclusive learning environment rather than traditional environments.

2.6.1. Role of Technology

Technology may be beneficial in fostering language learning for the students with dyslexia. With the help of technology, the materials or activities may be varied providing visual learning via multimedia, interactivity, learner autonomy, and collaborative opportunities (Galanouli, Murphy and Gardner, 2014 as cited in Juan, 2023). Technology may be helpful for teachers to represent the content (Vouglanis, 2023). The use of general technology, like PCs or laptops, and the application of specialized technologies, like scanners, text-to-speech devices, and spellchecker software may encourage students with dyslexia and tackle challenges. Also, virtual learning environment can help students by giving them lecture notes ahead of time (Björklund, 2011). Thus, by providing flexible, multimodal, and encouraging learning options, technology contributes to lowering the obstacles experienced by students with dyslexia.

2.6.2. Second Language Learning

Second language learning is another aspect of teaching students with dyslexia. Even though mother tongue may be the first language in which students are observed to have signs of dyslexia, the same difficulties may be experienced in their second language. However,

even if language learning is a challenging process by itself, learning a second language boosts proficiency in the mother tongue. In relation to this, learning a foreign language can be affected by the same challenges effecting the development of a mother tongue, including phonemic awareness, linguistic processing, working memory, metalinguistic comprehension, and sound-symbol linkages (Simon, 2000).

Therefore, while preparing an individualized teaching plan for the students with dyslexia, the structure of language and the coherence with the students' mother language should be considered by educators or policy makers. For instance, English is challenging alphabetic language because of its inconsistent letter-sound correspondence. (Heim and Grande, 2012). Thus, this may affect the students' second language development and cause them to feel unmotivated and frustrated. On the contrary of shallow (transparent) orthographies (German, Italian), English's deep (opaque) orthography and irregular letter-sound mappings cause it more complex to learn how to read (Vellutino, et al., 2004). On the other hand, for instance; if a school's second language is French, then Spanish and Latin, as transparent languages, are more useful and approachable than French. Thus, while preparing a teaching program for students with dyslexia, choosing Latin may provide encouragement (Burbank, 2024). Therefore, the target language's linguistic features have a crucial role in deciding how easy or difficult language learning will be for students with dyslexia. Matching students' cognitive profiles with second language choice and lesson design provides that second language learning becomes a source of motivation rather than demotivation.

2.6.3. Instructional Needs

Students with dyslexia need specialized educational support that addresses their unique learning challenges and supports their engagement in language learning. Instructional needs of students with dyslexia involve (Stevani and Tarigan, 2022):

- Searching for unfamiliar terms/words,
- Note-taking
- The ways of using scrambled words,

- English article practice,
- Word-blending, grammatical ending exercises,
- Instead of long sentences, manageable chunks,
- Practicing using both singular and plural nouns, prepositions, and possessives,
- Teaching clock reading
- Prompt and clear feedback
- Summarized and repeated instructions
- Give similar tasks to the ones they completed previously to make sure that they accomplished them into their tasks.
- Supporting them to make a study group with their peers.
- Give alternative ways of completing tasks (such as completing the task by writing, dancing or designing a poster)
- Give more time while practicing writing
- Break the tasks into small chunks

Additionally, proper instruction should also be (International Dyslexia Association, 2018):

- Explicit: Writing, spelling, and reading are taught explicitly.
- Systematic and cumulative: Information should be reviewed and arranged in a simple-to-complex order.

- Organized: Detailed methods for presenting, repeating and putting ideas into practice.

As a result, these instructional needs underline the importance of structured, practical, and accessible teaching methods to enable students with dyslexia to improve their language and academical skills.

2.6.4. Creating Inclusive Language Learning Environments

Students with dyslexia may have strengths in areas that do not require strong literacy skills such as conceptual abilities, reasoning, problem solving, creative thinking, and comprehension. Therefore, they need proper teaching strategies that concentrate on their needs as standard teaching strategies may not meet their needs (Dewi, 2022). In language classrooms, teachers should create a tolerant, motivative, creative and peaceful atmosphere. Since foreign language students with dyslexia gain from motivating and encouraging learning environment (Özçelik and Elverici, 2024). However, this learning environment may not be created every time. This is because of the factors such as lack of teachers' readiness, insufficient institutional support, and varying limited levels of awareness about dyslexia. According to the results of a study, evidence-based interventions can advance the field of inclusion for students with dyslexia, and it highlights the need for inclusive advances in language teaching (Özçelik and Elverici, 2024). Accordingly, creating inclusive language learning environments needs pedagogical strategies and teachers' awareness, knowledge, and attitudes towards students with dyslexia.

2.6.5. Teacher Awareness and Training

The inability to create proper inclusive learning environments may relate to the lack of theoretical information, awareness and positive attitudes towards students with dyslexia. For inclusive practices, teachers should be aware and knowledgeable about Special Language Learning Difficulties (SpLLDs) and students who experience these difficulties. Teacher training promotes positive attitudes and increases awareness (Bimali, 2019). Additional training in inclusive education, educational technology, and creative approaches is necessary for time management. Because inclusive classrooms may need more time (Juan,

2023). This may be beneficial for both pre-service and in-service teachers. Therefore, teacher education programs have a critical impact on training teachers with the skills to create inclusive environments that consider individual differences.

2.6.6. External and Internal Factors

Another aspect of inability to create an adequate language learning environment lies in both external and internal factors. External factors consist of family support, environmental conditions, and the adequacy of the education they receive, while internal factors consist of individuals' personality, and internal motivation (their desire to learn) (Balci, 2017). Even if the teachers attempt to create a peaceful environment, because of being another stakeholder as a student and having unmotivated attitudes towards language learning effect language learning negatively. In this case, traditional teaching methods may not be helpful, and teachers may feel unprepared to support students with dyslexia so they should be proactive and innovative (Juan, 2023). To achieve this, teachers should be aware of all the learning styles and specific needs of students with dyslexia and create various ways to catch students' attention during the class.

2.6.7. Strategies for Inclusive Practices

Teachers should implement learner-centered techniques that address the needs of students with dyslexia to create inclusive classrooms. Inclusive approaches put more emphasis on collaboration, multimodality, and specialized training. Several useful strategies for creating an inclusive classroom are listed below (Cambridge English, 2021):

- Establish a cooperative, collaborative and encouraging classroom environment
- Make use of multimodal input (use several senses)
- Give students a variety of methods. Instead of writing they can sketch.
- Keep L-shaped cards in hand. These can assist students in concentrating on areas/lines of a page.

- Divide new vocabulary into digestible chunks.
- Show students the ways to tackle exams methodically.
- Memorizing terminology with movement, music, painting, or visualization.
- Give feedback by using audio or video.
- To boost confidence, evaluation should involve follow-up and encouraging comments. It should be process oriented.

Arries (1999 as cited in Sadry, et al., 2022) indicated that while teaching students with dyslexia teachers should consider the followings:

- Give explicit instructions.
- Longer assignments should be divided into smaller parts.
- Readings to be implemented in the classroom should be given a day before.
- Activities should include examples.
- Activities should have the same design to lessen the anxiety.

2.7. Assessment and Monitoring

Bliznakov (2024) argues that writing benchmark assessments frequently do not represent the personal profiles of students with dyslexia and suggests adjustments such as different difficulty levels, extended time, and support tools to encourage balanced assessments. Similarly, school-age students can be detected when they start school and learn to read, write, and count (Koifman, 2023). At this stage, good training is a necessity. It is novel and significant. Some of the students' experience reading issues come from underprivileged homes. They may lack early literacy abilities like phonological awareness,

vocabulary, and print knowledge. Thus, it is important to record a child's educational history (Lyon, et al., 2003).

Learning to read can be a frustrating experience for many students with reading disabilities, and it can cause anxiety (Sanfilippo, et al., 2020). For example, when dyslexia is not diagnosed at an early age, individuals grow up with dyslexia and experience challenges throughout their lives. Adults with dyslexia may experience a range of results, from graduating from high school with no credentials to attending a university. Slow reading, spelling, written expression, working memory, focus, and organization are among the common challenges they experience (Darrington, 2022). These examples underline the need for systematic assessment and monitoring to enable students' difficulties to be noticed and addressed on time.

Assessment and monitoring are three essential steps for students. There are some reasons for assessment. First, for diagnosis, it establishes whether the student's profile meets the criteria for dyslexia, eliminates the alternative reasons, and identifies the most likely cause. Second, it helps instructors to make an intervention plan. The student's present ability level is the starting point for instruction. Lastly, for documentation. It tracks the history and aids in establishing an individual's eligibility for services and accommodations at employment, school, or college (International Dyslexia Association, 2018).

As the first step of assessment, after they are diagnosed, they need an individualized, continuous and well-planned teaching program. Such programs support that educational interventions are reactive, preventative, and minimizing long-term academic difficulties. When creating customized educational plans, it is important to consider each child's particular needs and characteristics (Salman, et al., 2016). However, even though there are differences between students with dyslexia and their peers, their assessment system includes the same questions and the same format. This standardized method diminishes the skills of students with dyslexia and ignores the variability of students. Thus, as they have different learning needs, their assessment system should be adopted in terms of their strengths and weaknesses. While providing an assessment system, children's traits, educational backgrounds, linguistic contexts, and cultural elements should be considered (Xia, et al., 2024). Considering these factors gives teachers practical insights into individualized

teaching and enables a comprehensive understanding of the learner. Balci (2017) underlines that they cannot be identified via traditional pen and paper examination even though they receive the same treatment as the other students and go through the same curriculum, school system and tests. Children's traits, educational backgrounds, linguistic contexts, and cultural elements should be considered in assessment procedures (Xia, et al., 2024). This repetition among research suggests that there is a agreement on the procedure need to go beyond standardization. For instance, even if students with dyslexia may fall behind their classmates, they may do well on oral examinations (Salman, et al., 2016). This example underlines the value of adjustable evaluation techniques that in situations where traditional forms fail, may reveal students' actual competencies.

On the other hand, students' progress should be tracked. Teachers, parents, and other professionals should use the outcomes of assessments to inform the creation of successful interventions (Xia, et al., 2024). Documentation for every assessment should be kept in a case. This may be helpful for counsellors, teachers, parents, and even for students themselves. By doing this, they see the development throughout their academic or daily life and make their learning process oriented.

In short, assessment and monitoring should be an ongoing process that guides instructional planning, enables accountability, and motivates students by making their progress visible. When properly implemented, they provide a foundation for fair educational practices and help students with dyslexia fulfill their potential.

2.8. Psychological and Emotional Impact

For school age children, they are expected to be successful at school. However, learning is a different process for each student. Some learn fast, some learn slower and because of this difference they have different needs and approaches towards school. Some of the students may have special learning difficulties and put more effort into learning. Students with dyslexia may be the ones who need to study harder and smarter to learn easier.

