

Barriers to Implementing Teaching Approaches that

Support Children with Reading Difficulties

BARRIERS TO IMPLEMENTING TEACHING APPROACHES THAT

SUPPORT CHILDREN WITH READING DIFFICULTIES

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21st November 2022

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This letter confirms that your research project *Barriers to Implementing Teaching Approaches that Support Children with Reading Difficulties* has been approved by the Nazarbayev University Graduate School of Education Ethics Committee.

You may proceed with contacting your preferred research site and commencing your participant recruitment strategy.



Yours sincerely


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ABSTRACT

Barriers to Implementing Teaching Approaches That Support Children with Reading Difficulties

Reading difficulties are a common issue that many children experience in their early school years. There are several teaching approaches that help to support these children, but their implementation in classrooms can be challenging due to various barriers. The aim of this study is to understand the barriers that teachers face while implementing effective strategies in teaching students with reading difficulties. As it is a small-scale qualitative research the data were collected from five experienced teachers working in primary mainstream schools in Astana through face-to-face interviews and interviews to the double (ITTD).

The study's findings reveal that teachers face a variety of challenges when applying effective strategies for educating children with reading impairments. These obstacles include a lack of knowledge and teaching aid, a lack of time, and insufficient resources. Teachers noted that a lack of suitable resources made implementing effective teaching methods challenging. Teachers' capacity to adopt these ideas was also constrained by time restrictions and competing goals, such as satisfying curriculum requirements. The findings also demonstrated that teachers use a variety of tactics to overcome these obstacles, such as cooperating with colleagues and customizing resources to match the needs of their students.

This study emphasizes the importance of proper assistance and resources for teachers who work with students who have reading difficulties. Addressing these barriers necessitates a multifaceted approach that includes providing teachers with appropriate resources and training, as well as allocating adequate time to assist teachers in overcoming these barriers and implementing effective strategies in teaching students with reading difficulties.

Аңдатпа

Оқуда Қиындықтары Бар Балаларға Қолдау Көрсететін Оқыту Тәсілдерін Жүзеге Асыруда Кедергілер

Оқу қиындықтары - бұл көптеген балалар мектеп жасында жиі кездесетін мәселе. Бұл балаларға қолдау көрсетуге көмектесетін оқытудың бірнеше тәсілдері бар, бірақ оларды сыныпта жүзеге асыру әртүрлі кедергілерге байланысты қиын болуы мүмкін. Бұл зерттеудің мақсаты оқуда қиындықтары бар оқушыларды оқытуда тиімді стратегияларды жүзеге асыру кезінде мұғалімдер кездесетін кедергілерді түсіну болып табылады. Бұл шағын көлемді сапалы зерттеу болғандықтан, деректер Астанадағы жалпы білім беретін мектептерде жұмыс істейтін бес тәжірибелі мұғалімнен бетпе-бет сұхбат және қос (ITTD) сұхбаты арқылы жиналды.

Зерттеу нәтижелері мұғалімдердің оқуы бұзылған балаларды оқытудың тиімді стратегияларын қолдануда әртүрлі қиындықтарға тап болатынын көрсетеді. Бұл кедергілерге білім мен оқу құралдарының жетіспеушілігі, уақыт тапшылығы және ресурстардың жеткіліксіздігі жатады. Мұғалімдер сәйкес ресурстардың жетіспеушілігі оқытудың тиімді әдістерін енгізуді қиындатқанын атап өтті. Мұғалімдердің бұл идеяларды қабылдау мүмкіндігі де уақыт шектеулерімен және оқу бағдарламаларының талаптарын қанағаттандыру сияқты бәсекелес мақсаттармен шектелді. Нәтижелер сонымен қатар мұғалімдердің бұл кедергілерді еңсеру үшін әріптестерімен ынтымақтасу және оқушылардың қажеттіліктеріне сәйкес ресурстарды теңшеу сияқты әртүрлі тактикаларды қолданатынын көрсетті.

Бұл зерттеу оқуда қиындықтары бар оқушылармен жұмыс істейтін мұғалімдерге тиісті көмек пен ресурстардың маңыздылығын көрсетеді. Бұл кедергілерді шешу мұғалімдерді тиісті ресурстармен және оқытумен қамтамасыз етуді, сондай-ақ мұғалімдерге осы кедергілерді жеңуге көмектесу және оқуда қиындықтары бар

оқушыларды оқытудың тиімді стратегияларын жүзеге асыруға көмектесу үшін барабар уақытты бөлуді қамтитын көп қырлы тәсілді қажет етеді.

Аннотация
Препятствия Для Внедрения Обучающих Подходов, Поддерживающих
Детей С Трудностями Чтения

Трудности с чтением — распространенная проблема, с которой сталкиваются многие дети в раннем школьном возрасте. Существует несколько подходов к обучению, которые помогают поддерживать таких детей, но их реализация в классах может быть затруднена из-за различных барьеров. Цель этого исследования — понять барьеры, с которыми сталкиваются учителя при внедрении эффективных стратегий обучения учащихся с трудностями чтения. Поскольку это небольшое качественное исследование, данные были собраны у пяти опытных учителей, работающих в начальных общеобразовательных школах Астаны, посредством личных интервью и интервью с двойником (ITTD).

Результаты исследования показывают, что учителя сталкиваются с множеством проблем при применении эффективных стратегий обучения детей с нарушениями чтения. Эти препятствия включают нехватку знаний и учебных пособий, нехватку времени и нехватку ресурсов. Учителя отметили, что отсутствие подходящих ресурсов затрудняет внедрение эффективных методов обучения. Способность учителей принять эти идеи также была ограничена временными ограничениями и конкурирующими целями, такими как выполнение требований учебной программы. Результаты также показали, что учителя используют различные тактики для преодоления этих препятствий, такие как сотрудничество с коллегами и настройка ресурсов в соответствии с потребностями своих учеников.

В этом исследовании подчеркивается важность надлежащей помощи и ресурсов для учителей, работающих с учащимися, испытывающими трудности с чтением. Устранение этих барьеров требует многогранного подхода, который включает

предоставление учителям соответствующих ресурсов и обучения, а также выделение достаточного времени для оказания помощи учителям в преодолении этих барьеров и реализации эффективных стратегий обучения учащихся с трудностями чтения.

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1. Introduction

1.1 Background Information

Reading is a very important skill for a person's cognitive development. Reading is essential for language learning and for one's life-long learning (Jayanti, 2016). Paris and Oka (1989) also see it as a cornerstone of literacy and education. Snow et al. (1998) support this idea by stating that reading is highly regarded and necessary for social and economic growth, as many children's academic careers are put at risk because they cannot read well enough to understand and meet the demands of an increasingly competitive economy. It is explained by the fact that in today's technological society, the demand for higher literacy is increasing, resulting in more severe consequences for those who fall behind (Snow et al., 1998). Freire (1983) also sees reading as an important skill for children's social development by stating that reading is seen as part of a larger process of human development and growth based on understanding one's own experience as well as the society at large. Rayner et al. (2011) agrees that reading is a highly complex skill that is required for success in many societies where the information is communicated in written form.

Many scholars have tried to understand the construct of reading. Psychologists, linguists, literary critics, psycholinguists, sociolinguists, semioticians, anthropologists, ethnographers, neuro-linguists, educational researchers, curriculum specialists, and those who study reading development and instruction are among those who fall into this category (Goodman, 1997). As the studies on reading were done in different fields of science, it led to various conceptualizations of reading. Goodman (1997) states:

While the study of text comprehension and schema theory was a popular topic among psychologists (Spiro, Bruce & Brewer, 1980), Piagetian psychologists studying early literacy development used a psychogenetic perspective to investigate how children learn to make sense of written language (Ferreiro & Teberosky, 1982; Goodman,

1991). The reader's active role in creating personal meaning was laid out by reader response theory in the field of literary criticism (Rosenblatt, 1978). To investigate literacy practices and uses, ethnographers looked at literacy in homes, communities, and classrooms (Bloome, 1989; Street, 1995). The common thing among these views was the focus on "an active reader constructing meaning" (p. 2).

Reading according to experimental research and neo-behaviorism is based on recognizing the words in the text quickly and automatically (Goodman, 1997). However, the psychosociolinguistic transactional model of reading, developed from the study of readers' unexpected responses during oral readings of unfamiliar texts (Goodman & Watson, 1987, as cited in Goodman, 1997) and based on miscue analysis, is the one that teachers have largely accepted and incorporated into "whole language" curriculum and literacy instruction (Goodman, 1997).

1.2 Problem Statement

Snow et al. (1998) state that increased focus on reading difficulties today is caused by technological advancement. Torgesen (2002) supports this perspective and states that literacy concerns arise not from declining literacy in schools, but from the realization that society's demand for high levels of literacy is growing rapidly. Thus, reading difficulties have attracted a considerable amount of scholarly attention. There have been numerous studies conducted to improve the effectiveness and efficiency of instructional programmes and practice in teaching reading as well as to determine the efficacy of those strategies and techniques in assisting students to read efficiently (Jayanti, 2016).

Studying effective strategies and techniques is a crucial aspect as it can help to prevent reading difficulties and support students who fall behind in reading, providing them with opportunities to succeed in life. In addition, these studies help teachers to get a better understanding and implement the tried and tested strategies in their practice.

Other studies claim that the term ‘reading difficulties’ can be used interchangeably with the term ‘dyslexia.’ Shaywitz (1998) declares that the most common and well-studied learning disorder is dyslexia (or specialized reading difficulty). While some use these two terms synonymously, not all reading specialists support this view. Dyslexia is a learning disorder that can cause functional impairments in reading, writing, and spelling and neurological differences in the brain cause this disorder (American Psychiatric Association, 2013; Shaywitz, 2003). According to Das (2020), “dyslexia is a more limited and particular term that can be used to describe a reading difficulty caused by an inability to transfer written language to spoken” (p. 15). Dyslexia is thus classified as a functional impairment because it impairs a person’s ability to process and comprehend written language, which can lead to academic and social difficulties. It means that dyslexia is just one of the reading difficulties, as it also includes some limitations in writing and speaking. It is possible that a student who does not read on grade level has dyslexia. Vaughn and Fletcher (2020) also argue that terms “dyslexia” and “students with reading disabilities” can be used interchangeably. They state that children with dyslexia constitute the largest group of children in special education, despite the fact that stronger instruction in the earlier grades may have prevented the special education referral in many cases. According to these authors, children with dyslexia constitute a large portion of the general education population that does not read well but has not been identified for special education. This means that teachers in Kazakhstan are likely to have students with reading difficulties or dyslexia in their classrooms even if these children are not formally identified as students with special needs. Thus, it can lead to the situation where teachers are left on their own to deal with the challenge of teaching children with reading difficulties. However, it is recognized that teachers, even those with the most advanced knowledge and skills, cannot and should not be asked to carry the entire burden of improving reading outcomes for all learners (Vaughn & Fletcher, 2020). This means that,

even though the teacher is knowledgeable and experienced, the process of teaching children who fall behind in reading cannot be solved by the teacher only and requires extra support that will enable them to effectively apply their knowledge and strategies.

1.3 Purpose of the Study

The purpose of this research is to understand what barriers prevent teachers from implementing appropriate pedagogical strategies in teaching students with reading difficulties. Reading for children is a very difficult skill as it includes using several skills at once such as automatic recognition skills, vocabulary and structure knowledge, formal discourse structure knowledge, content or world background knowledge, synthesis and evaluative skills or strategies, metacognitive knowledge and surveillance skills (Alyousef, as cited in Jayanti, 2006). Jayanti (2006) claims that “Reading is a complex, interactive mental activity of constructing meaning from written text” (p. 296). As reading is viewed as a complex activity it is important to make sure teachers have adequate knowledge of reading difficulties and effective strategies to deal with them, and are ready to work with students who fall behind in reading. Ensuring this will create an effective and successful learning process. This idea is supported by the International Reading Association (IRA) (2007), which declares that teachers are extremely important in teaching children with reading difficulties. It states that “knowledgeable, strategic, adaptive, and reflective teachers make a difference in student learning” (p.1). Taking all the above into consideration, it is extremely important to find out what obstacles teachers face in implementing effective approaches to cope with reading difficulties, as they are one of the main stakeholders in education. In particular, primary school teachers are of great importance as a student who is not at least a competent reader by the end of third grade is unlikely to graduate from high school. Students who do not develop early literacy skills are more likely to struggle with reading later in life (Juel, 1988; Morris, Shaw, & Perney, 1990, as cited in Vaughn et al., 2003). Torgesen (2002) also

emphasizes the importance of early intervention as delayed reading skill development has an impact on vocabulary growth (Cunningham & Stanovich, 1998, as cited in Torgesen, 2002), changes children's attitudes and motivation to read (Oka & Paris, 1986, as cited in Torgesen, 2002), and results in missed opportunities to develop comprehension strategies (Brown, Palincsar, & Purcell, 1986 as cited in Torgesen). Thus, effective support in teaching students who fall behind in reading in primary school can lead to the further success of these students (Snow et al. 1998).

Furthermore, Smart (2011) states that reading difficulties in children aged 7-8 remain at the age of 13-14. In addition, reading difficulties also cause negative self-belief in students (Chapman, 2010), as well as low academic performance (Smart, 2011). Unfortunately, most teachers feel helpless when faced with the necessity to assist poor readers. Also, Torgesen (2002) mentions that there is a widespread concern that public education is not as effective as it should be in teaching all children to read. He adds that one needs to find appropriate instructional resources to provide rigorous, explicit, and supportive instruction to the children who require it (Torgesen, 2002).

1.4 Research Questions

To find out what prevents teachers from using effective strategies in teaching students with reading difficulties the following three research questions were posed in this research:

- 1) What are the causes of reading difficulties in primary school children, effective strategies for teaching children with reading difficulties identified in literature?
- 2) How do primary school teachers with Russian as their language of instruction in Kazakhstan describe their effective strategies to teach students who fall behind in reading and what support is provided by schools to use effective reading strategies for children with reading difficulties?

3) How do these teachers' "vision," and their understanding of the most effective way to teach students who fall behind in reading correspond to their practice?

1.5 Significance of the Study

While research has identified effective teaching strategies for assisting children with reading difficulties as presented in the literature review, there are still barriers to implementing these strategies in the classroom, all of which are discussed in the findings chapter. As very few studies have delved into the topic in Kazakhstan, this study hopes to contribute to improving understanding of what prevents primary education teachers in Kazakhstan from applying effective strategies to teach reading to students with reading difficulties. Identifying the main barriers teachers face while assisting poor readers will help to enable teachers to implement early intervention techniques, which could positively impact the overall academic success and long-term achievement of these students. Additionally, most students with learning disabilities (LDs) struggle with reading (Fletcher, Lyon, Fuchs, & Barnes, 2007, as cited in Denton, 2012). This means that by preventing reading difficulties or by intervening early, other learning challenges that result from poor reading can be avoided.

1. Literature Review

The search revealed hundreds of studies, and only studies relevant to research problems, research aims and questions were included in this review. In light of this, three major bodies of literature were critically reviewed: (a) the characteristics of dyslexic learners, (b) strategies applied to teach reading and writing for children with dyslexia, (c) the most effective strategy or approach to teach reading and writing for children with dyslexia, (d) the barriers to implement effective strategy or approach to teach reading and writing for children with dyslexia. Throughout the review, important gaps and omissions in these fields or research have been identified and presented. Thus, this literature review provides the answer to the first research question of this study, shedding light on the causes of reading difficulties in primary school children, effective strategies for teaching children with reading difficulties, and factors that support and prevent teachers from using effective reading strategies for children with reading difficulties. Additionally, by analyzing the literature, it was noticed that scientists frequently use the word “dyslexia” as a synonym for “reading difficulties.” Jimenez et al. (2020) believe that since dyslexia is recognized as a disorder that affects language formation due to problems in the auditory and visual processing processes, researchers mainly connect it to reading difficulties, often interchanging these words in the literature. Therefore, in this study, the researcher also will use the term “reading difficulties” as a synonym for the word “dyslexia.” Thus, this literature review will provide a detailed answer to the first research question of this study.

2.1 Dyslexia as a Reading Difficulty

Defining dyslexia has become a battlefield for many scientists. Although there is widespread agreement on the many forms of dyslexia, there is no universal agreement on its description (Lawrence, 2009). The actual word *dyslexia* comes from a combination of two Greek words: “dys”, which means “difficult”, and “lexicos” which means “language.” Thus,

it means “difficulty with words.” Tonnessen (1997) states that “dyslexia” can be defined in many ways as the way “dyslexia” is defined is determined by a variety of demands and goals. Therefore, it can be seen that the definition can vary from country to country, culture to culture, and institution to institution. Shaywitz (2005) claims that converging evidence from several lines of inquiry suggests that dyslexia is a problem of the language system, and more precisely of a specific subcomponent of that system: phonological processing. As Frith (1999) states, dyslexia’s definition and explanation have long been a source of contention but three levels of description are used in this framework: behavioral, cognitive, and biological and it can help solve the confusion. According to Firth (1999, p.192) “dyslexia can be defined as a neuro-developmental disorder with a biological origin and behavioral signs which extend far beyond problems with written language.” In later research, Tonnessen (2006, p. 78) claims that there is a “dire need of both better definitions and better guidelines” in defining dyslexia to ensure that the aspects of dyslexia are not already covered by the concept “general reading problems.” Other studies have indicated (p.84) “here is no consensus on precise diagnostic criteria” and generally includes “difficulties with word reading, decoding, and spelling as evidenced by low accuracy and/or fluency on standardized assessments.” In comparison, Peterson and Pennington (2012, p.1997) see dyslexia as “a neuro-developmental disorder that is characterized by slow and inaccurate word recognition.” Lawrence (2009) identifies three reasons that make defining dyslexia complicated. The first reason is an effort to reduce dyslexia’s diverse character to a single definition. The second reason lies in “different research perspectives” and the third reason is an attempt to combine other associated particular learning impairments that sometimes overlap with dyslexia, such as dyscalculia, scotopic sensitivity, and ADHD, into a single category. This happens because “many pupils with general reading difficulties will have similar problems to those who are dyslexic” (Glazzard et al., 2015, p. 68). Vagueness is common in defining dyslexia and

Tonnessean (2006) claims that proposed definitions should be established and handled as hypotheses. However, in this study the definition given by the International Dyslexia Organisation (IDA) will be used, where dyslexia is defined as:

Dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.

This definition is broader and includes not only difficulties in literacy, but also numeracy, motor skills, behavior and processing information (Glazzard et al., 2015). As the notion of dyslexia is still very broad, there are no precise characteristics that will describe a dyslexic learner, and every dyslexic learner has his/her own distinct characteristics. The International Dyslexia Association (2008, as cited in Williams & Lynch, 2010) describes the characteristics of dyslexia in young learners as “difficulty reading single words, difficulty learning to associate letters and sounds, confusion of small words such as “at” and “to,” letter reversals, and word reversals” (p. 66). However, McBride (2019) mentions the difference in people’s opinions about the characteristics of dyslexic learners, and quotes one of her respondents who gives the following definition:

general impression of dyslexia for layman is a difficulty with reading, writing, handwriting, memory, processing speed, organization abilities, self-discipline, and so on. Basically, most (people) think that children with dyslexia should have the characteristics that every single research study has ever found. (p. 31)

She points out that no two dyslexic learners are alike since no two brains are exactly the same (McBride, 2019). In terms of defining dyslexia, most scholars suppose that dyslexia mostly relates to difficulties in literacy; however, difficulties go beyond it and can interfere with numeracy, motor skills, information processing and behavior. Hall (2009) presents a list of characteristics of dyslexic pupils in early childhood under Key Stage 1 and Key Stage 2, that can help teachers to recognize signs of dyslexia in students. Reid (2005) uses a causal modeling framework that involves three levels of dyslexia description: behavioral, cognitive, and biological as a possible solution to resolve issues about the concept of dyslexia. However, taking into consideration the view of different scholars it is hard to identify the myriad features that can be observed in every dyslexic person.

2.2 Reading Difficulties among Primary School Children

Reading is a complex skill that requires a number of cognitive processes, including decoding, vocabulary recognition, fluency, and comprehension (Biancarosa & Snow, 2006). These processes necessitate significant cognitive effort, and children who struggle with reading may also struggle in these areas. According to Rayner et al. (2016), one of the primary goals of reading is to learn textual information. This means that readers must not only decode words but also comprehend the meaning of the text. The ability to read is profoundly crucial at school. Paris and Oka (1989) claim that reading is the central component of literacy and education. Vaughn et al. (2003) emphasize the importance of teaching reading effectively as they believe that students who do not develop early literacy skills are more likely to struggle with reading later in life (Juel, 1988; Morris, Shaw & Perney, 1990). Snow (2021) indicates 95% of young readers are able to learn to read, but about 30% face reading failure while learning to read. Consequently, the earliest symptoms of reading difficulties appear at the early preschool age. Wolff and Gustafsson (2022) argue that preschool children with weak phonological awareness skills mostly tend to have reading

difficulties as they get older. This happens because basic reading skills are taught in primary school, which provide a background for further development of reading skills. Katz and Carlisle (2009) agree that basic reading strategies are taught in primary school and by the middle grades, children must be able to decode multisyllabic words as well as words with prefixes and suffixes (Schlagel, 1992, as cited in Katz and Carlisle, 2009). The researchers emphasize the importance of phonological awareness in a child, arguing that this skill is responsible for the transition from implicit to explicit control of sounds (Wolff & Gustafsson, 2022).

Atkinson and Martin (2021) suggest that young pre-readers with poor working memory will be at risk of having difficulty in reading as they lack the cognitive skills necessary to manipulate, accumulate, and repeat the information. This may have an impact on their ability to develop critical reading skills like decoding, comprehension, and fluency. Working memory has been shown to be important in reading development, particularly in the early stages of learning to read (Gathercole & Alloway, 2008; Swanson & Beebe-Frankenberger, 2004). Working memory refers to the ability to hold and manipulate information in the mind for short periods of time, which is required for tasks like decoding and comprehension. Furthermore, Atkinson and Martin (2021) contend that poor working memory may limit young pre-readers' ability to learn and apply phonics, which is a critical skill in reading development. Children who lack this fundamental skill may struggle to decode words and access their meaning, resulting in poor reading outcomes. Alloway et al. (2009, as cited in Atkinson & Martin, 2021) point out that primary school children with weak working memory functioning, along with difficulties in reading, also often have problems with attention and behavior. According to Fletcher et al. (2006, as cited in Ergen & Elma, 2018), in general, difficulty in reading appears due to problems in fluency, comprehension, and visual recognition of words. The researchers highlight that most young readers with

reading difficulties have low phonological awareness and fast naming skills (Boscardin, 2008, as cited in Ergen & Elma, 2018). Thus, lack of phonological skills and poor working memory can be challenges that young school children with reading difficulties frequently face. Moreover, Scherer (2016) claims that reading is a particularly emotional dimension for primary school children. Her research showed that primary school readers with reading difficulties encounter negative experiences during their studies, as they often make mistakes when reading, and their anxiety level increases, by being afraid of looking foolish in front of the whole class (Scherer, 2016). Therefore, the increase in the number of primary school readers with reading difficulties can be one of the important topics that causes concern in the field of education.

The Programme for International Student Assessment (PISA) is a survey conducted by the Organisation for Economic Co-operation and Development (OECD) to evaluate the knowledge and skills of 15-year-old students in reading, mathematics, and science. According to the PISA 2018 results, the influence of schools on the development of children's reading skills is gradually declining (OECD, 2019). This means that factors outside of school, such as family background, socio-economic status, and individual motivation, are playing a more significant role in shaping students' reading abilities than before (OECD, 2019).

2.3 Causes of Reading Difficulties

Scientists claim that decoding and comprehension are the basic actions involved in reading (Coltheart, 2015; Daniel et al., 2022; Gaillard et al., 2006, as cited in Sousa, 2007; Sahari & Johari, 2012; Sousa, 2007). Consequently, Sousa (2007) indicates that the combination of three brain networks—interpretation, visual and auditory processing—is essential for their efficient operation. In the reading process, at the very beginning, with the help of visual processing, a person combines letters into a word, sending impulses to the

optical cortex of the brain through the nervous system, the auditory system reacts to this impulse by identifying sounds, and the Brock and Wernicke brain regions located in the frontal lobe coordinate the received sounds into text that a person will be able to interpret (Coltheart, 2015; Daniel et al., 2022; Devine, 2022; Sahari & Johari, 2012; Seidenberg, 2013; Sousa, 2007). Therefore, if all the processes mentioned above function in a proper way, a child will not face difficulties in reading since the text and words are visualized in the mind accurately. Thus, is it possible to divide the causes of reading difficulties into three groups, depending on the area (visual processing, auditory processing and Brock and Wernicke brain regions) in which gaps arise.