2.8.1. Emotional and Behavioral Consequences

After diagnosis, students may suffer from both academical and psychological issues because of the negative feeling caused by falling behind their peers or negative approaches towards them. Thus, they may have behavioral indicators, such as low self-esteem, social disengagement, depression, losing interest in school, being unmotivated, acting out or misbehaving (Philipps and Associates 2022). Additionally, they experience academic failure, school rejection, hyperactivity, or anxiety (Salman, et al., 2016). Thus, they not only need a special education plan for their academical life but also be supported psychologically. Therefore, addressing dyslexia as a whole means noticing the interconnection between academic performance and emotional well-being. Because a student is a whole with their different aspects and their typical coping mechanisms for reading and writing may not work when they are worried or anxious (Björklund, 2011). On the other hand, it is stated that motivated students enhance their metacognitive knowledge and use metacognitive reading strategies during tests which will enhance their reading proficiency (Kuracki and Dłużniewska, 2023). This indicates that while dyslexia has continuous challenges, empowering motivation and self-awareness can support students' resilience and academic performance. Students with dyslexia may need professional help. Therefore, collaboration among stakeholders should be strong and promote students' lives with proper guidance and intervention so that their psychological burden may be reduced and academic, social and emotional development may promote.

2.9. Intervention and Support

2.9.1. Role of Stakeholders

While promoting the life of students with dyslexia, there are four main stakeholders. Respectively, students, parents, teachers, and counselors. After diagnosing dyslexia, the stakeholders should make a well-prepared individualized plan. Well-trained educators should plan an educational approach/teaching program after the diagnosis (Balci, 2019). Collaborative planning provides that interventions are comprehensive and highlights the academic, psychological, and social development of the students.

There is a chance for them called as “Early Diagnosis”. Because early diagnosis helps parents, educators and students understand the condition thoroughly (Balci, 2019). Early diagnosis also provides timely intervention plans that increase the possibility of overcoming learning obstacles before they become more severe. As a result of having a neurological basis, the process of students with dyslexia should be observed and evaluated and intervened carefully (Odegard et al., 2024). This shows that dyslexia is a permanent condition, and it requires systematic and ongoing educational support. Because it cannot be cured with medication, after diagnosing through special tests, its treatment is based on educational methods. Thus, the foundation of intervention is effective instruction, and educational methods should take priority over medical ones.

2.9.2. Parental Support

In addition to educational programs, without parental help or psychological support, being successful at overcoming all the challenges caused by dyslexia is not possible. Schulte-Körne (2010) suggests that students’ education should be supported at home. Parents may think that dyslexia is a result of parental failure, but professionals should inform both parents and students to relieve stress. Also, with the help of other stakeholders, students should be motivated to eliminate the difficulties they experience. If they lose interest because of the academical frustration, it may be harder to apply teaching plan properly.

There are some beneficial actions that parents can do (International Dyslexia Association, 2018), parents should:

- Look at their children’s classroom frequently.
- Keep in contact with the teacher regularly
- Be patient during "off" days. (There should be some break times/off days.)
- Students with dyslexia may need extra assistance or a break, sometimes. Keep motivating them.
- Read aloud to your child frequently.

- Encourage your child to have a hobby or talent.
- Discuss their learning challenges honestly. Tell them that everybody has different learning styles.

These techniques enable parents to become active in their child's educational process as well as using multisensory teaching methods that can provide solutions to the challenges related to dyslexia (Tarjiah et al., 2023).

2.9.3. Teachers' Role and Professional Development

Although, there is insufficient data about instructors to inform them about ways of supporting the students with Special Learning Difficulties (Özkardeş, 2013), it is crucial to detect students with dyslexia especially in or outside of the classroom and identify the symptoms and plan a special treatment or support program (Balci, 2019). Thus, it is an urgent need to raise awareness and support pre-service English teachers' professional development. With the help of proper interventions such as individualized and multisensory teaching, it may be possible to replace negative emotions with positives. Supportive actions consisting of giving more time in assessments or activities, providing visual and auditory learning materials, assisting students in developing self-efficacy, self-esteem, and a knowledge of their cognitive and psychosocial abilities which are believed to be the main cause of test stress. Prioritizing these, help them accomplish their goals academically (Kuracki and Dłużniewska, 2023). Shortly, supportive and inclusive interventions reduce the obstacles caused by dyslexia and create more fair and motivating learning opportunities for students with dyslexia.

2.10. Dyslexia in English Language Teaching Departments in Türkiye

Faculties of education aspire to shape pre-service teachers' teaching techniques and their point of view. Thus, designing teaching programs in terms of inclusivity and adding compulsory "Special Education and Inclusivity" or "Inclusive Language Teaching and Dyslexia" classes or increasing the number of the classes they already have may help pre-service English language teachers understand and be more knowledgeable about dyslexia or

other learning difficulties and enhance their practice. Since dyslexia is a language-based difficulty, pre-service English language teachers may have experienced language difficulties with their students during their practice and receiving specific training regarding dyslexia may help them develop positive attitudes and coping strategies for language difficulties that arise in the classroom. However, this underlines a crucial disconnection. Studies indicate that there is a need for more research about dyslexia in English language context and it is necessary to add empirical investigations in this field (Atar and Amir, 2023). Balcı (2017) suggests that more research is significant to identify what Dyslexia is, its' reasons, forms and the consequences. However, the necessity for both professional development and empirical studies is unaddressed which may cause future English language teachers to be unprepared, and the field inadequately evolved.

Teachers may gain sufficient understanding of inclusion and learning challenges if dyslexia-related content is integrated into the theoretical and practical parts of ELT training programs. To obtain practical knowledge, pre-service English teachers should be encouraged to take part in formal and informal fieldwork opportunities to observe or guide students with dyslexia (Özçelik and Elverici, 2024). On the other hand, another study revealed that Turkish language instructors, guidance counsellors, special education teachers and pre-school weren't trained sufficiently and weren't aware of learning difficulties enough during their university study (Balcı, 2019).

Three of the universities in Türkiye and their course load related to Special Education covers various topics of special education including dyslexia in English Language Teaching Departments are listed below:

Tablo 1

The distribution of courses related to special education and inclusivity

University	Course Name	Compulsory/ Selective	Semester	Theoretical+Practical	ECTS
University A	Special Education and Inclusivity	C	VII	2+0	3
University B	Special Education and Inclusivity	C	VII	2+0	3
University C	Special Education and Inclusivity	C	VII	2+0	3

According to *Table 1*, although the Special Education course is compulsory and pre-service English language teachers are required to take it, both quantitative and qualitative responses indicate that students do not gain sufficient benefit from the course regarding dyslexia as most participants responded “No” to the question “Have you ever received any training on dyslexia?” This finding may suggest the need to restructure the course content by incorporating new in-depth topics like dyslexia. Considering prevalence of dyslexia that affecting such a large population across the globe, an independent elective or compulsory dyslexia course can be designed and included in the English language teacher education program as dyslexia is a language-based learning difficulty. Therefore, redesigning teaching programs in terms of inclusivity and adding compulsory “Special Education and Inclusivity” or “Inclusive Language Teaching and Dyslexia” courses is a necessity to enhance English language teacher training.

Consequently, it is essential that teacher education programs integrate inclusive education and training that focuses on dyslexia. These changes improve the knowledge and skills of pre-service teachers and encourage better teaching methods that eventually help students with dyslexia overcome their obstacles.

CHAPTER THREE

METHODOLOGY

3.1. Theoretical Framework

The present study uses a social psychology framework, which offers significant insights into how social influences, cultural norms and group membership, individuals' cognitions and behaviors are shaped. Social psychology examines the explanations individuals naturally turn to with the aim of comprehending the world they live in (Van Lange et al., 2011). In the educational settings, these societal factors have a significant influence on teachers who are crucial social agents in the classroom. Teachers' point of view may reflect what and how they perceive things around. For instance, in the classroom environment, while teachers' perceptions provide an interpretation and a comprehension, teachers' attitudes towards students and students with learning difficulties such as dyslexia affect their academic and social life either positively or negatively because teachers' attitudes may reflect social expectations.

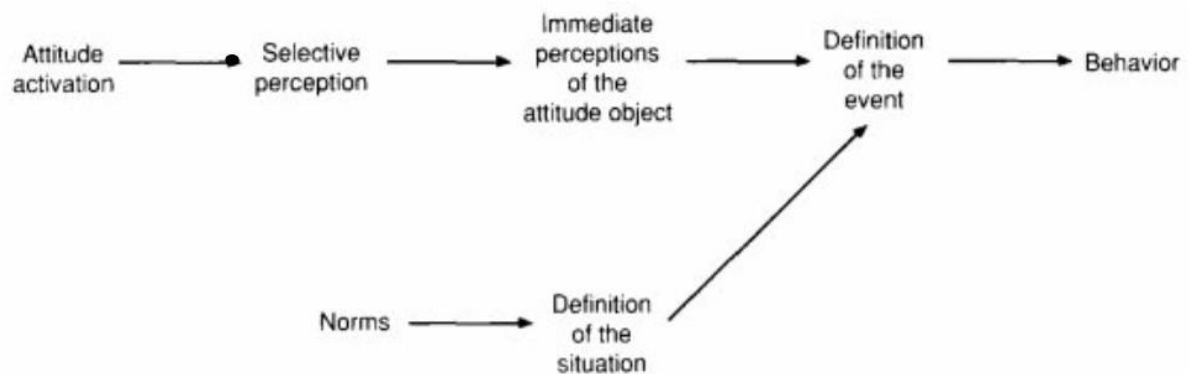


Figure 1. A schematic diagram of Ajzen and Fishbein's (1980) theory of reasoned action

Reference: *Fazio, 1990*

In this respect, separating perceptions and attitudes is as significant as defining them. There is a conceptual distinctive feature between perception and attitude even though they are not differentiated frequently. They express different values and judgements. Attitudes express a characteristic of the individuals towards life, society, etc. in other words their way of living or behaviors while perceptions are connected to how certain alternatives or

behaviors are viewed (Bahamonde-Birke et al., 2017). Reasoned action approach supports that behavior tends to follow logically from individuals' beliefs, attitudes, and intentions (Ajzen and Fishbein, 2005). Attitudes consist of personality, beliefs, values, behaviors, and motivations (Pickens, 2005). In addition, perceptions are related to attitudes and when individuals confront a stimulus, they interpret it as something meaningful based on prior experiences (Pickens, 2005). As a result, individuals develop a positive, neutral or negative evaluation. In other words, it is constructing a meaning from environment, stereotypes, and reactions towards situations.

The distinction between perception and attitudes is crucial because in the classroom, teachers behave in terms of their attitudes towards dyslexia, and they develop attitudes about how they perceive dyslexia. The meaning of the term "dyslexia" occurs in terms of teachers' perceptions and attitudes evolving from society, experiences, stereotypes, beliefs, etc. Thus, to support an inclusive and supportive learning environment for students with dyslexia, identifying teachers' perceptions and attitudes has a significant role in designing and implementing effective teaching strategies. In this context, identifying Pre-service English teachers' perceptions of and attitudes towards dyslexia in terms of understanding, experiencing, observing and being ready to adjust their teaching methods paves the way for an effective language learning. Because pre-service English teachers' perceptions include the knowledge effected by their experiences, beliefs, etc. and their attitudes include how the word "dyslexia" placed and defined in their cognition. After identifying the current perceptions and attitudes of the pre-service English teachers, enhancing positive domains and replacing negative ones may have an impact on the motivation to adjust into their teaching plan or classroom, to adopt tolerant approaches and to be a guide for efficient language learning program for students with dyslexia.