Analyzing the literature, researchers divide the causes of reading difficulties into two groups in accordance with two influencing factors: physical and environmental. Researchers identify the causes of physical factors based on the work of the three brain networks, as linguistic and non-linguistic (Table 1) (Akubuilu et al., 2015; Coltheart, 2015; Devine, 2022; Hulme & Snowling, 2011; Sahari & Johari, 2012; Seidenberg, 2013; Sousa, 2007). The linguistic causes are: a lack of physical functioning (Akubuilu et al., 2015); phonological deficit (Coltheart, 2015); poor visual processing, limited eyesight, word blindness (Devine, 2022); visual deficit (Hulme & Snowling, 2011; Sahari & Johari, 2012); low visual system and limited language skills (Seidenberg, 2013); poor phonological awareness, lack of auditory, visual processing, low memory (Sousa, 2007) and the nonlinguistic causes are: limited mental functioning (Akabuilu et al., 2015); brain issues, lack of motor coordination, incapacity to get sounds, speech differences, and low detection skills (Sousa, 2007).

Table 1

Limited and Nonlinguistic Causes of Reading Difficulties

Studies	Linguistic Causes
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Akubuilu et al. (2015)	Lack of physical functioning
Coltheart (2015)	Phonological deficit
Devine (2022)	Poor visual processing, limited eyesight, word blindness
Hulme and Snowling (2011)	Visual deficit
Seidenberg (2013)	Limited visual processing and low language skills
Sahari and Johari (2012)	Visual deficit
Sousa (2007)	Poor phonological awareness, lack of auditory, visual processing, low memory
Studies	Nonlinguistic Causes
Akubuilu et al. (2015)	Limited mental functioning
Sousa (2007)	Brain and speech differences, lack of motor coordination, inability of perceiving sounds, poor detection skills

Source: The author.

As for the environmental reasons, scientists claim that negative experiences in society, home, school, and culture cause difficulty in reading by affecting a child's motivation and interest to read (Table 2) (Akubuilu et al., 2015; Coltheart, 2015; Devine, 2022; Hulme & Snowling, 2011; Sahari & Johari, 2012; Seidenberg, 2013; Sousa, 2007). Consequently, to causes depending on the environmental factor: lack of interest and social support, socioeconomic background differences (Akubuilu et al., 2015; Seidenberg, 2013); negative experience at school, ineffective teaching, and limited vocabulary (Coltheart, 2015; Devine, 2022; Hulme & Snowling, 2011; Seidenberg, 2013); low motivation and interest to read (Sahari & Johari, 2012); limited parental support and household resources, dialect differences, language barrier (Sousa, 2007).

Table 2*Environmental Causes of Reading Difficulties*

Studies	Environmental Causes
Akubuilu et al. (2015)	Lack of interest and social support, socioeconomic background differences
Coltheart (2015)	Negative school experiences, poor teaching, limited vocabulary
Devine (2022)	Negative school experiences, poor teaching
Hulme and Snowling (2011)	Limited vocabulary
Seidenberg (2013)	Socioeconomic background differences, negative school experiences, poor teaching
Sahari and Johari (2012)	Low motivation and interest to read
Sousa (2007)	Limited parental support and lack of household resources, dialect differences, language barrier

Source: The author.

Thus, by reviewing the literature, it is clear that there is no single cause for reading difficulties and that the problem is multidimensional. Moreover, Coltheart (2015) claims that sometimes reading difficulties appear as a result of a combination of several reasons or influencing factors. However, it is important to mention that reading difficulties arise in childhood, and these difficulties may increase due to environmental factors at school.

As mentioned earlier the causes for reading difficulties vary but most often negative school experiences, ineffective teaching, and limited social support from parents and teaching staff are cited as probable causes among primary school children (Akubuilu et al., 2015; Coltheart, 2015; Devine, 2022; Seidenberg, 2013; Sousa, 2007). Most researchers emphasize that primary school plays a considerable role in the acquisition and development of reading

skills in children (Akyol et al., 2021). Scherer (2016) also argues that due to teachers often tending to label children with reading difficulties as “poor readers” and “being not intelligent pupils,” those primary school readers lose interest and motivation to improve their reading. Ergen and Elma (2018) point out that primary school teachers use strategies such as reading out loud in front of a class, reading huge texts without paying attention to comprehension negatively affect the emotional balance of children with reading difficulties. As a result, more and more stakeholders encourage teachers, especially primary school educators, to attend in-service training and additional courses that will help to facilitate the academic process for both teaching staff and students (Veerabudren et al., 2022). Others claim that successful practice will be possible after universities review their teacher preparation curriculum to include special courses and seminars dedicated to working with children with special educational needs as well as with reading difficulties (Akyol et al., 2021; Ergen & Elma, 2018; Schrer, 2014). Consequently, teachers need to choose instructional strategies carefully while working with primary school children with reading difficulties. Thus, it is significant to identify the barriers that primary school teachers face while working with children with reading difficulties.

2.4 Strategies Applied to Teach Students with Reading Difficulties

Reading difficulties can be caused by a number of factors, including developmental delays, learning disabilities, and a lack of literacy exposure. Early intervention, according to Snowling and Hulme (2011), is critical in addressing reading difficulties. To address reading difficulties, teachers can employ a variety of effective strategies, including explicit instruction in phonics and word recognition skills, the implementation of a structured literacy approach, and the use of multisensory techniques to engage students in reading (Shaywitz, 2003). Additionally, teachers can use assistive technology to help struggling readers, such as text-to-speech software and audiobooks (Rose, Meyer, & Hitchcock, 2019).

Teachers can help students improve their reading skills and achieve success in school and beyond by identifying the causes of reading difficulties and employing evidence-based strategies to address them. According to research, effective reading interventions should be tailored to the student's individual needs and should target the specific skills or processes that are causing reading difficulties (National Reading Panel, 2000). Thus, in order to select appropriate strategies and interventions, teachers must first identify the underlying causes of reading difficulties. Teachers can help students overcome reading difficulties and achieve academic success by using evidence-based strategies that are tailored to the individual needs of the student.

As dyslexia is defined as a learning difficulty and sometimes used as a synonym for reading difficulties, it is imperative that special strategies or programmes are implemented to support students with dyslexia and reading difficulties. These programmes could be beneficial for all students, as the principles that are used in supporting dyslexic students are not dyslexia-distinctive, but can be applied more intensively when teaching students with dyslexia (Fawcett, 2002, as cited in Reid, 2005). Thus, strategies developed for children with dyslexia and other reading difficulties can be used to teach reading to all children. For example, the Davis Dyslexia Correction method, which was developed to help people with dyslexia, has been shown to be effective for teaching reading to all students (Davis, 2010). Similarly, the Orton-Gillingham approach, developed for dyslexic students, has been used successfully with students of varying reading abilities (Hudson & Lane, 2012).

As dyslexia is usually associated with difficulties in reading, most approaches and strategies are focused on phonology. However, Townsend (2000, as cited in Reid, 2005) states that other aspects including promotion of attention and listening, development of spoken language, fine motor skills, handwriting, short- and long-term skills, sequencing and directionality should be taken into consideration while preparing programs for students with

dyslexia. It is clear that the characteristics of children with dyslexia differ from child to child. As a result, there will not be one perfect strategy that will help every single child with dyslexia. Causal modeling framework can help in guiding teachers as they are more likely to be interested in behavioral or cognitive aspects of dyslexia rather than in biology. Reid (2005) in his article claims that the type of program is not as important as its embedment into the reading approach in order to address students' needs. This means that the reading needs of students in primary school are different from those of students in secondary school. Therefore, the programs in this case might be different. However, McBride (2019) warns against labeling certain strategies as effective as "the nature of dyslexia can differ substantially from one child in one cultural context to another child in a different cultural context" (p. 113). In spite of the debate around effective strategies some suggestions are worthy of consideration. Most of the described strategies are based on evaluation of individual programmes and their effectiveness in addressing needs of dyslexic students (Reid, 2005). Glazzard et al. (2015) suggest several strategies; however, he mentions that specific needs of individual learners should be addressed. This is supported by McBride (2019) as she believes that "what works for one person may not work for another" (p. 104). McBride (2019) finds that games, different ways of text presentation, assertive technologies, extra time, support and encouragement work best for remediating dyslexia. Glazzard et al. (2015) suggests that multisensory teaching, a structured programme, over-learning, and use of cursive script are the main strategies to support children with dyslexia. Reid (2005) says that there are plenty of programmes that help children with dyslexia and most of them are bottom-up and can be characterized as following: multisensory, sequential, cumulative, over-learning. Lawrence (2009) also states that a multi-sensory approach is the best to help children with dyslexia. He also mentions that this approach can be useful for those who do not have any problems in reading.

Taking into consideration all the above, multi-sensory approach, over-learning and structured programmes seem to be the most effective in supporting students with dyslexia. Multi-sensory teaching is the approach that involves all senses while learning. Glazzard et al (2015) point out that multi-sensory approaches are “inclusive and work for all children” (p. 79). It includes air writing, making letters from dough, using sandpaper, etc. They even suggest displaying letters by bending students’ bodies in PE lessons as a part of multi-sensory teaching. Reid (2005) explains multi-sensory teaching as the “programme that involves visual, auditory, kinesthetic and tactile involvement” (p. 141). A similar explanation is provided by Lawrence (2009) who adds that the multi-sensory approach is as widely used by teachers of dyslexic students as well as teachers of regular students, because this approach is beneficial for all students.

Another strategy defined by Reid (2005) is over-learning which is a series of repetitive activities that help the learner achieve mastery. Fawcett (2002, as cited in Reid, 2005) claims that this technique helps students with dyslexia gain the automaticity they lack. It has already been mentioned that students with dyslexia need to develop their short term memory. In order to achieve this, Glazzard et al. (2015) claim that revisiting learning material from previous lessons will help students with dyslexia make progress in their learning. He also recommends using a multi-sensory approach to revise the material that has already been learnt.

Structured programme is a strategy that refers to the type of learning where the structure is the same but the context might be different. Reid (2005) calls it a sequential approach. Walker (2000, as cited in Reid, 2005) supports this idea by claiming that students who were taught in this manner for one or two hours each week for little over two years doubled their pace of spelling growth and performed even better in reading.

As Reid (2005) highlights, it is not the approach that needs to be different but the presentation of it, to meet needs of students with dyslexia. Thus, the methods and strategies might be similar to those for ordinary students; however, the presentation of the context has to be different in order to address the needs of students with dyslexia. According to the researcher, different senses should be included in order to help students understand letters, regular revisiting should be implemented to gain automaticity and help to develop short-term memory. In addition to this, all the lessons should be well-structured to support dyslexic learners.

In addition to these approaches, children who struggle with reading can benefit from the use of technology. Text-to-speech software, for example, has been shown in studies to be an effective tool for improving reading comprehension and fluency in struggling readers (Higgins, Boone, & Lovitt, 2016). Similarly, audiobooks have been shown to improve reading comprehension and motivation for reading (Wong, Hicks, & Ramsey, 2018). It is important to note, however, that not all technology-based interventions are equally effective, and the effectiveness of these interventions can vary depending on the student's individual needs and abilities.

By reviewing the literature, the researcher identified that 1) researchers often use the terms “dyslexia” and “reading difficulties” interchangeably; 2) the causes of reading difficulties vary, 3) several instructional strategies can be applied, and 4) there is a relationship between the cause of the reading difficulty and the strategy applied. Even though working with primary school children with reading difficulties is a common topic of research, a gap still exists regarding the barriers primary school teachers face while working with students who fall behind in reading. Consequently, this study aims to conduct face-to-face interviews followed by Interview To The Double (ITTD) to reach a deeper understanding of how teachers see effective strategies in dealing with reading difficulties,

the barriers they face while applying these strategies and how it affects their teaching practice.

2. Methodology

3.1 Research Design

The aim of this qualitative research was to understand the barriers teachers face while implementing effective strategies in teaching students with reading difficulties. As it was a small-scale research, a face to face interview followed by the interview to the double (ITTB) research design was chosen. This design is appropriate to address the research questions. Face-to-face interview is one of the most popular qualitative research designs according to Creswell (2014). It is a data collecting method in which the researcher asks questions and records responses from only one study participant at a time (Creswell, 2014). Kvale (1996, as cited in Cohen, 2018) defines an interview as an interchange of perspectives between two or more persons on a topic of mutual interest, emphasizing the importance of human contact in knowledge generation and emphasizing the social situatedness of research data. According to Hochschild (2009, as cited in Cohen, 2018), interviews may accomplish what surveys cannot: they can investigate topics in depth, examine how and why individuals frame their ideas in the manner that they do, and how and why they draw connections between ideas, values, events, beliefs, behaviors, and so on. According to Creswell (2014) face-to-face interviews give important information when participants cannot be physically seen, and they allow participants to provide extensive personal information. In this research it helped to shed light on the research questions and research results. Face-to-face interviews were followed by Interviews To The Double (ITTD). The ITTD asks interviewers to pretend that they have a double who will take their position at work the next day (Nicolini, 2009). According to Nicolini (2009) the interviewee-instructor is then requested to offer the exact instructions required to prevent the interviewer-double from being unmasked. Nicolini (2009) claims that the method was shown to be beneficial for both capturing experience and enriching it via reflection. ITTD is rooted in Marxist traditions and was originally used to recover and justify the local knowledge that workers learned on the job and passed on to novices (Oddone et al.,

1977, as cited in Nicolini, 2009). Nicolini (2009) reports that “participants often reported that the interviews offered them the opportunity to become aware of—while also reorganizing in their own mind—what they already knew” (p. 197).

3.2 Research Instruments

One of the methods of data collection that were used: face-to-face or online interviews. This research design consisted of interviews with teachers (from primary schools in Astana) on the topic of the implementation of effective strategies in teaching students with reading difficulties. First, face-to-face interviews were conducted to answer the second research question of this study: How do primary school teachers with Russian as their language of instruction in Kazakhstan describe their effective strategies to teach students who fall behind in reading? During the interview open-ended questions were asked, as participants could best express their experiences when they were not confined by the researcher's or previous study findings, as well as create response alternatives (Creswell, 2014). The interview consisted of 10 open-ended questions (Appendix A). Face-to-face interviews in this study helped to understand the level of knowledge teachers have about reading difficulties and dyslexia.

As the main focus of this study was practice, after face-to-face interviews the participants were interviewed using ITTD method to help understand the difficulties teachers have while teaching students with reading difficulties and as a result answer the third research question. Social scientists, in order to study practice, must consider not only the object of study, but also how that practice and social context construct our understanding of the phenomenon at hand, as well as tools, assumptions, and positions in the field must also be questioned. (Bourdieu, 2004; Steier, 1991, as cited in Nicolini, 2009). Nicolini (2009) states that practice cannot be understood by using one single method due to its complexity. ITTD was chosen to allow participants to talk and ensure that while answering the questions

teachers would not criticize or compromise themselves. ITTD is considered to be especially beneficial for capturing the ongoing concerns that guide members' behavior as well as the normative and moral component of practice, as well as for helping to clarify and express practice (Nicolini, 2009). Interview consisted of three open-ended questions that were aimed to reveal the true barriers teachers face while teaching students with reading difficulties. In this method the interviewee was asked to imagine he or she has a double, who would replace him or her at work the next day. This helped to provide a safe environment for participants, as the identity of the double could not be revealed. Thus, ITTD could shed the lights to the problems interviewee would normally conceal. In this research teachers were given two profiles of students with reading difficulties that would be in the class the following day. Then they were asked to imagine the doubles going to work to teach these students. That is when they came up with the list of obstacles they faced. Even though this approach has been criticized, when combined with other methodologies, it provides insight into the criteria members use to determine the appropriateness of the situated activity (Nicolini, 2019). The idea is that the participant will respond honestly as it is not what they have done, but what someone might have done and faced. So, they feel safe about reporting it. This feature was extremely important to this research as it helped to define true problems in implementing effective strategies in teaching students with reading difficulties.

As two different research tools were used in this study there was a need for a triangulation research approach. It helped to ensure the reliability of the results. Even though some scientists considered triangulation as a transitional tool between qualitative and quantitative research (Oppermann, 2000), Denzin (2007) says triangulation refers to the application and combination of multiple research methods in studying the same phenomenon. This view is supported by other scientists as they claim that triangulation is the use of two or more data sources, researchers, methodological approaches, theoretical perspectives (Denzin,

1970; Kimchi, Polivka, and Stevenson, 1991, as cited in Thurmond, 2001), or analytical methods (Kimchi et al., 1991, as cited in Thurmond, 2001) in the same study. Heale and Forbs (2013) also state that triangulation in research is the use of multiple approaches to study a problem. The use of triangulation is due to the aim to increase confidence in the results by confirming the statement by two or more independent means (Bryman, 2004), as well as to combine insights from two or more rigorous approaches that provide a more comprehensive picture of results than either approach alone (Tashakkori, 2003, as cited in Heale & Forbes, 2013). This idea was previously introduced by Webb (1966, as cited in Bryman, 2004) who thought “once a proposition has been confirmed by two or more independent measurement processes, the uncertainty of its interpretation is greatly reduced” (p. 1). So, triangulation was used in this research to ensure that the collected data is valid and reliable. Thurmond (2001) divides triangulation into five types: data source triangulation, investigator, triangulation, methodologic triangulation, theoretical triangulation, and data-analysis triangulation. In this study methodologic triangulation will be used. It can be confusing, as many think that it is triangulation between qualitative and quantitative research. However, it can be classified further as “between-method” and “within-method” triangulation (Thurmond, 2001, p.254). In the case of this research it was within-method methodologic triangulation with two types of approaches used to collect data: face-to-face interviews and ITTD, which provided reliable data for analysis.

3.3 Research Sample

As in qualitative research, we identify our participants and sites through purposeful sampling based on places and people that can best help us understand our central phenomenon» (Creswell, 2014, p. 205), the site for this research is mainstream schools in Astana, the capital city of Kazakhstan. According to Creswell (2018) the goal of qualitative research is not to generalize to a population, but rather to produce an in-depth investigation

of a key phenomenon. Thus, in order to better comprehend this phenomenon, the qualitative researcher picks persons and settings for data gathering on purpose. Thus, it was decided to choose five - seven participants for individual interviews. The main criteria for selecting respondents were the location, city in Northern Kazakhstan, and primary school teachers aged 30-40 years old. The age was identified as a key criterion because the notion of reading difficulties is relatively new and the older generation might not be competent in this topic. On the other hand, young teachers might not have enough experience to have encountered cases of reading difficulties. As the topic of reading difficulties has not been well explored in Kazakhstan, snowball sampling was chosen. Creswell (2014) says that snowball sampling is used when there is the unfamiliarity of the topic or the complexities of events, and the appropriate individuals to study with are unknown. Snowball sampling starts when the participants are asked to recommend other participants who might be interested in the research. The aim of this selection was to ensure that the actions, behaviors, events, venues, and persons involved are representative (Cohen, 2018).

Before the beginning of the interview, the researcher explained the aim and nature of the study to participants as well as confirm their consent on participation. All respondents were asked to sign a permission form that includes the following research details: description, time commitment, risks and benefits, participants' rights, and my contact information. With their agreement, all participants were notified that their interviews would be audio recorded. Audio recording lets researchers do a more in depth analysis of the interviewee's speech (Creswell, 2014, p. 243).

3.4 Data Collection Procedures

Creswell (2014) describes the ideal procedure of qualitative data analysis, which consists of six steps. These six steps were: preparing and organizing the data, process of coding, using the codes to develop a more general picture of the data, representing the

findings through narratives and visuals, interpreting the meaning of the results, and conducting strategies to validate the accuracy of the findings (Creswell, 2014). However, Cohen (2018) claims there is no unique or proper approach to analyze and display qualitative data; the method used should be suited for purpose.

To find out what barriers teachers face while teaching students with reading difficulties the qualitative research method was used. While conducting this research two types of interviews were used to answer all research questions.

Firstly, face-to-face interviews were conducted to explore teachers' understanding of what the effective strategies in teaching students with reading difficulties are, as well as their vision of the students who fall behind in reading and the barriers they face while teaching them. Face-to-face interviews are a widely used method in qualitative research, particularly when exploring complex and subjective phenomena (Rubin & Rubin, 2012). According to Fontana and Frey (2018) face-to-face interviews allow researchers to explore participants' subjective experiences and perspectives in depth, which is often difficult to achieve using other methods.

After the face-to-face interviews another research tool, ITTD, was used. This method was chosen to understand how teachers' real vision of effective strategies in teaching students with reading difficulties correspond to their real practice and the true obstacles they face while teaching such students. The ITTD is usually used in qualitative research to increase the validity and reliability of data obtained through interviewing (Gubrium & Holstein, 2009). The technique involves conducting multiple interviews with the same participant or group of participants, with the goal of gaining a more comprehensive and nuanced understanding of their experiences and perspectives.

Interviews to the double can be used when researchers want to gain a deeper understanding of complex and subjective phenomena, as it allows them to explore the same topic or issue from multiple angles (Gubrium & Holstein, 2009). This technique is also useful when researchers are exploring sensitive or personal topics, as it allows participants to gradually open up and share more about their experiences over time.

As soon as the data was collected via audio recording, it was then transcribed as notes on the computer. After that the data was read and generalized and then coded, and finally presented.

3.5 Data Analysis

The analysis of the data happened as soon as the data was collected to make it of a good quality. According to Cohen (2018) data analysis is organizing, accounting for, and interpreting the data; in other words, making meaning of the data in terms of the participants' perceptions of the situation, noticing patterns, themes, categories, and regularities. He also claims that qualitative research generates massive volumes of data quickly, and early analysis mitigates the problem of data overload by identifying significant elements for future attention (Cohen, 2018).

This study included three research questions. The first question was closely examined in the literature review chapter. The other two questions were answered by the means of the interviews. The results of the interviews were separated into two groups, as two different interviews, face-to-face and ITTD, were conducted to answer the second and third research questions. One group answered the second research question regarding the description of students who fall behind in reading as well as the effective strategies teachers use and barriers they face while teaching those students. The second group of results referred to the third research question where teachers had to think about what their double would find useful in teaching students with reading difficulties and what would prevent them from using it. After

that the results were coded according to the questions of the interviews. To analyze and code the data, Excel program was used to analyze the data.

As two types of interviews, face-to-face and ITTD , were conducted, the two sets of data were collected. To make the results more reliable, a triangulation method was used. Using triangulation can help to strengthen the rigor and credibility of qualitative research, particularly when the research topic is complex and subjective as it is in this research. Denzin (2017) claims that triangulation is a commonly used method in qualitative research that involves the use of multiple sources of data or methods to increase the validity and reliability of the findings. In this research triangulation helped to reveal the difference between the teachers' ideal vision of effective strategies in teaching students with reading difficulties and true obstacles they face while this process and their real practice.

3.6 Ethical Issues

The research design for this work includes face-to-face interviews and ITTD. Therefore, it is essential to ensure identifiability, anonymity, confidentiality, and privacy of the participants. Given that qualitative data can be sensitive or personal, the researcher must consider not just who will conduct any transcription, but also the ethical criteria (e.g., confidentiality) that the transcriber must adhere to (Cohen, 2014). This means that the collected data must be kept confidential with restricted access to it. In addition, the researcher should consider concerns of research integrity, such as the potential repercussions of the research and its dissemination, data ownership, how it may be used, informed consent, and disclosure (Cohen, 2018). Therefore, all ethical guidelines were taken into consideration and strictly adhered to.

The first step in following ethical precautions was to submit an application for ethics review to the Nazarbayev University Graduate School of Education Ethics Committee, which was approved. Before the interview, participants were asked to sign an informed consent

form. The principle of informed consent concerns autonomy and arises from the participant's right to freedom and self-determination (Cohen, 2018). The participants were informed that their participation was voluntary, as this is one of the four elements of informed consent (full information, comprehension, and competence being the other three) according to Cohen (2018). The interviews were conducted via the ZOOM platform, and the participants were in a comfortable environment to ensure they were not distracted and could provide honest answers. As soon as the data was collected, it was coded and stored securely on a personal computer with a password to ensure its anonymity and confidentiality.