The MODE (Motivation and Opportunity as DEterminants of the attitude-to-behavior process) helps identifying how perceptions and attitudes effect pre-service English language teacher's classroom behavior and motivation to create an inclusive environment. By using social psychology, MODE supports this study. According to this model developed by Fazio (1990) attitudes governs behavior in two ways related to individuals' motivation and cognitive ability:

1. Deliberative Processing Model

2. Spontaneous Processing Model

In the deliberative process, careful, and rational action is underlined. Individuals arrive at their attitudes towards specific actions by weighing the possibility that the behavior result in potential outcomes and acceptability of these outcomes. On the contrary, in the spontaneous processing, the process starts with the activation of the attitude. If only the attitude is activated from memory, the selective perception of the object in the instant situation cannot be produced.

Accordingly, a motivated pre-service English teacher may balance the advantages of adjusting their teaching strategies against the disadvantages by recognizing dyslexia-related challenges (selective perceptions). This results in a well-planned, attitude-consistent behavior. In this respect, MODE gives a theoretical explanation of the way pre-service English teachers attitudes towards dyslexia effect their actions in adjusting the language classroom and their preparedness for real-life applications. This model is presented in *Figure 2* below.

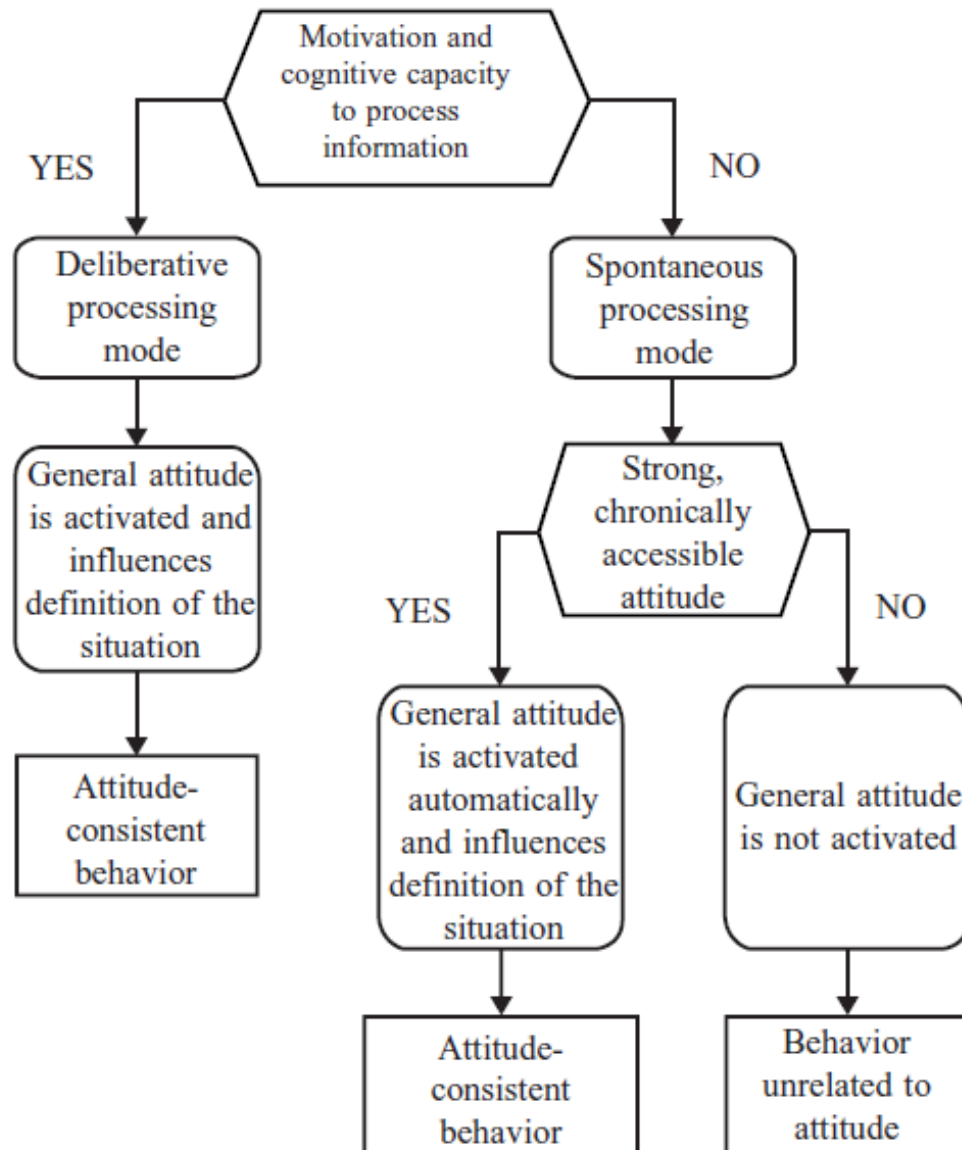


Figure 2. Fazio's (1990) MODE model

Reference: *Pickens, 2005*

Consequently, by employing a social psychology framework, this research underlines how social learning, stereotypes, and social norms shape pre-service English teachers' perceptions, and attitudes and how prepared they are to take an action for creating inclusive classroom. To close the gap between cognitive states and observable behavior, this study makes use of MODE model. This model indicates that teachers' motivation and opportunity to enhance their teaching professions and attitude towards dyslexia indicates their motivation to behave inclusively. As a result, this framework enables a comprehensive analysis of how teachers' profession shapes through their teacher education program.

3.2. Research Design

This study employed a sequential explanatory mixed methods design, integrating quantitative and qualitative approaches to provide a comprehensive understanding of pre-service English teachers' perceptions, and attitudes regarding dyslexia. Explanatory sequential design of mixed methods research defines the incorporation of both quantitative and qualitative research. They have the same importance in an explanatory mixed methods design. Respectively, they have their own benefits (Toyon, 2021). While quantitative research may provide statistical, objective, and general results, qualitative research may provide in-depth explanation, experiential, and elaborative results. To provide answers to the research questions mixed methods research involves qualitative (open-ended questions) and quantitative (a closed-ended question and a questionnaire) data. For both data types, there are rigorous methods including data collection, analysis and interpretation (Creswell and Creswell, 2018). The aim is to combine qualitative and quantitative components into research to expand and strengthen the findings of the research (Schoonenboom and Johnson, 2017; Teddlie and Tashakkori, 2009). In the light of the sequence and features of the sequential explanatory mixed method research, firstly, quantitative data were collected through a structured questionnaire with 20 items. Then, qualitative responses were gathered through five open-ended questions, and a Likert type question to measure pre-service English teachers' perceived preparedness regarding teaching students with dyslexia. Explanatory mixed method design supported the study's depth and validity of the study (Teddlie and Tashakkori, 2009) and to provide a comprehensive understanding of the perceptions and attitudes of pre-service English teachers.

3.2.1. Problem Statement

Although emphasis on inclusive education is growing, results of the studies indicate that pre-service English teachers may graduate without adequate knowledge, positive attitudes, or practical experience in supporting students with dyslexia (Kormos and Nijakowska, 2016; 2017; Nijakowska et al., 2018; Balcı 2019; Atar and Amir, 2023; Yüksel and Özcan, 2025). In the context of English language teaching, this issue may have a critical role, as dyslexia directly affects reading, writing, and language acquisition processes. According to the observations and existing literature, misconceptions about dyslexia are

prevalent, personal exposure to students with dyslexia is limited, and formal training opportunities are not sufficient in teacher education programs in Türkiye (Ekoç Özçelik and Ergün Elverici, 2024; Yüksel and Özcan, 2025). As a result, pre-service English teachers may feel unprepared to address the needs of students with dyslexia in their classrooms which can be present, practicum or future classrooms. This emphasizes an urgent needs analysis to identify current knowledge, perceptions, attitudes, preparedness and experiences of pre-service English language teachers.

3.2.2. Research Questions

This study aims to address the following research questions:

- How do the perceptions and attitudes of pre-service English teachers regarding dyslexia distribute?
- Is there any difference among the perceptions and attitudes of pre-service English teachers regarding dyslexia in terms of their gender?
- Is there any difference among the perceptions and attitudes of pre-service English teachers regarding dyslexia in terms of their year of education?
- Is there any difference among the preparedness of pre-service English teachers regarding dyslexia in terms of their gender?
- Is there any difference among the preparedness of pre-service English teachers regarding dyslexia in terms of their year of education?
- What are pre-service English teachers' conceptual understanding of dyslexia?
- What prior experiences have pre-service English teachers had with individuals with dyslexia, and how do they describe these experiences?
- Which school practitioner do pre-service English teachers perceive as holding the greatest responsibility for supporting students with dyslexia, and why?

- To what extent do pre-service English teachers believe they are prepared, through their teacher education program, to support students with dyslexia?

3.3. Settings and Participants

The quantitative and qualitative parts consist of 235 participants. After data screening and removal of 9 incomplete or invalid responses, the analysis was conducted with total 226 participants. They were selected through convenience sampling, a non-probability sampling technique in which the researcher includes participants who are easily accessible and willing to participate (Creswell, 2012; Golzar, et al., 2022). Demographic variables such as university, year of education, age, and gender information were also collected alongside the main questionnaire. For confidentiality, the names of the universities were anonymized and coded as University A, University B, and University C. These three state universities have similar teaching programs, contents and hours. They are in the same region therefore the university the university was not taken as an independent variable and to reach a wider population the data was collected from three universities. The distribution across universities was respectively: 38, 84, and 104. The participants were from all grade levels: 37 first-year, 72 second-year, 41 third-year, and 68 fourth-year students. Age groups were categorized as 18–20, 21–23, and 24+. Gender was specified as Female (F), and Male (M).

3.4. Data Collection Tools

The questionnaire with 20 Likert-type (1 - not at all, 2 - to a lesser extent, 3 somewhat, 4 - to a greater extent, 5 – fully) items assessing participants' attitudes towards dyslexia developed by Martan, et al., (2017) "Teachers' Attitudes Towards Teaching Students with Dyslexia" was adapted in this research. The dichotomous (Yes/No) structure was conducted to gather clear and straightforward responses rather than measuring the level or degree of perceptions and attitudes of the pre-service English language teachers. Because the results are intended to be used as a needs analysis for proposing a future course, the aim of the research is to identify the presence or absence of knowledge, perceptions and attitudes of pre-service English teachers regarding dyslexia. The scale (Martan et al., 2017) consists of 3 subdimensions: Scale of Individualized Teaching Methods, Scale of the Adaptation of the Teaching Materials and Evaluation Procedures, and Scale of the Support of Classroom

Atmosphere and Cooperation assessing teachers' attitudes about dyslexia. Also, the language of the scale was English originally and participants had sufficient English knowledge to comprehend the items. Additionally, to expand the understanding of the participants' knowledge, beliefs, attitudes and preparedness, the research was supported by a Likert-type preparedness question with *1. Not at all prepared 2. Slightly prepared 3. Moderately prepared 4. Very prepared 5. Extremely prepared* responses and five open-ended questions focusing on the participants' understanding of dyslexia, experiences, observations, prior training, stakeholders in supporting students with dyslexia, and their level of preparedness.