3. Findings

This study aimed to understand the obstacles that teachers experience while teaching students who fall behind in reading. The findings described here provide the answer to the second and third research questions of this study:

2) How do primary school teachers with Russian as their language of instruction in Kazakhstan describe their effective strategies to teach students who fall behind in reading? What support is provided by schools to use effective reading strategies for children with reading difficulties?

3) How do these teachers' vision, and their understanding of the most effective way to teach students who fall behind in reading correspond to their practice?

Question one was answered by the means of literature review. Other two questions will be answered in this section by presenting the results of the interviews with participants.

The results were organized according to these questions.

How did the teacher find out that students had reading difficulties?

First of all, 100% of participants reported that they have had students with reading difficulties in their classes, mentioning that reading difficulties are very common among primary school children. For instance, Participant 1 mentioned, "Almost every year I have at least one student in the class who struggles with reading." Participant 2 also noted that "reading difficulty is very common among students."

Four out of five participants said that they identified reading difficulties among their students because they were very slow in reading; however, no one mentioned help from specialists, such as defectologies, neuropsychologists or specialists of PMPC. In addition, all participants stated that students who fall behind in reading also experienced lack of comprehension of the text they read.

Participant 3 in his interview stated “while group reading they are always very slow and unconfident, which leads to misunderstanding as when they start blending sounds they might read the words incorrectly.” The same was reported by other participants. For example, participant 1 commented “when checking their reading speed they are below the expected level. In addition, they usually don’t understand what they have read.” This idea was supported by Participant 3, who claimed “reading frustrates them and most of those who are very slow in reading don’t understand the meaning of the sentences they read.”

Did teachers think students with reading difficulties had dyslexia? Why? Why not?

None of the teachers reported their students had dyslexia, most of them said that they did not know the full or correct meaning of the term “dyslexia.” For instance, participant 4 could not claim that students who fell behind in reading had dyslexia because he said “I am not sure if I fully understand this term.” The same answer was delivered by the other three participants. Participant 1 stated “I know dyslexia is somehow connected with reading difficulties, but I am not sure if these terms are synonyms.” Interestingly, Participant 5 also denied observing dyslexia in students who struggled with reading, but due to the other reason. This teacher stated “reading difficulties are the result of poor preparation. I mean, no kindergarten or any other academic support and preparation before school. I also think that this happens due to the lack of parental involvement in the development of children.”

What behavior did teachers observe in students with reading difficulties?

As was discussed previously in the literature review there is no unique list of characteristics of students with reading difficulties and it seemed to differ from student to student. However, there can be some commonalities. In this study, three out of five participants reported that the children with reading difficulties whom they taught were hyperactive and had low concentration. For example, participant 1 stated “These children are hyperactive, they always want to move, to touch everything. They can’t sit still which disturbs them from reading and understanding the text.” Participant 2 in the interview

claimed “I noticed that students with reading difficulties are usually hyperactive and as a result they can’t concentrate. They got distracted very easily”. However, Participant 5 noticed “Most of the students with reading difficulties are hyperactive. However, I have taught several students who were quiet, but still they couldn’t concentrate for a long time.”

Still one of the teachers stated that students with reading difficulties are shy and quiet. This was participant 3, who said “In the cases I encountered, the students were very shy and quiet. Most of the time they were daydreaming, so I had to attract their attention to make her do the task.”

In addition, the majority of teachers believe that students with reading difficulties are not sociable.

Participant 4 said while answering this question said, “Even though they are hyperactive, they usually experience problems in socializing. They usually don’t communicate with classmates and outside the school they also don’t have many friends.”

What problems did the student face while learning?

According to the information gathered in this qualitative research study, it was discovered that students with reading difficulties experienced a number of difficulties during learning. Low academic achievement was one of the most common problems. All of the participants reported that all the students they taught who had reading difficulties also had low academic performance.

Participant 4: “I have noticed that all the students who have reading difficulties experience overall low academic performance. This happens due to the lack of understanding of what they read.”

What strategies did teachers use to deal with reading difficulties?

Data collected in this study revealed that teachers mostly use multi-sensory approach, assistive technology and individual explanation of the task. Three out of five teachers said

they use visual material, pictures, audio or video materials and individual assistance to support students who struggle with reading. Participant 1:

“I try to use a lot of visual aids to support students with reading difficulties. It helps them to understand the meaning and make a whole picture of the texts we are reading. Audio materials are also very helpful to support those students, as they usually struggle with blending sounds and when they have audio support they don’t need to do it.” The participant also added that these strategies are also helpful for students who do not fall behind in reading.

Some other techniques that were mentioned by participants include drilling (two out of five), differentiation (two out of five), and scaffolding (one out of five).

What techniques did teachers find effective in supporting students with reading difficulties?

While answering this question the most common answer was praising or giving positive feedback. All participants found this technique helpful when teaching students with reading difficulties. For instance, participant 3 said in his answer “as reading causes frustration and exhaustion it is very important to give positive feedback or praise the student for any effort that they make to motivate them to read and help them track the progress.” The same was stated by participant 1 “rewarding, I mean, giving positive feedback is important as it encourages students not to give up reading”. This idea was supported by the answer of participant 5, who said “if I have a student who has reading difficulties, I try to praise the student for every attempt.”

What kind of support was provided to teachers by the school?

The data collected from the participants indicated that two of five teachers did not get any support from their school to assist students with reading difficulties. The other three teachers reported they had support that included interactive boards and black and white printers. Participant 5 also stated that support was provided by their colleagues during

informal discussions, adding “we don’t really discuss such needs in school. We don’t ask for any extra facilities or tools that can help us to assist students with reading difficulties. I find it very helpful to discuss some techniques and approaches that my colleagues use. But if I need something I have to do it myself and pay for it myself. For example, coloring printing.”

What do teachers want to learn to make their strategies in helping students with reading difficulties work more effectively?

Results show that all of the teachers would like to know what strategies to use while teaching students with reading difficulties. Participant 1 stated,

“The thing that I find the most important is to know the correct and effective strategies to deal with reading difficulties. Everything that I use now is tested myself and it doesn’t always work. I also think that it is important to know the reasons for reading difficulties. Maybe that can help to identify the special needs that the students have and as a result help effectively.”

Participant 4 in the answer also prioritized teaching strategies among other things to learn in order to support students with reading difficulties by stating

“It takes a lot of time and effort to find the things that work for students, who fall behind in reading. So having a workshop on effective strategies would be extremely beneficial for primary school teachers, as none of us had been taught this in the university.” The other things that teachers were interested in were causes of reading difficulties (one out of five) and dyslexia (one out of five).

What approach and techniques would the double use while teaching students from portfolio?

This data was collected by the means of ITTD, which means that the teacher had to imagine their double was going to teach two students with reading difficulties from the portfolio provided by the interviewer. The first child from the portfolio was a boy who

struggled with reading more than two-syllable words (changing places of syllables), and a lack of comprehension of the material read. In addition, he was hyperactive, can't concentrate. The second child was a boy with the same difficulties. But in comparison to the first one, he was shy, silent and unconfident.

Collected data presents very diverse answers on the approaches and techniques that teachers would recommend other teachers to use while teaching students with reading difficulties. Participant 1 named a few methods, such as Davis method and Doman method, that are considered helpful while teaching students with reading difficulties. Davis method was created by a person who had dyslexia. Davis method involves three basic steps: mastery of the alphabet and basic language symbols, mastery of words for which the dyslexic has no picture or meaning, building sequencing and comprehension skills during reading (Marshall, 2008). The Doman method is also aimed to facilitate the reading process by using cards with words and learning to read the whole words instead of blending sounds.

Participant 1 while answering the question said, "I think he might use some new methods that were not taught to us. Maybe Davis method or Doman method. They both are used in many countries all over the world and said to be helpful to assist students with reading difficulties."

The other answers include using assistive technology (two out of five) such as video materials. Two out of five would use physical activities and interactive games. Participant 5, however, thought differently and stated that "the double would, probably, use calm and quiet activities, as they help to calm down and concentrate."

What materials would the double use to support these students?

The results show that the teachers recommend the double to use different types of visual aids. Four out of five of teachers would advise doubles to use cards and pictures to assist students who struggle with reading. Participant 2 said "Pictures are very helpful. I have

already used it in the classroom. Students really enjoy it.” Participant 1 would advise to use video and playdoh to support students with reading difficulties. Participant 1 stated that “Using visual aids and 3D shapes of the objects is very useful to make the connections between the word and the meaning”

What obstacles does the double face while teaching students with reading difficulties?

All participants reported that the main obstacles the doubles might experience were the lack of knowledge and facilities, such as comfortable furniture, audio versions of books and screen reader tools. Participant 1 said

“The main obstacle would be lack of knowledge. Teachers usually don’t know what to do to help. Not only they don’t know, they don’t physically have time and strength to do or search for something new and effective.”

Participant 2 stated “It would be great if we had furniture that would be comfortable for the students, that doesn’t distract students and provide a learning atmosphere.”

Three out of five teachers claimed that it would be physically difficult for the double to teach students with reading difficulties in a class of 30-36 students. Participant 4 claimed “I really want to support students who fall behind in reading, however, it is very difficult to devote some time in a classroom of 30 students or sometimes even more.” One out of five participants identified absence of teaching assistance in schools. Participant 1 said “I think one teacher in the classroom is not enough to meet all the needs of all students.” One teacher mentioned that it would be time-consuming to prepare extra materials for students with reading difficulties. Participant 3 stated “The teachers have a heavy workload and it is almost impossible to find time for preparing extra materials, when you have tons of work to check and papers to sign for administration.”

The results of this study show that the ITTD method provided different results than face-to-face interviews. This emphasizes the importance of utilizing alternative methods to gain a deeper understanding of teachers' experiences. Participants were able to share insights and experiences that they would not have been able to share in a traditional interview setting thanks to the ITTD method. Thus, it can be concluded that teachers know more and wish to use other methods to support their students who fall behind in reading. However, it is impossible due to the barriers they face while teaching these students.

The findings of this study shed light on the numerous challenges that teachers face when teaching students with reading difficulties. These findings highlight the need for improved resources, facilities, and teaching assistants to assist students who require extra help. Furthermore, the study emphasizes the physical demands that teachers face when working with large groups of students who struggle with reading.

4. Discussion

How do primary school teachers with Russian as their language of instruction in Kazakhstan describe their effective strategies to teach students who fall behind in reading?

Description of students with reading difficulties

This study's findings are consistent with previous research on students who struggle with reading. Students who struggle with reading may exhibit a variety of symptoms, including difficulty recognizing and decoding words, difficulties with comprehension and recalling information, and a lack of fluency and speed in reading (Snowling & Hulme, 2012). Negative emotions such as frustration, anxiety, or avoidance of reading-related activities may also occur (Vellutino et al., 2004). In this study, all five participants reported that their struggling readers lacked comprehension, and four out of five participants reported that their students read very slowly, indicating fluency difficulties. Furthermore, one participant observed students becoming exhausted while reading, which could indicate the presence of reading-related anxiety or difficulties with sustained attention.

Additionally, teachers were asked about the behavior that was observed in their students with reading difficulties. In the result all respondents reported that their students could not concentrate for a long time. This result was predictable, as attention and concentration problems have been linked to reading difficulties (Shaywitz et al., 2008). When students struggle with decoding or comprehension, it is possible that they will need to devote more cognitive resources to reading tasks, leaving fewer resources available for attention and other aspects of learning (Torgesen, 2004). This can lead to distractibility, restlessness, or difficulty maintaining attention while reading (Badian, 1999).

Even though the answers seem to be similar, differences in the typical behavior of students who struggle with reading were observed. Two participants reported shyness in their

students, while the remaining three reported hyperactivity. The literature also contains opposing viewpoints on this subject. Hudson, High, and Al Otaiba (2007) discovered that children who struggle with reading are more likely to be shy than their peers. Shyness in these children may result from negative reading experiences or a lack of confidence in their reading ability. Other research, however, suggests that hyperactivity and inattention are more common in children with reading difficulties (Willcutt et al., 2005). This could be due to the fact that reading tasks demand more cognitive resources, leaving fewer resources for attention and learning. Inattention and hyperactivity can exacerbate reading difficulties by making it difficult for children to focus on and comprehend text (Badian, 1999).