3.4.1. Quantitative Data Collection Tools

Attitudes Towards Dyslexia Scale

Quantitative data were collected using the "Teachers' Attitudes Towards Teaching Students with Dyslexia" Scale developed by Martan et al., (2017). The instrument consists of 20 items across three subdimensions:

- *Individualized Teaching Methods* ($\alpha = .81$)
- *Adaptation of Teaching Materials and Evaluation Procedures* ($\alpha = .72$)
- *Support of Classroom Atmosphere and Cooperation* ($\alpha = .79$)

On the other hand, as the items were dichotomously scored with "Yes/No" responses, the reliability analysis was conducted using the Kuder–Richardson Formula 21 (KR-21) to conduct this research. After computing the total scores, mean, and variance, the KR-21 coefficient for the overall 20-item scale was found to be .64, indicating acceptable internal consistency (George and Malley, 2003 as cited in Allevato and Al Marrar, 2019).

3.4.2. Qualitative Data Collection Tools

Open-ended Questions and a Likert Type Question

Qualitative data were collected through five open-ended questions and a Likert-type question. These questions aimed to explore participants' conceptualizations, experiences, observations, prior training, and preparedness regarding dyslexia. The questions and response formats are presented below in *Table 2*:

Table 2

Open-ended questions and a likert-type question

Open-ended Questions and a Likert-type question	Response Format
1. How would you explain dyslexia?	Open response
2. Do you know an individual with dyslexia? If so, please briefly describe your observations.	Open response
3. Have you ever had any experience working with an individual with dyslexia? If so, please explain.	Open response
4. Have you ever received any training on dyslexia? If so, please explain. (indicate the type of training, its type, duration, and where or how it was provided)	Open response
5. Which school practitioner has the greatest responsibility towards supporting students with dyslexia? Please explain.	Open response
6. How prepared do you feel you are to work with students with dyslexia?	1. Not at all prepared 2. Slightly prepared 3. Moderately prepared 4. Very prepared 5. Extremely prepared

Note. Sixth question was analyzed, and the results were presented in *Table 11* and *12*.

The answers to the open-ended questions above are categorized according to the answers of the participants' themes as shown in *Table 3* below:

Table 3

Categorization of qualitative questions

Open-ended Questions	Answers and Emerged Themes
1. How would you explain dyslexia?	Accurate Partially Accurate/Skill Focused Myths/Misconceptions Limited understanding and learning abilities Irrelevant-Unsure
2. Do you know an individual with dyslexia? If so, please briefly describe your observations.	No one Family/Relative Self Irrelevant-Unsure
3. Have you ever had any experience working with an individual with dyslexia? If so, please explain.	No Yes
4. Have you ever received any training on dyslexia? If so, please explain.	None School-based Elective Course Seminar/Webinar
5. Which school practitioner has the greatest responsibility towards supporting students with dyslexia? Please explain.	Classroom Teacher All the teachers School Administration Family Special Education Teachers Irrelevant-Unsure Speech Therapists and Psychologists Experts and Academics Guidance Counsellor

3.5. Data Collection Procedures

The instruments were administered during the 2024–2025 academic year at three state universities. Depending on institutional permissions, data collection was done via Google forms and took place between November and March 2024. Participants were informed about the aim of the study, ethical considerations, and the voluntary nature of

participation. Also, the research was conducted under the approval of the University Ethics Committee including the three participant universities. The average completion time was approximately 20–25 minutes.

3.6. Data Analysis

The data were analyzed via Excel (Microsoft 365), SPSS (Version 27), JASP (Version 0.18.3), and MAXQDA 2024, with complementary purposes in the overall analysis process.

Descriptive statistics (frequencies, and percentages) were calculated with SPSS to summarize participants' demographic information and responses to the scale items. KR-21 test was computed via Excel to examine the internal consistency of the 20-item scale, and it supported reliability estimation and cross-verification of results.

In terms of qualitative data, the participants responses to the five open-ended questions and a Likert-type question were analyzed via directed content analysis (Hsieh and Shannon, 2005). Firstly, coding categories were created in the light of the frequency of the participants' responses and categorized codes (themes) were matched accordingly. This analysis was conducted by MAXQDA 2024, which enabled systematic coding, theme development, and collection of quotations. Inter-coder reliability was created, and sample quotes were integrated into the results to represent the participants' point of views.

The current study provided a comprehensive approach to analyzing both quantitative and qualitative content analysis by incorporating the strengths of the three software programs, SPSS for descriptive and inferential statistical analyses, KR-21 reliability testing, and visual interpretation, and MAXQDA for qualitative content analysis.

3.6.1. Data Analysis Procedures

The quantitative data were analyzed using SPSS (Version 27) and JASP (Version 0.18.3). There were multiple steps in the analysis process:

1. Preliminary Data Screening

- Before analysis began, the dataset was checked for missing or invalid responses. There were nine invalid responses, and they were eliminated. Then, 226 valid responses were used for the analysis.

2. Descriptive Statistics

- Participants' demographic information and scale responses were summarized in SPSS in which also descriptive statistics were carried out. Frequencies and percentages were calculated to give a general picture of the sample.

3. Reliability Analysis

- KR-21 test was computed to evaluate internal consistency for the entire scale and each of the subscales. Reliability analysis was carried out through Excel data sheet with total score, variance and average score.

Table 4

Questionnaire KR-21 calculation results

Scale	k (items)	M	σ^2	KR-21
Main Scale (Q1–Q20)	20	1.67	3.95	.64

CHAPTER FOUR

FINDINGS

4.1. Introduction

With the data collected from both quantitative and qualitative parts of the study, this chapter seeks to address general information about the participants, and the research questions.

4.2. Quantitative Data Analysis

Table 5
Descriptive statistics for year of education

	Year of Education	Frequency (N)	Percent (%)
Valid	1	37	16.4
	2	72	31.9
	3	41	18.1
	4	68	30.1
	Total	218	96.5
Missing		8	3.5
Total		226	100.0

Table 5 indicates that 31.9% of the participants were in their 2nd year, 30.1% in their 4th year, 18.1% in their 3rd year, and 16.4% in their 1st year which means this distribution, 2nd- and 4th-year students were the dominant groups in this study.

Table 6
Descriptive statistics for gender

Gender	Frequency (N)	Percent (%)
Female	151	66.8%
Male	75	33.2%
Missing	-	-
Total	226	100.0

According to the *Table 6*, 66.8% of the participants were female, 33.2% were male. This distribution corresponds with the research in which female participants consisted of the majority (Nijakowska et al., 2020).

Table 7
Distribution of “Yes” responses by year of education

			Year of Education				
			1	2	3	4	Total
YesIndex	1	Count	14	16	23	30	83
		Expected Count	14.1	27.4	15.6	25.9	83.0
		% within NoIndex	16.9%	19.3%	27.7%	36.1%	100.0%
		Adjusted Residual	.0	-3.4	2.6	1.2	
	2	Count	7	16	6	20	49
		Expected Count	8.3	16.2	9.2	15.3	49.0
		% within NoIndex	14.3%	32.7%	12.2%	40.8%	100.0%
		Adjusted Residual	-.6	-.1	-1.3	1.7	
	3	Count	3	11	3	7	24
		Expected Count	4.1	7.9	4.5	7.5	24.0
		% within NoIndex	12.5%	45.8%	12.5%	29.2%	100.0%
		Adjusted Residual	-.6	1.4	-.8	-.2	
	4	Count	7	15	4	4	30
		Expected Count	5.1	9.9	5.6	9.4	30.0
		% within NoIndex	23.3%	50.0%	13.3%	13.3%	100.0%
		Adjusted Residual	1.0	2.1	-.8	-2.3	
	5	Count	0	2	5	4	11
		Expected Count	1.9	3.6	2.1	3.4	11.0
		% within NoIndex	0.0%	18.2%	45.5%	36.4%	100.0%
		Adjusted Residual	-1.5	-1.1	2.3	.4	
	6	Count	2	6	0	2	10
		Expected Count	1.7	3.3	1.9	3.1	10.0
		% within NoIndex	20.0%	60.0%	0.0%	20.0%	100.0%
		Adjusted Residual	.3	1.9	-1.6	-.8	
	7	Count	2	2	0	1	5
		Expected Count	.8	1.7	.9	1.6	5.0

Table 7 contiuned

	% within NoIndex	40.0%	40.0%	0.0%	20.0%	100.0%
	Adjusted Residual	1.4	.3	-1.1	-.5	
8	Count	1	1	0	0	2
	Expected Count	.3	.7	.4	.6	2.0
	% within NoIndex	50.0%	50.0%	0.0%	0.0%	100.0%
	Adjusted Residual	1.2	.5	-.7	-1.0	
9	Count	1	1	0	0	2
	Expected Count	.3	.7	.4	.6	2.0
	% within NoIndex	50.0%	50.0%	0.0%	0.0%	100.0%
	Adjusted Residual	1.2	.5	-.7	-1.0	
1	Count	0	2	0	0	2
0	Expected Count	.3	.7	.4	.6	2.0
	% within NoIndex	0.0%	100.0%	0.0%	0.0%	100.0%
	Adjusted Residual	-.6	2.0	-.7	-1.0	
Total	Count	37	72	41	68	218
	Expected Count	37.0	72.0	41.0	68.0	218.0
	% within NoIndex	17.0%	33.0%	18.8%	31.2%	100.0%

Table 7 indicated that the cross-tabulation of year of education and YesIndex reveals a few participants gave “Yes” responses. The largest part of participants ($n = 83$, 38.1%) gave “Yes,” response to the Item 1, whereas 49 of them (22.5%) responded “Yes” to Item 2. Less than 15% of the participants gave “Yes” responses to Item % or higher, which caused the frequency reduced as YesIndex scores increases. This table indicates that the entire scale was mostly responded with “No,” and “Yes” responses stayed at the minimal level. Furthermore, third-year participants gave higher responses in the 1st and 3rd items and in the 2nd and 4th items had a higher representation of fourth-year participants. On the other hand, first- and second-year participants were placed in the lowest groups (Items 1–2). Despite the little variations, the distribution provided more “No” responses with little support for “Yes” response.