Finally, all participants reported that students who fell behind in reading had low academic performance. This idea is supported by previous studies. Reading, according to Shaywitz et al. (2008), is essential for success in school and beyond because it serves as the foundation for all academic learning. When children struggle with reading, their performance in other subjects suffers, including math, science, and social studies. Students with reading difficulties are at a higher risk of academic failure and are more likely to require remedial instruction or special education services, according to research (National Institute of Child Health and Human Development, 2000; Snowling & Hulme, 2012). Furthermore, reading difficulties can lower self-esteem and motivation, resulting in a lack of engagement and interest in learning (Vellutino et al., 2004).

These findings emphasize the complexity of reading difficulties' nature. Thus, there is no universal characteristic of a poor reader, as it differs from student to student. That is why it is important that teachers as the main stakeholders understand these diverse needs of children with reading difficulties.

Effective strategies to teach students with reading difficulties

The current qualitative research discovered that teaching students with reading difficulties requires explicit and systematic instruction in phonemic awareness, phonics, fluency, vocabulary, and comprehension (National Reading Panel, 2000). Teachers can use multisensory techniques such as manipulatives, visual aids, and movement to help students connect sounds and letters (Birsh, 2011). Furthermore, ample opportunities for students to practice reading in a supportive and engaging environment are essential (Allington & Cunningham, 2011). Assistive technology, such as text-to-speech software, can also help struggling readers improve their reading comprehension and fluency (Higgins, Boone, & Lovitt, 2016). Individual explanation and praise are effective strategies and techniques used by three out of five participants to deal with reading difficulties, according to the findings of this study. Furthermore, two out of every five participants reported using technology to help students who are falling behind in reading, such as video or audio aids, drilling, and differentiation.

How do these teachers' vision, and their understanding of the most effective way to teach students who fall behind in reading correspond to their practice?

The ITTD method was used in this study to investigate the strategies teachers use when teaching students with reading difficulties. This method was used to encourage participants to give honest responses and to provide a realistic portrayal of their experiences. Participants were asked to describe the methods they used to teach students with reading difficulties during the interviews. Three of the five participants said they used video assistance as a teaching method, and two others said they used interactive activities to help students who were falling behind in their reading. One participant, however, mentioned using the Devis and Doman methods to help poor readers, and another mentioned using calm activities to create a positive learning environment for students with reading difficulties. The results of this study

show that the ITTD method provided different results than face-to-face interviews. This emphasizes the importance of utilizing alternative methods to gain a deeper understanding of teachers' experiences. Participants were able to share insights and experiences that they would not have been able to share in a traditional interview setting thanks to the ITTD method. Thus, it can be concluded that teachers know more and wish to use other methods to support their students who fall behind in reading. However, it is impossible due to the barriers they face while teaching these students.

What are the barriers that teachers face while teaching students with reading difficulties?

The purpose of this study was to identify the challenges that teachers face when teaching students who have reading difficulties. Participants were asked to provide responses during ITTD sessions in order to obtain a genuine understanding, which ensured anonymity and encouraged honest answers. Due to a lack of facilities and resources, participants unanimously agreed that teaching students with reading difficulties posed significant challenges. Participants also mentioned other challenges, such as a lack of teaching assistants and time constraints. Due to the large number of students in their classrooms, three out of five teachers reported physical difficulties while providing support to their students who were falling behind in reading.

The results of ITTD differed from the results of the face-to-face interviews. That means that the use of ITTD was important and helped a lot to understand the true nature of the barriers teachers face while implementing effective strategies when teaching students with reading difficulties.

The findings of this study shed light on the numerous challenges that teachers face when teaching students with reading difficulties. These findings highlight the need for improved resources, facilities, and teaching assistants to assist students who require extra help. Furthermore, the study emphasizes the physical demands that teachers face when working with large groups of students who struggle with reading.

6. Conclusions

This study aimed to understand the barriers that primary school teachers face while teaching students with reading difficulties. To achieve it three research questions were posed:

- 1) What are the causes of reading difficulties in primary school children, effective strategies for teaching children with reading difficulties identified in literature?
- 2) How do primary school teachers with Russian as their language of instruction in Kazakhstan describe their effective strategies to teach students who fall behind in reading? What support is provided by schools to use effective reading strategies for children with reading difficulties?
- 3) How do these teachers' vision, and their understanding of the most effective way to teach students who fall behind in reading correspond to their practice?

6.1 Summary of the Major Findings

The first research question was closely examined in the literature review. It revealed that reading difficulties are common among primary school students, and they can have a major impact on a student's academic achievement. In the literature two main causes of reading difficulties were identified: physical and environmental. Physical are then divided into linguistic and non-linguistic subgroups. Linguistic causes include a lack of physical functioning (Akubילו et al., 2015); phonological deficit (Coltheart, 2015); poor visual processing, limited eyesight, word blindness (Devine, 2022); visual deficit (Hulme & Snowling, 2011; Sahari & Johari, 2012); low visual system and limited language skills (Seidenberg, 2013); poor phonological awareness, lack of auditory, visual processing, low memory (Sousa, 2007). Limited mental functioning (Akubילו et al., 2015); brain difficulties, lack of motor coordination, inability to hear noises, speech discrepancies, and poor detection abilities (Sousa, 2007) are examples of non-linguistic impairments. Negative experiences in

society, home, school, and culture are seen as environmental causes. In addition, according to a comprehensive literature review, there are four effective strategies to support students with reading difficulties or dyslexia. They are multi-sensory approaches, over-learning, structured programmes and assistive technology. Multi-sensory approach is based on the idea to include all sense in the learning process to make it the most effective. Over-learning is about repeating the same material several times until students get mastery in it. Structured programmes are the ones that use the same structure all the time but the context is different. This strategy is also regarded as very effective. The last but not least effective is the use of assistive technology, such as screen readers, audiobooks, etc. Thus, reviewing the literature answered the first research question about the reading difficulties among the primary school children, causes and effective strategies to deal with it.

Second research question was answered by face-to-face interviews with five primary school teachers of urban schools from Northern Kazakhstan. The results of the interviews identified the characteristics of students who fall behind in reading. All teachers reported that students with reading difficulties were very slow in reading and experienced a lack of comprehension of the material they read. Most of the participants said that children who struggled with reading were hyperactive and lost concentration easily. The combination of all these factors together led to the overall low academic performance of those children in school and difficulties in socializing. Teachers also talked about the strategies they found effective while teaching students who fall behind in reading. Most of the teachers used visual aids, such as pictures and videos, as well as audio assistance in the classroom, which, according to the literature, are considered to be effective when teaching children with reading difficulties. Finally teachers said about the support they get and the barriers that prevent them from using those effective strategies to support students who experience difficulties with reading. More than half of the participants claimed that support was limited and only included interactive

boards and black and white printers. While others stated that no support was provided by school in order to help teachers to create opportunities for children with reading difficulties.

Thus, the second research question was fully addressed and covered by the face-to-face interview.

To get a full and comprehensive answer to the third research question ITTDs were held with the same participants. The interviews provided interesting results. When teachers were asked to give the doubles suggestions about the techniques to be used while teaching students with reading difficulties, more participants offered to use assistive technology such as audio or video assistance. One teacher mentioned methods such as Davis and Doman methods, which were not identified in the face-to-face interviews, when teachers were talking about their practice. The material suggested to the double for effective teaching were also more diverse, such as play doh and video materials, and involved more senses than those that were mentioned in the face-to-face interviews. The last part of ITTDs was devoted to the barriers that the doubles might face while teaching students with reading difficulties. All teachers identified a lack of knowledge and facilities as the main barriers to implement effective strategies while teaching students who fall behind in reading. Other obstacles included time constraints and lack of teaching assistants. All the answers obtained during the ITTDs were sufficient to answer the third research question.

The results of the study revealed the importance of addressing the problem of reading difficulties among the primary school students and professional development of teachers who work with those students in order to improve their reading skills and overall academic performance.

6.2 Limitations

This study has one big limitation that should be noted when evaluating the findings.

The main limitation is that the study only included five primary school teachers from urban schools in Northern Kazakhstan, limiting the findings' generalizability to other situations. The findings may not be applicable to teachers in other locations or educational systems.

6.3 Implications

The implications of these findings are significant for the main stakeholders of the educational system such as teachers, school administrators, and politicians. Teachers must be equipped with the essential information and resources and ready to properly serve children who fall behind in reading. Teachers should be trained and supported by school administrators and policymakers to implement effective strategies, including the use of assistive technology. They should also ensure that schools have the necessary facilities and resources to assist students with reading difficulties.

In addition, the data suggest that early intervention is critical to preventing reading difficulties and the negative consequences they have on academic achievement and sociability. Schools should identify and support students who are struggling with reading as early as possible to ensure they receive the interventions and support they need to achieve academically and socially. Hiring special education specialists would also benefit the teaching process, as these specialists can correctly identify the difficulties and guide those students who are in need

6.4 Directions for Future Research

Based on the results of this research, the following directions are suggested for future research.

First of all, the effectiveness of certain strategies can be explored. For example, a multi-sensory approach can be chosen and specific techniques within this approach can be examined in order to support students with reading difficulties.

Secondly, as this research identified a lack of teachers' knowledge on effective strategies, examination of the impact of teacher training and professional development on the way teachers support students who fall behind in reading can be beneficial. It can improve the outcomes of the students and support teachers as well.

References

- Akubuilu, F., Okorie, E., Onwuka, G., & Uloh-Bethels, A. (2015). Reading readiness deficiency in children: Causes and ways of improvement. *Journal of Education and Practice*, 6(24),
- Akyol, H., Temur, M., & Erol, M. (2021). Experiences of primary school with students with reading and writing difficulties. *International Journal of Progressive Education*, 17(5), 279-298. <https://doi.org/10.29329/ijpe.2021.375.18>
- Allington, R. L., & Cunningham, P. M. (2011). *Schools that work: Where all children read and write*. Pearson.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). <https://doi.org/10.1176/appi.books.9780890425596>.
- Atkinson, S., & Martin, C. (2021). Early detection of risk of reading difficulties using a working memory assessment battery. *British Educational Research Journal*, 48, 1183-1197. <https://doi.org/10.1002/berj.3821>
- Atkinson, L., & Martin, M. (2021). Working memory, language and literacy development: A review. *Journal of Research in Reading*, 44(1), 28-44.
- Badian, N. A. (1999). Persistent arithmetic, reading, or arithmetic and reading disabilities. *Annals of Dyslexia*, 49(1), 45-70. <https://doi.org/10.1007/s11881-999-0011-x>
- Biancarosa, G., Snow, C. E. (2006). *Reading next: A vision for action and research in middle and high school literacy: A report from the Carnegie Corporation of New York*. Alliance for Excellent Education.
- Birsh, J. R. (2011). *Multisensory teaching of basic language skills* (3rd ed.). Brookes Publishing.