Table 8

Distribution of “No” responses by year of education

		Year of Education					
		1	2	3	4	Total	
NoIndex	11	Count	0	2	0	0	2
		Expected Count	.3	.7	.4	.6	2.0
		% within YesIndex	0.0%	100.0%	0.0%	0.0%	100.0%
		Adjusted Residual	-.6	2.0	-.7	-1.0	
	12	Count	1	1	0	0	2
		Expected Count	.3	.7	.4	.6	2.0
		% within YesIndex	50.0%	50.0%	0.0%	0.0%	100.0%
		Adjusted Residual	1.2	.5	-.7	-1.0	
	13	Count	1	1	0	0	2
		Expected Count	.3	.7	.4	.6	2.0
		% within YesIndex	50.0%	50.0%	0.0%	0.0%	100.0%
		Adjusted Residual	1.2	.5	-.7	-1.0	
	14	Count	2	2	0	1	5
		Expected Count	.8	1.7	.9	1.6	5.0
		% within YesIndex	40.0%	40.0%	0.0%	20.0%	100.0%
		Adjusted Residual	1.4	.3	-1.1	-.5	
	15	Count	2	6	0	2	10
		Expected Count	1.7	3.3	1.9	3.1	10.0
		% within YesIndex	20.0%	60.0%	0.0%	20.0%	100.0%
		Adjusted Residual	.3	1.9	-1.6	-.8	
16	Count	0	2	5	4	11	
	Expected Count	1.9	3.6	2.1	3.4	11.0	
	% within YesIndex	0.0%	18.2%	45.5%	36.4%	100.0%	
	Adjusted Residual	-1.5	-1.1	2.3	.4		
17	Count	7	15	4	4	30	
	Expected Count	5.1	9.9	5.6	9.4	30.0	
	% within YesIndex	23.3%	50.0%	13.3%	13.3%	100.0%	
	Adjusted Residual	1.0	2.1	-.8	-2.3		
18	Count	3	11	3	7	24	
	Expected Count	4.1	7.9	4.5	7.5	24.0	
	% within YesIndex	12.5%	45.8%	12.5%	29.2%	100.0%	
	Adjusted Residual	-.6	1.4	-.8	-.2		
19	Count	7	16	6	20	49	
	Expected Count	8.3	16.2	9.2	15.3	49.0	
	% within YesIndex	14.3%	32.7%	12.2%	40.8%	100.0%	
	Adjusted Residual	-.6	-.1	-1.3	1.7		
20	Count	14	16	23	30	83	
	Expected Count	14.1	27.4	15.6	25.9	83.0	
	% within YesIndex	16.9%	19.3%	27.7%	36.1%	100.0%	
	Adjusted Residual	.0	-3.4	2.6	1.2		
Total	Count	37	72	41	68	218	
	Expected Count	37.0	72.0	41.0	68.0	218.0	
	% within YesIndex	17.0%	33.0%	18.8%	31.2%	100.0%	

Table 8 revealed that most participants grouped around the higher NoIndex scores, which confirms the complementary nature of the YesIndex and NoIndex distributions. The largest group of participants (n = 83, 38.1%) supported the NoIndex = 20 category, which means they answered no to that item. This was followed by the NoIndex = 19 category (n = 49, 22.5%) and the NoIndex = 17 category (n = 30, 13.8%). Few participants gave “No” responses at the lower end of the scale. There were two to five instances across the categories such as NoIndex= 11, 12, and 13. Second-year participants demonstrated larger range including mid-range score (16-17) However, fourth-year participants were more likely to demonstrate in the highest NoIndex categories (19-20). While first-year participants were more evenly divided between NoIndex= 17, 19, and 20; third-year participants demonstrated a noticeable concentration in NoIndex=18. Nevertheless, these variances, in general, demonstrates a significant preponderance of “No” answers on the scale.

Table 9
Distribution of “Yes” responses by gender

		Gender			
		Female	Male	Total	
YesIndex	1	Count	72	14	86
		Expected Count	57.5	28.5	86.0
		% within YesIndex	83.7%	16.3%	100.0%
		Adjusted Residual	4.2	-4.2	
	2	Count	36	14	50
		Expected Count	33.4	16.6	50.0
		% within YesIndex	72.0%	28.0%	100.0%
		Adjusted Residual	.9	-.9	
	3	Count	15	10	25
		Expected Count	16.7	8.3	25.0
		% within YesIndex	60.0%	40.0%	100.0%
		Adjusted Residual	-.8	.8	
	4	Count	12	19	31
		Expected Count	20.7	10.3	31.0
		% within YesIndex	38.7%	61.3%	100.0%
		Adjusted Residual	-3.6	3.6	

Table 9 continued

5	Count	5	7	12
	Expected Count	8.0	4.0	12.0
	% within YesIndex	41.7%	58.3%	100.0%
	Adjusted Residual	-1.9	1.9	
6	Count	5	5	10
	Expected Count	6.7	3.3	10.0
	% within YesIndex	50.0%	50.0%	100.0%
	Adjusted Residual	-1.2	1.2	
7	Count	2	3	5
	Expected Count	3.3	1.7	5.0
	% within YesIndex	40.0%	60.0%	100.0%
	Adjusted Residual	-1.3	1.3	
8	Count	1	1	2
	Expected Count	1.3	.7	2.0
	% within YesIndex	50.0%	50.0%	100.0%
	Adjusted Residual	-.5	.5	
9	Count	0	2	2
	Expected Count	1.3	.7	2.0
	% within YesIndex	0.0%	100.0%	100.0%
	Adjusted Residual	-2.0	2.0	
10	Count	3	0	3
	Expected Count	2.0	1.0	3.0
	% within YesIndex	100.0%	0.0%	100.0%
	Adjusted Residual	1.2	-1.2	
Total	Count	151	75	226
	Expected Count	151.0	75.0	226.0
	% within YesIndex	66.8%	33.2%	100.0%

According to the *Table 9*, the cross-tabulation of gender and YesIndex categories demonstrates the varieties in the number of items which female and male participants responded with “Yes”. Item one was supported by the largest group of participants (n=86), with less percentage of male participants (16.3%, n=14) and most females (83.7%, n=72). These Item two groups (n=50) indicated a similar pattern where females predominating (72.0%). On the contrary, the Item four category (n=31) indicated a significant deviation

from expected values with adjusted residuals (-3.6 and 3.6) showing that most of the participants were male (61.3%, n=19). Even though, the total numbers were low, male participants are more prevalent in the Item five as well as the seven and nine. Three of the female participants supported all ten items at the highest end while none of the male participants did so.

Consequently, these results indicate that males were more likely to approve a moderate number of items (four to five) while females were more concentrated in the low category (Items one or two). The distribution of “Yes” answers revealed a gendered scores with men being more represented in mid-range items and women at the lowest items.

Table 10
Distribution of “No” responses by gender

		Gender			
		Female	Male	Total	
NoIndex	11	Count	3	0	3
		Expected Count	2.0	1.0	3.0
		% within NoIndex	100.0%	0.0%	100.0%
		Adjusted Residual	1.2	-1.2	
	12	Count	0	2	2
		Expected Count	1.3	.7	2.0
		% within NoIndex	0.0%	100.0%	100.0%
		Adjusted Residual	-2.0	2.0	
	13	Count	1	1	2
		Expected Count	1.3	.7	2.0
		% within NoIndex	50.0%	50.0%	100.0%
		Adjusted Residual	-.5	.5	
	14	Count	2	3	5
		Expected Count	3.3	1.7	5.0
		% within NoIndex	40.0%	60.0%	100.0%
		Adjusted Residual	-1.3	1.3	
	15	Count	5	5	10
		Expected Count	6.7	3.3	10.0
		% within NoIndex	50.0%	50.0%	100.0%
		Adjusted Residual	-1.2	1.2	
	16	Count	5	7	12
		Expected Count	8.0	4.0	12.0
		% within NoIndex	41.7%	58.3%	100.0%
		Adjusted Residual	-1.9	1.9	

Table 10 continued

17	Count	12	19	31
	Expected Count	20.7	10.3	31.0
	% within NoIndex	38.7%	61.3%	100.0%
	Adjusted Residual	-3.6	3.6	
18	Count	15	10	25
	Expected Count	16.7	8.3	25.0
	% within NoIndex	60.0%	40.0%	100.0%
	Adjusted Residual	-.8	.8	
19	Count	36	14	50
	Expected Count	33.4	16.6	50.0
	% within NoIndex	72.0%	28.0%	100.0%
	Adjusted Residual	.9	-.9	
20	Count	72	14	86
	Expected Count	57.5	28.5	86.0
	% within NoIndex	83.7%	16.3%	100.0%
	Adjusted Residual	4.2	-4.2	
Total	Count	151	75	226
	Expected Count	151.0	75.0	226.0
	% within NoIndex	66.8%	33.2%	100.0%

Table 10 indicated that the cross-tabulation of gender and NoIndex categories reveals a complementary distribution to the YesIndex categories. Item 20 had the largest range of participants ($n=86$, 38.1%), with a considerable gender variation from expected counts confirmed by adjusted residuals (4.2 and -4.2) where females (83.7%) outnumbered males (16.3%). In the same way, males were more concentrated in mid-range categories like Item 16 and 17, where adjusted residuals indicated their frequencies outnumbered expected values while females were more represented in the Item 19 (72.0% vs. 28.0%). At the lower end, Item 11-13, there were few cases with a small number of irregular responses from both females and males. Noticeably, all the cases were male in Item 12, but all cases were female in Item 11. According to the general pattern, despite isolated anomalies, male participants were more distributed across mid-items while females concentrated in the highest items giving more negative responses. Furthermore, the results highlighted the gendered pattern in “No” responses with more varied responses of males and females representing a larger tendency to give more “No” answers.

Additionally, Cramer's $V = .395$; $\chi^2 (9) = 35.350$, $p < .001$; the chi-square test results are significant. Since these variations are systematic rather than random, Cramer's V resulted in .395 supporting the situation. The mean rank of female participants was lower than that of males meaning males gave more “Yes” responses. The observed gap is not likely to be the result of chance because of the significant difference ($p < .001$). Also, Mann-Whitney test supported the gendered distribution in the Crosstabs.

Table 11

Distribution of preparedness by year of education

		Year of Education					
		1	2	3	4	Total	
Preparedness	Low	Count	26	63	31	47	167
		Expected Count	25.9	62.4	30.7	48.0	167.0
		% within	15.6%	37.7%	18.6%	28.1%	100.0%
		Closed_EndedQ1_Cat					
		Adjusted Residual	.1	.5	.3	-.8	
High		Count	1	2	1	3	7
		Expected Count	1.1	2.6	1.3	2.0	7.0
		% within	14.3%	28.6%	14.3%	42.9%	100.0%
		Closed_EndedQ1_Cat					
		Adjusted Residual	-.1	-.5	-.3	.8	
Total		Count	27	65	32	50	174
		Expected Count	27.0	65.0	32.0	50.0	174.0
		% within	15.5%	37.4%	18.4%	28.7%	100.0%
		Closed_EndedQ1_Cat					

Table 11 revealed that the cross-tabulation of year of education and preparedness levels overwhelmingly showed most participants' responses in the low category ($n = 167$, 96.0%). Level of low preparedness was distributed more evenly with the biggest percentage in the second year (37.7%) followed by the fourth year (28.1%), third year (18.6%), and first year (15.6%). There were no significant deviations from expected frequencies when adjusted residuals were near zero. Comparatively, a little percentage of participants ($n=7$, 4.0%) concentrated in the category of “High” level of preparedness. Even though higher percentages could be seen in the all years (14.3% - 28.6%), the fourth year had a higher

percentage (42.9%). High preparedness level was uncommon and didn't vary in terms of the year of education according to the adjusted residuals which highlighted no noticeable deviations from expectations. The results indicated that pre-service English teachers' perceptions of their readiness to work with students with dyslexia were low regardless of their year of education implying that students' self-reported preparedness didn't significantly increase ($\chi^2 (3) = .731, p = .866$) as they advanced through the teacher education.