- Bryman, A. (2004). Triangulation and measurement.
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.).
Routledge.
- Coltheart, M. (2015). What kinds of things cause children's reading difficulties? *Australian Journal of Learning Difficulties*, 20(2), 103-112.
<https://doi.org/10.1080/19404158.2015.1114000>
- Creswell, J. (2014). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson.
- Daniel, J., Vaughn, S., Roberts, G., & Grills, A. (2022). The importance of baseline word reading skills in examining student response to a multicomponent reading intervention. *Journal of Learning Disabilities*, 55(4), 259-271.
<https://doi.org/10.1177/00222194211010349>
- Das, J. P. (2020). *Assessing learning disabilities: A neuropsychological perspective*.
Springer.
- Davis, R. D. (2010). *The gift of dyslexia: Why some of the brightest people can't read and how they can learn* (Revised and Expanded ed.). Perigee Books.
- Denton, C. (2012). Response to Intervention for Reading Difficulties in the Primary Grades: Some Answers and Lingering Questions. *Journal of learning disabilities*. 45, 232-43.
DOI: 10.1177/0022219412442155
- Denzin, N. K. (2007). Triangulation. In Ritzer, G. (Ed), *The Blackwell encyclopedia of sociology*. <https://doi.org/10.1002/9781405165518.wbeost050>
- Devine, T. (1962). Causes of reading difficulty. *The Clearing House*, 37(2), 83-86.
<https://www.jstor.org/stable/30194670>

- Ergen, Y., & Elma, C. (2018). Primary school teachers' practices and troubles with students who they think have undiagnosed difficulties in verbal communication, reading and writing. *Universal Journal of Educational Research*, 6(1), 120-131.
<https://doi.org/10.13189/ujer.2018.060111>
- Freire, P. (1983). The importance of the act of reading. *Journal of Education*, 165(1), 5–11.
<https://doi.org/10.1177/002205748316500103>
- Frith, U. (1999). Paradoxes in the definition of dyslexia. *Dyslexia: An International Journal of Research and Practice*, 5(4), 192-214.
- Gathercole, S. E., & Alloway, T. P. (2008). *Working memory and learning: A practical guide for teachers*. Sage.
- Glazzard, J., & Al, E. (2015). *Teaching and supporting children with special educational needs and disabilities in primary schools*. Sage.
- Goodman, K. S. (1997). The reading process. In Edwards, V., Corson, D. (Eds.), *Encyclopedia of language and education*. Springer. https://doi.org/10.1007/978-94-011-4540-4_1
- Hall, W. (2009). *Dyslexia in the primary classroom*. Learning Matters Ltd.
- Heale, R., & Forbes, D. (2013). Understanding triangulation in research. *Evidence-Based Nursing*, 16(98), 98.
- Higgins, E. L., Boone, R., Lovitt, T. C. (2016). The effects of text-to-speech on reading comprehension and metacognition for secondary students with reading disabilities. *Reading Research Quarterly*, 51(1), 77-93. <https://doi.org/10.1002/rrq.131>

- Hudson, R. F., Lane, H. B. (2012). Using the Orton-Gillingham approach to teach reading. *Intervention in School and Clinic, 47*(5), 271-277.
<https://doi.org/10.1177/1053451211434720>
- Hudson, R. F., High, L., Al Otaiba, S. (2007). Dyslexia and the brain: What does current research tell us? *Reading Teacher, 60*(6), 506-515. <https://doi.org/10.1598/RT.60.6.3>
- Hulme, C., & Snowling, M. (2011). Children's reading comprehension difficulties: Nature, causes, and treatments. *Association for Psychological Science, 20*(3), 139-142.
<https://doi.org/10.1177/0963721411408673>
- International Reading Association (IRA). 2007. *Teaching reading well. A synthesis of the International Reading Association's research on teacher preparation for reading instruction*. International Reading Association.
- Jimenez, E. A., Romeo, A., Perez Zapata, L., Sole Puig, M., Bustos-Valenzuela, P., Canete, J., Varela Casal, P. & Super, H. (2020). Eye vergence responses in children with and without reading difficulties during a word detection task. *Vision Research, 169*, 6-11.
<https://doi.org/10.1016/j.visres.2020.02.001>
- Lawrence, D. (2009). *Understanding dyslexia: A guide for teachers and parents*. Open University Press.
- Mcbride, C. (2019). *Coping with dyslexia, dysgraphia and ADHD: A global perspective*. Routledge.
- National Reading Panel. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). National Reading Panel.

- Nicolini, D. (2009). Articulating practice through the interview to the double. *Management Learning, 40*(2), 195-212.
- OECD. (2019). *PISA 2018: Insights and interpretations*.
<https://www.oecd.org/pisa/PISA%202018%20Insights%20and%20Interpretations%20FINAL%20PDF.pdf>
- Oppermann, M. (2000). Triangulation — a methodological discussion. *Int. J. Tourism Res.*, 2, 141-145. [https://doi.org/10.1002/\(SICI\)1522-1970\(200003/04\)2:2<141::AID-JTR217>3.0.CO;2-U](https://doi.org/10.1002/(SICI)1522-1970(200003/04)2:2<141::AID-JTR217>3.0.CO;2-U)
- Peterson, R. L., Pennington B. F. (2012). Developmental dyslexia. *The Lancet, 379* (9830), 1997-2007. [https://doi.org/10.1016/S0140-6736\(12\)60198-6](https://doi.org/10.1016/S0140-6736(12)60198-6)
- Rayner, K., Schotter, E., Masson, M., Potter, M., & Treiman, R. (2016). So much to read, so little time: How do we read, and can speed reading help? *Association for Psychological Science, 17*(1), 4-34. <https://doi.org/10.1177/1529100615623267>
- Rayner, K., Pollatsek, A., Ashby, J., & Clifton Jr., C. (2011). *Psychology of reading*. Psychology Press. <https://doi.org/10.4324/9780203155158>
- Reid, G., Fawcett, A. (2008). *Dyslexia in context: Research, policy and practice*.
- Riddick, B. (2006). Dyslexia friendly schools in the UK. *Topics in Language Disorders, 26*(2), 144-15.
- Rose, D. H., Meyer, A., & Hitchcock, C. (2019). *The universally designed classroom: Accessible curriculum and digital technologies*. Harvard Education Press.
- Saat, F., & Ozenc, E. (2022). Effect of self-evaluation-based oral reading method in elementary school on reading fluency and reading comprehension. *Participatory Educational Research, 9*(2), 437-462. <https://doi.org/10.17275/per.22.48.9.2>

- Sahari, S., & Johari, A. (2012). Improvising reading classes and classroom environment for children with reading difficulties and dyslexia symptoms. *Procedia - Social and Behavioral Sciences*, 38, 100-107. <https://doi.org/10.1016/j.sbspro.2012.03.329>
- Scherer, L. (2016). 'I am not clever, they are cleverer than us': Children reading in the primary school. *British Journal of Sociology of Education*, 37(3), 389-407. <https://doi.org/10.1080/01425692.2014.948989>
- Seidenberg, M. (2013). The science of reading and its educational implications. *Language Learning and Development*, 9, 331-360. <https://doi.org/10.1080/15475441.2013.812017>
- Shaywitz, S. E. (2003). *Overcoming dyslexia: A new and complete science-based program for reading problems at any level*. Knopf.
- Shaywitz, S. E. (2005). Dyslexia (Specific reading disability). *Biological Psychiatry*, 57 (11), 1301-1309. <https://doi.org/10.1016/j.biopsych.2005.01.043>
- Shaywitz, S., & Shaywitz, B. (2008). Paying attention to reading: The neurobiology of reading and dyslexia. *Development and Psychopathology*, 20(4), 1329-1349. doi:10.1017/S0954579408000631
- Snow, P. (2021). SOLAR: The science of language and reading. *Special Issue: Language and Literacy*, 37(3), 222-233. <https://doi.org/10.1177/0265659020947817>
- Snowling, M. J., Hulme, C. (2011). Evidence-based interventions for reading and language difficulties: Creating a virtuous circle. *British Journal of Educational Psychology*, 81(1), 1-23. <https://doi.org/10.1348/000709910X498612>

- Snowling, M. J., Hulme, C. (2012). Interventions for children's language and literacy difficulties. *International Journal of Language & Communication Disorders*, 47(1), 27-34.
- Sousa, D. (2007). *How the special needs brain learns*. Corwin Press.
- Spiering, J. (2019). Engaging adolescent literacies with the standards. *Knowledge Quest*, 47(5), 44-49. <https://eric.ed.gov/?id=EJ1214903>
- Swanson, H. L., Beebe-Frankenberger, M. (2004). The relationship between working memory and mathematical problem solving in children at risk and not at risk for serious math difficulties. *Journal of Educational Psychology*, 96(3), 471-491.
- Thurmond, V. A. (2001), The point of triangulation. *Journal of Nursing Scholarship*, 33, 253-258. <https://doi.org/10.1111/j.1547-5069.2001.00253.x>
- Tonnessen, F. E. (1997). How can we best define 'Dyslexia'? *Dyslexia: An International Journal of Research and Practice*, 3(2), 78-92.
- Tonnessen, F. E. (2006). On defining «Dyslexia». *Scandinavian Journal of Education Research*, 39(2), 139-156.
- Torgesen, J. K. (2002). The prevention of reading difficulties. *Journal of School Psychology*, 40(1), 7-26. [https://doi.org/10.1016/S0022-4405\(01\)00092-9](https://doi.org/10.1016/S0022-4405(01)00092-9)
- Veerabudren S., Kritzinger, A., Ramaswamy, S. (2021). Corrigendum: Teachers' perspectives on learners with reading and writing difficulties in mainstream government primary schools in Mauritius. *South African Journal of Childhood Education*, 11(1). <https://doi.org/10.4102/sajce.v11i1.1023>
- Vellutino, F. R., Scanlon, D. M., Lyon, G. R. (2004). Differentiating between difficult-to-remediate and readily remediated poor readers: More evidence against the IQ-

achievement discrepancy definition of reading disability. *Journal of Learning Disabilities*, 37(5), 469-480. <https://doi.org/10.1177/00222194040370050701>

Willcutt, E. G., Pennington, B. F., Olson, R. K., Chhabildas, N., & Hulslander, J. (2005). Neuropsychological analyses of comorbidity between reading disability and attention deficit hyperactivity disorder: In search of the common deficit. *Developmental Neuropsychology*, 27(1), 35-78.

Williams, A. J., Lynch, A. S. (2010). Dyslexia: What teachers need to know. *Kappa Delta Pi Record*, 46(2), 66-70. <https://doi.org/10.1080/00228958.2010.10516696>

Wolff, U., Gustafsson, J. (2022). Early phonological training preceding kindergarten training: Effect on reading and spelling. *Reading and Writing*, 35, 1865-1887. <https://doi.org/10.1007/s11145-022-10261-x>

Wong, M. S., Hicks, J. A., Ramsey, D. (2018). The effects of audiobooks on reading comprehension and motivation for elementary school students. *Journal of Educational Psychology*, 110(3), 309-320. <https://doi.org/10.1037/edu0000227>

Appendices

Appendix A

Interview protocol

Hello, my name is Aziza Khamitova. Currently I am doing my master's degree in Nazarbayev University. My major is Leadership in Education, my minor is Inclusive Education. I am doing research on reading difficulties. The topic of my thesis is Barriers to Implementing Teaching Approaches that Support Children with Reading Difficulties. This topic is very important because we have many children with reading difficulties, who do not succeed in school. So, I want to find out what problems teachers face while teaching students with reading difficulties. Finding out the obstacles will help to adjust and improve strategies to support these students and as a result it will enhance the learning outcomes of students. Our interview will take approximately one hour. If you are ready let's start the first part of the interview.

Questions:

1. Have you ever encountered teaching students with reading difficulties?
2. How did you find out that students had reading difficulties?
3. Do you think they had dyslexia? Why do you think so?
4. What behavior did you observe in these students?
5. What problems did the student face while learning?
6. What strategies did you use to deal with this problem?
7. What techniques did you find effective in supporting students with reading difficulties?
8. What kind of support was provided by the institution?
9. What do you want to learn to make your strategies in helping students with reading difficulties work more effectively?

Now I would like to create a situation. Imagine you have a student with reading difficulties in your classroom. Here are two profiles of students with reading difficulties. Now imagine your double is going to teach these students tomorrow. Tell me how you see the process.

1. What approach and techniques does the double use while teaching these students?
2. What materials does the double use to support these students?
3. What obstacles does the double face while teaching these students?

Profile 1.

Name: Andrey

Gender: boy

Grade : TBC

Reading characteristic: struggles with reading more than two-syllable words (changing places of syllables), lack of comprehension of the material read.

Behaviour characteristic: hyperactive, can't concentrate.

Profile 2.

Name: Abulkhair

Gender: boy

Grade: TBC

Reading characteristic: struggles with reading more than two-syllable words (changing places of syllables), lack of comprehension of the material read.

Behaviour characteristic: lack of confidence, very shy and silent.

Протокол интервью

Здравствуйте, меня зовут Азиза Хамитова. В настоящее время я получаю степень магистра в Назарбаев Университете. Моя специальность — «Лидерство в образовании», моя дополнительная специальность — «Инклюзивное образование». Я занимаюсь исследованием трудностей чтения. Тема моей диссертации — «Препятствия для внедрения подходов к обучению, поддерживающих детей с трудностями в чтении». Эта тема очень важна, потому что у нас много детей с трудностями в чтении, которые не успевают в школе. Итак, я хочу выяснить, с какими проблемами сталкиваются учителя при обучении студентов с такими трудностями. Выявление препятствий поможет скорректировать и улучшить стратегии поддержки таких учащихся и, как следствие, улучшить результаты обучения учащихся. Наше интервью продлится около часа. Если вы готовы, давайте начнем первую часть интервью.