Table 12

Distribution of preparedness by gender

			Gender		
			Female	Male	Total
Preparedness	Low	Count	108	6	114
		Expected Count	110.2	3.8	114.0
		% within Gender	94.7%	5.3%	100.0%
		Adjusted Residual	-1.9	1.9	
	High	Count	64	0	64
		Expected Count	61.8	2.2	64.0
		% within Gender	100.0%	0.0%	100.0%
		Adjusted Residual	1.9	-1.9	
Total	Count	172	6	178	
	Expected Count	172.0	6.0	178.0	
	% within Gender	96.6%	3.4%	100.0%	

Table 12 showing the preparedness levels in terms of the genders, revealed that while males showed up in the low group, females represented in the both the low and high levels. All participants in the high category ($n=64$) were female, while 108 (94.7%) and 6 (5.3%) of the participants in the low category were female as well. According to the adjusted residuals (± 1.9) males' higher than anticipated presence in the low group and absence in the high group represent minor but significant deviations from predicted frequencies. In general, according to the results preparedness of the participants to work with students with dyslexia was primarily related with females because males were highly concentrated in the lower preparedness category. This supports that a potential gender disparity in self-reported

readiness, with females demonstrating higher variation, including a substantial representation in the high preparedness group.

As a result of the analysis of the association between preparedness, year of education and gender, the chi-square test results indicated that there is no significant difference across all year groups (Pearson χ^2 (3) =.731, p =.866). Effect size calculations revealed that (Phi=.065, Cramer's V =.065) the association is insignificant which means the year of education had no meaningful relation with responses in other words the distribution of responses was not affected by the year groups.

On the other hand, in terms of the gender variable the mean rank of male participants ($N = 75$: 143.69) was higher than females ($N = 151$; 98.51). Also, The Mann–Whitney U test identified a significant difference between the groups, $U = 3398.50$, $Z = -5.07$, $p < .001$. Accordingly, male participants gave more “Yes” responses regarding perceptions and attitudes towards dyslexia than female pre-service English teachers. The mean rank of female participants ($N = 151$: 128.49) was higher than males ($N = 75$; 83.31). Also, The Mann–Whitney U test indicated that there is a significant difference, $U = 3398.50$, $Z = -5.07$, $p < .001$. As a result, female participants gave more “No” responses regarding dyslexia. While male participants were more likely to affirm awareness and positive attitudes (higher YesIndex scores), female pre-service English teachers were more likely to respond negatively (higher NoIndex scores) which demonstrated the differences in perceptions and attitudes towards dyslexia varied in terms of genders. This is supported by the Pearson chi-square results which were not significant (p =.062), even though the likelihood ratio indicated a significant relationship (p =.019). Additionally, to strengthen the results, the effect size values (Phi=–.140, Cramer's V =.140) were calculated. It is revealed that there is a small effect, pointing to a slight tendency for gender to effect responses.

4.3. Qualitative Data Analysis

Table 13

Distribution of thematic categories in participants' qualitative responses by year of education

Questions and Themes	Year of Education			
	1	2	3	4
Q1- How would you define dyslexia?	91.90%	98.60%	97.60%	97.10%
Accurate	10.80%	2.80%	7.30%	1.50%
Partially Accurate/Skill Focused	56.80%	56.90%	61.00%	57.40%
Myths/Misconceptions	16.20%	23.60%	22.00%	23.50%
Limited understanding and learning abilities	5.40%	11.10%	4.90%	2.90%
Irrelevant-Unsure	2.70%	4.20%	2.40%	11.80%
Q2 – Do you know an individual with dyslexia? If so, please briefly describe your observations.	100.00%	100.00%	100.00%	97.10%
No one	89.20%	91.70%	95.10%	89.70%
Family/Relative	8.10%	6.90%	4.90%	5.90%
Self	0%	1.40%	0%	1.50%
Irrelevant	2.70%	0%	0%	0%
Q3 – Have you ever had any experience working with an individual with dyslexia? If so, please explain.	100.00%	100.00%	100.00%	97.10%
No	94.60%	100.00%	100.00%	92.60%
Yes	5.40%	0%	0%	4.40%
Q4 – Have you ever received any training on dyslexia? If so, please explain.	100.00%	100.00%	100.00%	97.10%
None	100.00%	98.60%	85.40%	76.50%
School-based Elective Course	0%	0%	14.60%	16.20%
Seminar/Webinar	0%	1.40%	0%	5.90%
Q5 – Which school practitioner has the greatest responsibility towards supporting students with dyslexia? Please explain.	54.10%	83.30%	75.60%	77.90%
Classroom Teacher	8.10%	1.40%	4.90%	14.70%
All the teachers	29.70%	47.20%	26.80%	36.80%
School Administration	5.40%	2.80%	4.90%	5.90%
Family	0%	0%	0%	1.50%
Special Education Teachers	2.70%	5.60%	19.50%	8.80%
Irrelevant-Unsure	0%	15.30%	0%	1.50%
Speech Therapists and Psychologists	0%	2.80%	0%	0%
Experts and Academics	2.70%	1.40%	0%	1.50%
Guidance Counselor	5.40%	6.90%	19.50%	7.40%
SUM	991.89	1063.89	1046.34	1033.82
N = Documents	100.00	100.00	100.00	100.00

Table 13 indicates the answers of participants analyzed across year groups and a clear development pattern occurred.

Q1- How would you define dyslexia?

Regardless of the year of education almost all participants tried to define dyslexia. Most of them answered the question incomplete or skill focused answers such as focusing mainly on reading – spelling, reading – writing, speaking – reading paired challenges while a small percent from 1st to 4th year, all participants stated 10.80%, 2.80%, 7.30% and 1.50% respectively presented appropriate definitions.

Some of the participants' answers were as follows:

- P5, Female, 4th Year: *“Dyslexia is a difficulty in reading fluently and correctly”*.
- P6, Female, 4th Year: *“Dyslexia is a difficulty in spelling the words and understanding written texts”*.
- P20, Female 4th Year: *“Dyslexia is lack of ability to read and write”*.
- P44, Female, 4th Year: *“Dyslexia is kind of sickness and a difficult yin reading”*.
- P55, Female, 4th Year: *“Dyslexia is a poor eye condition”*.
- P67, Female, 4th Year: *“Dyslexia is an anxiety of reading”*.
- P106, Female, 3rd Year: *“Dyslexia is a learning difficulty effecting the how we see the order of the letters”*.
- P110, Male, 1st Year: *“Dyslexia is underaged people's inability to read properly”*.
- P173, Female, 2nd Year: *“Dyslexia is a brain disorder”*.
- P220, Male, 2nd Year: *“Dyslexia is a learning disability”*.

Q2 - Do you know an individual with dyslexia? If so, please briefly describe your observations.

Approximately 90% of the participants indicated that they did not know anyone with dyslexia. Only a few participants identified themselves as individuals with dyslexia and a tiny proportion mentioned family or relatives. This suggests that there is a little personal exposure or observation towards dyslexia at any level of education which could pave the way for the persistence of misconceptions.

Some of the participants' answers were as follows:

- P2, Male, 4th Year: *"Yes. I think, I have a dyslexia"*.
- P131, Female, 4th Year: *"I have a student in my practicum classroom"*.
- P178, Female, 2nd Year: *"I have a friend with dyslexia. I must repeat myself while talking to him"*.
- P181, Female, 2nd Year: *"I don't know anyone, but I think I have it"*.

Q3 – Have you ever had any experience working with an individual with dyslexia? If so, please explain.

Almost all participants regardless of year of education had no direct experience with students with dyslexia in the classroom. Only a small percentage of first- and fourth-year pre-service English teachers indicated having a few experiences. The disconnection between theoretical instruction and actual classroom environment is emphasized by this lack of exposure to practice-based learning.

Some of the participants' answers were as follows:

- P18, Female, 4th Year: *"Yes, I had a student for two years. It was difficult for me to teach them. Because I had no experience"*.

- P78, Female, 1st Year: *“I helped the girl I know”*.
- P126, Female, 1st Year: *“Yes, I have. We should be patient while we teach them”*.
- P132, Female, 4th Year: *“Yes, I have. I gave more time for them during the activities”*.

Q4 – Have you ever received any training on dyslexia? If so, please explain.

According to the participants’ answers there was a lack of formal training. 98.6% of second-year participants and 100% of first year participants said they had never had any instruction. A small percentage of third- and fourth-year participants (14-16%) reported they had taken an elective course or attended seminars and webinars. This highlights how rare teacher training programs incorporate dyslexia education.

Some of the participants’ answers were as follows:

- P136, Female, 4th Year: *“Yes. I had a selective course at the university”*.
- P152, Female, 4th Year: *“Yes. I attended a webinar”*.

Q5 – Which school practitioner has the greatest responsibility towards supporting students with dyslexia? Please explain.

While answers of the first year-participants distributed responsibility more widely (all the teachers 29.7%, classroom teachers 54.1%), second years gave the responsibility to classroom teachers (83.3%). More participants said guidance counselors, special education teachers or specialists during the third and fourth year of education, which indicates the understanding of the collaborative aspect of support. Notwithstanding, the answer “all teachers have responsibility” persisted across all years.

As a conclusion, even though the misconceptions remained, participants' understanding of dyslexia improved somewhat over time. Most participants had never been trained, and very few had ever interacted with students with dyslexia in their personal or professional lives. Although responsibility was distributed in various ways, there was a slow change from classroom teachers alone to a larger group of stakeholders.

Table 14

Distribution of thematic categories in participants' qualitative responses by gender

Questions and Themes	Gender	
	Female	Male
Q1- How would you define dyslexia?	95.10%	95.00%
Accurate	7.40%	5.00%
Partially Accurate/Skill Focused	53.10%	60.00%
Myths/Misconceptions	23.50%	20.00%
Limited understanding and learning abilities	3.70%	7.50%
Irrelevant-Unsure	7.40%	2.50%
Q2 – Do you know an individual with dyslexia? If so, please briefly describe your observations.	98.80%	97.50%
No one	93.80%	85.00%
Family/Relative	3.70%	10.00%
Self	0%	2.50%
Irrelevant	1.20%	0%
Q3 – Have you ever had any experience working with an individual with dyslexia? If so, please explain.	98.80%	97.50%
No	95.10%	97.50%
Yes	3.70%	0%
Q4 – Have you ever received any training on dyslexia? If so, please explain.	98.80%	97.50%
None	82.70%	92.50%
School-based Elective Course	17.30%	5.00%
Seminar/Webinar	0%	0%
Q5 – Which school practitioner has the greatest responsibility towards supporting students with dyslexia? Please explain.	65.40%	82.50%
Classroom Teacher	7.40%	17.50%
All the teachers	30.90%	27.50%
School Administration	2.50%	10.00%
Family	1.20%	0%
Special Education Teachers	9.90%	10.00%
Irrelevant-Unsure	0%	2.50%
Speech Therapists and Psychologists	0%	0%
Experts and Academics	1.20%	2.50%
Guidance Counselor	12.30%	12.50%
SUM	1014.81	1040.00
N = Documents	100.00	100.00

Table 14 indicates the answers of participants analyzed across genders and a noticeable contrast appears.

Q1- How would you define dyslexia?

Majority of the participants 53.1% of females and 60% of males defined dyslexia as a partially true – skill-based category. Even though both females and males had misconceptions, females reported them more frequently (23.5%) than males (20%). It's interesting to underline that females were more likely than males to give unsure or irrelevant responses (7.4%) which indicates more caution or hesitation.

Some of the participants' answers were as follows:

- P8, Male, 4th Year: *“Dyslexia is a difficulty in understanding the words and numbers”*.
- P16, Female, 4th Year: *“A condition making people have hard time in reading texts”*.

Q2 – Do you know an individual with dyslexia? If so, please briefly describe your observations.

93.8% of females and 85% of males reported that they didn't know anyone with dyslexia. However, males were more likely to mention themselves as an individual with dyslexia (2.5% vs. 0%) or someone from family members/relatives (10% vs. 3.7%).

Some of the participants' answers were as follows:

- P22, Male, 3rd Year: *“A lecturer of mine has it. I wouldn't even notice if she hadn't mentioned”*.
- P132, Female, 4th Year: *“I have a student. He writes very slow”*.

- P180, Male, 2nd Year: *“I don’t know anyone, but I think I have it”*.

Q3 – Have you ever had any experience working with an individual with dyslexia? If so, please explain.

A small percentage of individuals (3.70%) mentioned personal experience including their practicum classrooms, or students private teaching experiences.

Q4 – Have you ever received any training on dyslexia? If so, please explain.

There was a major notable gender gap. Only 5% of males and 17.3% of females stated that they took a school-based elective course or seminars/webinars. It is implied that female participants might look for more training possibilities more actively.

Some of the participants’ answers were as follows:

- P136, Female, 4th Year: *“Yes, in a selective course at the university and a seminar”*.
- P167, Male, 2nd Year: *“I attended a seminar”*.

Q5 – Which school practitioner has the greatest responsibility towards supporting students with dyslexia? Please explain.

Females were more likely to emphasize the function of guidance counselors (12.3%) or to give all teachers responsibility (30.9%). On the other hand, males were more likely to mention special education teachers (10.00%), classroom teachers (17.5%) and school administration (10%). Female participants responses were highly unsure and larger distribution of stakeholders represent their tendency for caution, hesitancy, and preparedness to accept shared responsibility. On the contrary, males gave more definitive responses, based on their personal or familial experience. However, they shared more responsibility with school administrators or experts instead of taking a cooperative approach.

CHAPTER FIVE

CONCLUSION AND SUGGESTIONS

5.1. Discussion

The results of the study indicated that, pre-service English language teachers in Türkiye have generally positive attitudes on teaching students with dyslexia; nevertheless, their preparedness and professional knowledge remained limited. This finding aligns with other studies carried in both Turkish and foreign contexts that pre-service English language teachers have basic awareness and positive attitudes regarding dyslexia; however, teachers have a strong sense of unpreparedness (Mortimore, 2012; Ryder and Norwich, 2019; Schnabmann et al., 2020). Balcı (2017) supported that although Turkish pre-service English language teachers are motivated to engage with students with dyslexia, their pedagogical and practical strategies are insufficient (you can provide some details of this study to refer to the differences rather than just mentioning without giving any details). Doğan (2013) highlighted that in other context with primary school teachers also have insufficient knowledge and effective strategies to support students with dyslexia and in Italy and Cyprus, teachers also have insufficient practical teaching skills (Bonifacci et al., 2017; Dimililer and Istek, 2018). Likewise, as Polat et al., (2023) stated that teachers working in inclusive environments did not consider themselves as knowledgeable enough to implement inclusive strategies in a classroom although the study was conducted with in-service teachers. As a result, if in-service teachers have difficulty in creating inclusive environment, their teacher education process should be redesigned. Similarly, English teachers may have difficulty in creating inclusive environment while teaching students with dyslexia. Qualitative results support that even though most participants (%) could describe dyslexia, their definitions were mainly focused on reading-writing skills rather than theoretical awareness, conceptual depth or practical comprehension.

According to the findings, regardless of the participants' year of education, their preparedness level to teach students with dyslexia was low and their preparedness did not progress through the teacher education program ($\chi^2 (3) = .731, p = .866$). Nijakowska et al. (2018; 2020)'s study underlined the different level of preparedness between pre-service and in-service English as a Foreign Language (EFL) teachers from Greece, Cypriot, and Poland

and it is indicated that in-service teachers felt more prepared thanks to their training and experiences (54.2% of them are experienced with over 10 years). As can be concluded from the research, even though teachers have low preparedness level, they can be prepared to their teaching process in teacher education programs rather than giving at least ten years to feel competent enough to teach English to the students with dyslexia. According to the qualitative results pre-service English teachers' preparedness did not increase significantly through year of education in the current teaching program. 4th year pre-service English teachers reported little practical preparedness (28.7%) while first-year pre-service English teachers preparedness level is similar (15.5.%). In the light of these percentages, competency did not increase as the teacher education program progressed.

The current study revealed that while only 14.6–17.3% of the participants reported taking an elective course or workshop, and 0–5.9% of them reported attending a seminar or a webinar regarding dyslexia which take a couple of hours to cover general information about dyslexia, most participants (82.7–92.5%) had never received training. The current study reported that pre-service English teachers in Türkiye did not receive sufficient training through their teacher education program. The “Training_Q4” indicated that most participants (82.7–92.5%) never had any type of instruction regarding dyslexia. Similarly, research in Türkiye indicated that primary school and pre-service English teachers' knowledge and training regarding dyslexia is inadequate during their teacher education (Sümer-Dodur and Altındağ Kumaş, 2021; Altındağ Kumaş and Yıldırım, 2023) and this causes them to feel themselves as incapable of identifying provide the necessary support to students with dyslexia (Balcı, 2019, as cited in Yüksel and Özcan, 2025). According to the cross-tabulation of gender and level of preparedness identified that females represented both low and high levels despite low level of males. In the high category, all participants were female (n=64). The studies conducted (Seçkin-Yılmaz and Erim, 2019; Balcı, 2019) reported that female teachers were more knowledgeable than males regarding dyslexia. On the contrary, in this study males gave more “yes” answers especially in item 4 (61.3%) about providing continuous feedback to the students with dyslexia. The possible reasons may be given as females might have responded more hesitantly to the questions as in the current study. Namely, even if they may be knowledgeable, their confidence differs from males. As the result of the current study suggests there is a gender-based variation, which correlates with international reviews indicating discrepancies in gender patterns (Folia and Malisiova,

2025). Moreover, according to the descriptive statistics in the current work, misconceptions regarding dyslexia persisted across study years, with only a small percentage providing accurate definitions of the concept of dyslexia (1st year = 10.8%; 2nd year = 2.8%; 3rd year = 7.3%; 4th year = 1.5%). This supports the finding from other international studies that most teachers lack adequate training and knowledge (Folia and Malisiova, 2025; Indrarathne, 2019; Fekih, 2019; Tobbi, 2020; Nushi and Eshraghi, 2023). Furthermore, in the current study, most participants reported that they had no personal or professional experience with dyslexia. Almost all stated not knowing anyone with dyslexia, and only a small number (10%) mentioned relatives, acquaintances or practicum students. The quantitative limited instructional experience was supported by qualitative results which indicated that almost all the participants had never received formal training and teaching experience with dyslexia. Also, higher levels of preparedness discovered in the analysis revealed that females reported higher attendance at elective courses.

These results are consistent with the existing literature. For instance, Nijakowska et al. (2020) stated that pre-service foreign language teachers usually promote inclusive environment despite their teacher education program was insufficient. Kormos and Nijakowska (2017) highlighted that teacher preparation programs rarely had comprehensive modules regarding dyslexia, which resulted in little change in pre-service teachers' attitudes during their study years. This supports the current study's findings which indicated little change in study years. Similar findings were reported by Indrarathne (2019) who investigated English as a Foreign Languages (EFL) teacher in Sri Lanka and highlighted that while they agreed the significance of material adaptation, they had limited teaching abilities to implement it in the classroom. Qualitative results supported these findings by indicating that misconceptions and skill-based definitions continued through year of education and suggested that theoretical teaching was insufficient to improve practical awareness regarding dyslexia. The qualitative results indicated that there was a need for cooperation, patience, and empathy during teaching students with dyslexia. However, participants identified their professional competency as insufficient to detect and effectively teach students with dyslexia.

The current study' qualitative results indicated that Turkish pre-service English teachers appreciated cooperation, patience, and empathy with coworkers and parents. MacFarlane and Woolfson (2013) supported the collaboration in inclusive education. Additionally, absence of participants' exposure to practical training, and inability to detect dyslexia were mainly mentioned. These supported the difference between attitudes and preparedness observed in research on in-service and pre-service special education teachers. Both qualitative and quantitative results supported the idea that even though attitudes towards inclusive education were positive, participants' preparedness was weak across both sources. In conclusion the current study reported that pre-service English teachers in Türkiye context have low preparedness, insufficient training, and continuous misconceptions regarding dyslexia. This study highlights the necessity of systematic and experimental teacher training opportunities for pre-service English language teachers to eliminate the gap between theory and practice.

Consequently, the investigation of these findings identified that challenges experienced by pre-service English teachers in Türkiye are broader teacher education issue worldwide. This current study demonstrates all subject teacher education programs should include systematic and experiential training regarding dyslexia and other learning difficulties. Without the gap in the literature closed, supportive regulations in teacher education done in teacher education, future English teachers may struggle with teaching students with dyslexia. Even though the results of the study indicated that positive attitudes coexist, pre-service English teachers have limited conceptual understanding and insufficient training according to the holistic interpretation of both qualitative and quantitative analysis. This supports the need for curriculum-level regulations to eliminate the awareness-practice gap. Thus, teachers' self-confidence and learning process of students with dyslexia may be affected negatively.

5.2. Conclusion

How do the perceptions and attitudes of pre-service English teachers regarding dyslexia distribute?

The descriptive data (Tables 17–18) identified that most participants responded positively to the questions. In the largest YesIndex category (38.1%), it clustered and followed by YesIndex=19 category (22.5%). Most participants only gave one or two 'No' responses resulting in low NoIndex scores. This finding shows that pre-service English teachers generally had negative opinions of definition of dyslexia such as disorder, disability, brain problem, etc. and limited understanding of dyslexia. It is concluded that pre-service English teachers had positive views and partially knowledgeable regarding dyslexia.

Is there any difference among the perceptions and attitudes of pre-service English teachers regarding dyslexia in terms of their gender?

The findings show that males scored higher YesIndex although female participants scored higher on NoIndex (see Table 9-10). This indicated that females responded more negatively whereas males responded more positively. According to chi-square test, there is a moderate correlation ($\chi^2 (9) = 35.350, p < .001$; Cramer's $V = .395$). This was supported by qualitative results (Table 25) that highlighted that males more frequently self-identified or stated familial situations whereas females responded more irrelevant or inaccurate answers (7.4% vs. 2.5%). On the other hand, females stated being more likely to look for training although the percentage of males looking for training relatively low (17.3% vs. 5%).

Is there any difference among the perceptions and attitudes of pre-service English teachers regarding dyslexia in terms of their year of education?

Both YesIndex and NoIndex scores varied across year of education ($\chi^2 (3) = 17.128, p = .001$). Second-year students demonstrated the highest NoIndex mean rank (131.18), while third-year students achieved the highest YesIndex mean rank (128.91). Qualitative data (Table 23-24) indicates that there is a progress about pre-service English teacher perceptions and attitudes from the first to the fourth year, despite misconceptions persist. Also, while later-year pre-service teachers identifies collaboration (e.g., guidance counselors, special education teachers), early-year pre-service teachers allocate responsibility to classroom teachers.

Is there any difference among the preparedness of pre-service English teachers regarding dyslexia in terms of their gender?

Preparedness levels varied by gender (Table 22). Male participants grouped only in the low preparedness” although all participants in the “high preparedness” category (n=64) were female. Adjusted residuals (± 1.9) demonstrated minor but significant variations. Qualitative data highlighted that only 5% of male reported any training, whereas female reported elective courses and seminars more frequently (17.3%).

Is there any difference among the preparedness of pre-service English teachers regarding dyslexia in terms of their year of education?

Low preparedness level prevailed through study years (96%), with only 4% underlining high preparedness (n=7). Among them, 42.9% were 4th-year students; however, chi-square results indicated no difference ($\chi^2 (3) = .731, p = .866$). Therefore, participants did not show a apparent improvement in preparedness as they advanced in their education.

What are pre-service English teachers’ conceptual understanding of dyslexia?

Even though, almost all participants tried to define dyslexia, most responded partially or skill-focused (reading, spelling, reading–writing). Accurate definitions ranged only between 1.5% and 10.8% through year of education. Many participants had misconceptions about dyslexia who defined dyslexia as a “sickness,” “brain disorder,” or “eye problem.” For instance: “Dyslexia is a brain disorder” (P173, Female, 2nd Year); “Dyslexia is a difficulty in spelling the words and understanding written texts” (P6, Female, 4th Year).

What prior experiences have pre-service English teachers had with individuals with dyslexia, and how do they describe these experiences?

Nearly all participants (Table 23, Q2–Q3) indicated no experience with students with dyslexia. Around 90% of participants stated that they did not know anyone with dyslexia, and very few of them indicated relatives, acquaintances or practicum students. Small number of stated difficulties because of limited teacher training: “Yes, I had a student

for two years. It was difficult for me to teach them. Because I had no experience” (P18, Female, 4th Year). This highlights a disconnect between theoretical coursework and practice-based exposure.

Which school practitioner do pre-service English teachers perceive as holding the greatest responsibility for supporting students with dyslexia, and why?

3rd- and 4th-year pre-service teachers mentioned collaborative responsibility including special education teachers and guidance counselors (Table 23–25) although early-year pre-service teachers mentioned responsibility primarily to classroom teachers (e.g., 54.1% of 1st years, 83.3% of 2nd years). There were also gender differences, males often gave responsibility to classroom teachers or administrators, whereas females emphasized shared responsibility among all teachers and guidance counselors.

To what extent do pre-service English teachers believe they are prepared, through their teacher education program, to support students with dyslexia?

96% of participants showed low preparedness scores and only 4% of them showed high preparedness scores. There was no difference observed through study years, supporting that teacher education did not notably improve preparedness. Qualitative responses supported this, underlining limited formal training and low preparedness levels.

5.3. Implications

- The study emphasizes the significance of enhancing pre-service English language teachers’ awareness regarding dyslexia by integrating inclusive principles into ELT departments’ curricula. Program designers and policy makers should integrate dyslexia-related theoretical and practical regulations into teacher education programs in Türkiye.
- There is an evident need for the integration of compulsory or elective courses, webinars/seminars, and special education practicums especially on dyslexia in English language teaching departments in Türkiye due to the limited exposure to

dyslexia-related content and practices. Pre-service English language teachers' preparedness may be enhanced by improving and adjusting the classroom techniques with dyslexia and modifying the teaching program in ELT departments.

- The gap between perceptions, attitudes and preparedness of pre-service English language teachers may occur among in-service teachers. Thus, professional development programs should be consistent throughout their teaching process. In-service training nationwide should be provided to raise awareness and improve the knowledge of in-service teachers. In other words, dyslexia training should be integrated into pre-service and in-service English language teachers' career.
- For future research, a longitudinal design may be conducted to identify how pre-service English language teachers' perceptions, attitudes and preparedness evolve throughout the years of the study. Also, in-service English teachers may participate in the study to evaluate the difference between pre-service and in-service English language teachers. The sample may be expanded through other teaching departments in faculty of education in the private and state universities in Turkey as well as other countries. This is a necessity because of the limited amount of research in literature. In other words, comparative studies across various regions, institutions, subject areas may provide comprehensive and inclusive reflection of the teacher preparedness in different research samples.

5.4. Limitations

- The sample was limited to pre-service English teachers studying at English language teaching departments from three state universities in Türkiye. Also, the universities were chosen based on practical accessibility. Although the total number of participants was 235, 9 answers were excluded due to the missing or invalid data. Therefore, the findings generalizability to all teacher education programs in Türkiye or around the world was limited.

- To collect data, the short timeline and reliance on both printed and online survey implementation, there was limited opportunity to combine data sources. Descriptive statistics and non-parametric tests were the main tools in quantitative components in the light of the abnormal distribution of normality tests. Even though descriptive or non-parametric tests are appropriate, these might not have had the statistical power to reflect the diverse attitudes and perceptions of the participants.
- The qualitative components of the study were coded by hand via MAXQDA, even though the analysis was done by the software, the coding phase was completed by the researcher. Thus, there is a chance of subjectivity during coding.
- It was difficult to identify how pre-service English teachers' perceptions and attitudes changed over time because the study was not longitudinal, and perceptions and attitudes may change over the time.
- The study's contribution to the fields of Special Education and Inclusive Education was limited because the study solely addressed dyslexia rather than including the other learning difficulties.

Thus, due to having unique research samples including participants educational and cultural background, the study should be carefully transferred to other contexts.

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APPENDICES

APPENDIX 1

SORU/ANKET/GÖRÜŞME FORMU

Dear Participants,

This research aims to identify your awareness of Dyslexia. Please, choose the best option that appeals to you and complete the survey answering all of the statements below. Your answers will only be used for research purposes and kept confidential. Attendance is VOLUNTARY and ANONYMOUS in this research. If you have any questions, do not hesitate to contact us. Thank you in advance for your contribution.

Selin CENGİZ YEŞİL - ÇOMU Faculty of Education ELT Department

Your age:

Your grade:

Your Gender:

Your university:

-How would you explain dyslexia?

-Do you know an individual with dyslexia? If so, please briefly describe your observations.

-Have you ever had any experience working with an individual with dyslexia? If so, please explain.

-Have you ever received any training on dyslexia? If so, please explain.

-How prepared do you feel you are to work with students with dyslexia. Circle the best option for you.

1. Not at all prepared 2. Slightly prepared **3. Moderately prepared** 4. Very prepared **5. Extremely prepared**

-In your opinion, which school practitioner has the greatest responsibility towards supporting students with dyslexia. Please explain.



APPENDIX 2

Dear Participants,

This research aims to identify your awareness of Dyslexia. Please, choose the best option that appeals to you and complete the survey answering all of the statements below. Your answers will only be used for research purposes and kept confidential. Attendance is VOLUNTARY and ANONYMOUS in this research. If you have any questions, do not hesitate to contact us. Thank you in advance for your contribution.

Selin CENGİZ YEŞİL -

		Yes	No
1	The teacher needs to continually highlight to a student with dyslexia the progress s/he has achieved in knowledge and skills.		
2	The teacher should carefully plan a task difficulty according to the current possibilities of a student with dyslexia.		
3	When assessing students with dyslexia, the teacher should equally assess the outcomes and efforts the learner has invested in acquiring educational content.		
4	The teacher should provide a student with dyslexia with continuous feedback about his/her strengths and abilities.		
5	The teacher should use a multisensory approach in teaching students with dyslexia (use of visual, auditory, kinesthetic, and tactile sensory modality).		
6	The teacher should base his/her teaching on the opportunities for achieving success in students with dyslexia.		
7	It is a legal right of students with dyslexia to be assigned with a smaller number of tasks in the written exam.		
8	The teacher should not expect from students with dyslexia to solve all tasks in the same amount of time as other students.		
9	The teacher is legally allowed to opt for an oral examination when evaluating and grading a student with dyslexia.		
10	In perceptive and linguistic terms, the teacher adjusts the teaching materials to students with dyslexia.		

11	The adjustments, such as using beige paper, custom fonts, texts divided into paragraphs, and highlighting an important text, contribute to the educational progress of students with dyslexia.		
12	Every student with dyslexia has the legal right to an appropriate program of education (regular program with individualized procedures).		
13	It is essential that the teacher creates a stimulating atmosphere in the classroom for students with dyslexia.		
14	The teacher should not publicly point out reading and writing mistakes made by students with dyslexia.		
15	Dyslexic students achieve poorer educational results when there is no cooperation among school, experts and environment, or no professional assistance of theirs.		
16	It is the teacher's obligation to respect the specific recommendations of speech and language therapists about how to work with students with dyslexia.		
17	The teacher is obliged to familiarize the parents of students with dyslexia with the individualized procedures to be used in the work with their child.		
18	The teacher should create positive classroom atmosphere in which a student with dyslexia has the right to make mistakes without feeling uncomfortable.		
19	It is important for a teacher to establish relationships among the students in the classroom based on tolerance and respect for diversity in learning.		
20	The progress of students with dyslexia depends on the cooperation of teachers and parents.		

Link to google forms: [-](#)

APPENDIX 3

ETHICAL BOARD APPROVAL



T.C.
ÇANAKKALE ONSEKİZ MART ÜNİVERSİTESİ REKTÖRLÜĞÜ
Lisansüstü Eğitim Enstitüsü Etik Kurulu
Bilimsel Araştırma ve Yayın Etiği

Sayı : E-84026528-050.99-2400301137
Konu : Başvuru İncelenmesi

18.11.2024

Sayın Selin CENGİZ

Yürütücülüğünüzü yapmış olduğunuz 2024-YÖNP-5352 nolu projeniz ile ilgili Bilimsel Araştırma ve Yayın Etiği Komisyonu'nun almış olduğu 14.11.2024 tarih ve 16/02 sayılı kararı aşağıdadır.

Bilgilerinize rica ederim.

KARAR 02- Sorumlu yürütücülüğünüzü **Doç. Dr. Sevim İNAL**'ın yaptığı ve proje araştırmacısı **Selin CENGİZ** tarafından gerçekleştirilen “MOOC Aracılığıyla İngilizce Öğretmenlerinin ve Öğretmen Adaylarının Disleksiye Yönelik Bilgi ve İnançlarının Değerlendirilmesi ve Geliştirilmesi” başlıklı araştırmanın, ilgili **taahhüt edilen izinlerin alınması** ve Bilimsel Araştırma ve Yayın Etiği Komisyonuna sunulması koşulu ile Etik Komisyon ilkelerine **uygun** olduğuna oy birliği ile karar verilmiştir.