Вопросы:

1. Сталкивались ли вы когда-нибудь с учащимися, испытывающими трудности с чтением?
2. Как вы узнали, что ученики испытывают трудности с чтением?
3. Как вы думаете, у них была дислексия? Почему Вы так думаете?
4. Какое поведение вы наблюдали у этих учеников?
5. С какими проблемами столкнулся студент во время обучения?
6. Какие стратегии вы использовали для решения этой проблемы?
7. Какие приемы вы считаете полезными для помощи учащимся, испытывающим трудности с чтением?
8. Какую поддержку оказала школа?

9. Чему вы хотите научиться, чтобы ваши стратегии помощи учащимся, испытывающим трудности с чтением, работали более эффективно?

Теперь я хотел бы создать ситуацию. Представьте, что в вашем классе есть ученик с трудностями в чтении. Вот два профиля учащихся с трудностями в чтении. А теперь представьте, что завтра ваш двойник будет учить этих студентов. Расскажите, как вы видите этот процесс.

1. Какой подход и приемы использует двойник при обучении этих студентов?
2. Какие материалы использует двойник для поддержки этих учеников?
3. С какими препятствиями сталкивается двойник, обучая этих студентов?

Профиль 1.

Имя: Андрей

Пол: мальчик

Класс

Характеристика чтения: затруднения при чтении более чем двусложных слов (перестановка слогов местами), непонимание прочитанного.

Характеристика поведения: гиперактивный, не может сосредоточиться.

Профиль 2

Имя: Абулхаир

Пол: мальчик

Класс:

Характеристика чтения: затруднения при чтении более чем двусложных слов (перестановка слогов местами), непонимание прочитанного.

Характеристика поведения: неуверенный в себе, очень застенчивый и молчаливый.

Әңгімелесу хаттама

Сәлеметсізбе, менің атым Азиза Хамитова. Қазір Назарбаев Университетінде магистратурада оқып жатырмын. Мамандығым – «Білім берудегі көшбасшылық», екінші мамандығым – инклюзивті білім беру. Мен оқу қиындықтары туралы зерттеу жүргіземін. Менің дипломдық жұмысымның тақырыбы оқуда қиындықтары бар балаларды қолдайтын оқыту әдістерін енгізудегі кедергілер. Бұл тақырып өте маңызды, өйткені бізде оқуы қиын, оқуда үлгермейтін балалар көп. Олай болса, оқу қиындығы бар оқушыларды оқыту барысында мұғалімдердің қандай қиындықтарға тап болатынын білгім келеді. Кедергілерді анықтау осы студенттерге қолдау көрсету стратегияларын түзетуге және жақсартуға көмектеседі және нәтижесінде оқушылардың оқу нәтижелерін арттырады. Біздің сұхбатымыз шамамен бір сағатты алады. Дайын болсаңыз, сұхбаттың бірінші бөлімін бастайық.

Сұрақтар:

1. Сіз оқуда қиындықтары бар студенттерге сабақ берген кезде кездестіңіз бе?
2. Оқушылардың оқуда қиындықтары бар екенін қалай білдіңіз?
3. Қалай ойлайсыз, оларда дислексия белгілері болды ма? Неге олай ойлайсыз?
4. Осы оқушылардан қандай мінез-құлық байқадың?
5. Оқу барысында оқушы қандай қиындықтарға тап болды?
6. Бұл мәселені шешу үшін қандай стратегияларды қолдандыңыз?
7. Оқу қиындығы бар оқушыларды қолдаудың қандай әдістерін пайдалы деп таптыңыз?
8. Мекеме тарапынан қандай қолдау көрсетілді?

9. Оқу қиындығы бар оқушыларға тиімдірек жұмыс істеуге көмектесу үшін стратегияларыңызды жасау үшін нені үйренгіңіз келеді?

Енді мен бір жағдайды жасағым келеді. Сіздің сыныбыңызда оқу қиындығы бар оқушы бар екенін елестетіп көріңіз. Мұнда оқу қиындығы бар студенттердің екі профилі берілген. Енді сіздің қосылыңыз ертең осы студенттерге сабақ беретінін елестетіп көріңіз. Процесті қалай көретініңізді айтыңыз.

1. Бұл студенттерді оқыту кезінде сіздің қосылыңыз қандай әдіс-тәсілдерді қолданады?
2. Бұл студенттерді қолдау үшін сіздің қосылыңыз қандай материалдарды пайдаланады?
3. Осы оқушыларды оқытқанда сіздің қосылыңыз қандай кедергілерге тап болады?

Профиль 1.

Аты: Андрей

Жынысы: ұл

Сынып:

Оқуға тән белгілер: екі буынды сөздерден көп оқудағы қиындықтар (буындарды орындарына ауыстыру), оқылғанды дұрыс түсінбеу.

Мінез-құлық сипаттамасы: гиперактивті, зейінін жинақтай алмайды.

Профиль 2.

Аты-жөні: Әбілқайыр

Жынысы: ұл

Сынып:

Оқуға тән белгілер: екі буынды сөздерден көп оқудағы қиындықтар (буындарды орындарына ауыстыру), оқылғанды дұрыс түсінбеу.

Мінез-құлық ерекшеліктері: өзіне сенімсіз, өте ұялшақ және үнсіз.

Appendix B

Interview Transcript

Interviewer: Hello, let's start our interview. Are you sure you are comfortable in the place you are now? Nothing should compromise your answers.

Participant 1: Hello. Yes, I am.

Interviewer: I remind you that our interview will consist of two parts. So, let's start. The first question is "Have you ever encountered teaching students with reading difficulties?". Can you describe your experience?

Participant 1: Yes, I have had several students that experienced reading difficulties. To be honest, I think, almost every year I have at least one student in the class who struggles with reading. It is very common among primary school children.

Interviewer: Thank you for your answer. Can you tell me how you identified reading difficulties in your students?

Participant 1: Actually, it is never officially diagnosed. I just see and feel it, because they really struggle with reading difficulties. For example, when checking their reading speed they are below the expected level. In addition, they usually don't understand what they have read. I think it happens because when they read they mix the letters and then struggle when blending them. Then it takes them a long time to connect the words in the sentence and get the main idea. So, these are the factors that let me suppose students have reading difficulties.

Interviewer: ok. Do you think these students had dyslexia?

Participant 1: (Pause) it is a very interesting question. And I don't really know how to answer this question. I know dyslexia is somehow connected with reading difficulties, but I

am not sure if these terms are synonyms. But I can't say for sure. Unfortunately, I am not competent to answer this question.

Interviewer: I understand, thank you. Can you describe What behavior you observed in these students?

Participant 1: Sure. All the students from my class who experienced difficulties in reading were very similar. These children are hyperactive, they always want to move, to touch everything. I mean it is very hard for them to focus for a long time. They can't sit still which disturbs them from reading and understanding the text. I want to add that these students are usually not very sociable. They don't have friends and most of the time prefer to stay alone. And I remember that several students were scuttered. They used to forget their things, and couldn't put on their clothes properly. I think that's it.

Interviewer: That was a very full answer. What problems did the student face while learning?

Participant 1: Due to the difficulties they experienced, they usually had low academic performance. It happens because they are very slow in reading and don't understand the meaning of the things they read. That causes misunderstanding of the tasks and materials. In primary school a lot of time is devoted to reading as it is the main goal to teach students to read and prepare them for more independent work in secondary school.

Interviewer: I see, very interesting. As a classroom teacher who teaches them most of the time, what strategies do you use to support these students?

Participant 1: I try to use a lot of visual aids to support students with reading difficulties. It helps them to understand the meaning and make a whole picture of the texts we are reading. Audio materials are also very helpful to support those students, as they usually struggle with blending sounds and when they have audio support they don't need to do it. I

read on the internet that it is very beneficial for students with reading difficulties. I also read that it is good only for students who struggle with reading but for other students as well. So, I try to support the materials from the books with presentations, videos or audios. I also use group work in the classroom. I think that this help students with reading difficulties to relax and release stress, as they are not assessed by teachers and don't have to do all the work themselves.

Interviewer: That's great. And what techniques do you find effective in supporting students with reading difficulties?

Participant 1: I think, rewarding, I mean, giving positive feedback is important as it encourages students not to give up reading. I see how difficult it is for them to read, and every attempt requires a lot of effort. In order to motivate them I find this technique very helpful. I praise them for every little progress they make to help them see their own progress.

Interviewer: Good idea! I also think it helps. Can you tell me if any support was provided by the school?

Participant 1: You may know that mainstream urban schools don't have a lot of facilities that private schools have. We use the things that have already been provided. In my case we are more lucky than other schools. In my classroom we have an interactive whiteboard that really facilitates the work. I can use presentations, videos, and games in a good quality. For young children it is very exciting to use interactive whiteboards instead of writing on the paper or chalkboard.

Interviewer: Yes, nowadays children are very familiar with technology and are willing to use it everywhere possible. Finally we finish the first part of our interview with the things you want to learn to make your strategies in helping students with reading difficulties work more effectively.

Participant 1: This is a very important question. The thing that I find the most important is to know the correct and effective strategies to deal with reading difficulties. Everything that I use now is tested myself and it doesn't always work. I also think that it is important to know the reasons for reading difficulties. Maybe that can help to identify the special needs that the students have and as a result help effectively. Frankly speaking, most of the teachers use their intuition to support the students with reading difficulties instead of tested working strategies. That is why I think it is crucial for teachers to obtain knowledge about effective strategies. It should even be taught in universities, I think. In addition, I would like to find out why reading difficulties occur in students. Maybe it will help to find an appropriate strategy to support students. I also would like to learn about dyslexia which you mentioned in the interview previously. But the main thing is strategies.

Interviewer: I understand. Thank you for your answers. We have finished the first part of the interview. And now I would like you to imagine your double is going to work tomorrow. I would like you to answer the question suggesting the things that might happen to the double. Is it clear?

Participant 1: So, I am not telling you something I do, I should talk about the things that the double might face. Am I right?

Interviewer: Yes, are you ready?

Participant 1: Yes, let's try.

Interviewer: Ok, so here are two students that will be in the classroom your double teach tomorrow. The first one's name is Andrey. He studies in second grade. His reading level is low. He struggles with reading more than two-syllable words (changing places of syllables), lack of comprehension of the material read. In terms of behaviour he is hyperactive, can't concentrate. The other one's name is Abulkhair. He is also a second grade

student. He has the same reading difficulties including struggles with reading more than two-syllable words (changing places of syllables), lack of comprehension of the material read.

But in comparison to the first boy he is not confident, very shy and silent. Is the description clear?

Participant 1: Yes, it is clear.

Interviewer: Great, then let's go to the first question. What approach and techniques does the double use while teaching these students? How do you see the process?

Participant 1: Hmm, I think he might use some new methods that were not taught to us. Maybe Davis method or Doman method. They both are used in many countries all over the world and said to be helpful to assist students with reading difficulties. I read about it on the internet and saw the comments on a forum. Teachers all over the world say these approaches are very useful.

Interviewer: Can you tell more about these methods?

Participant 1: I know just some basic information. For example, the Davis method was created by a dyslexic person. He suggests including all student's senses, like fine motor skills, physical activities, etc, to improve reading. The Doman method is based on the idea that students are not taught separate letters and syllabus but are taught to remember the whole words.

Interviewer: Thank you very much. Can you suggest, what materials does the double use to support these students?

Participant 1: As I have mentioned these methods, the double might use visual aids and 3D shapes of the objects is very useful to make the connections between the word and the

meaning. The double might use playdoh, videos, cards with words and so on. Students usually enjoy activities with these resources.

Interviewer: Yes, children like doing something creative. The last question is about the obstacles the double faces while teaching these students?

Participant 1: I think the main obstacle would be lack of knowledge. Teachers usually don't know what to do to help these students. Not only they don't know, they don't physically have time and strength to do or search for something new and effective. I mean, in mainstream school the number of students is very big and physically it is very hard to find time to support students with needs. So they just try whatever they think is effective, until they find something that works. In addition, teachers have a lot of papers to write and submit to administration. That is why, I think one teacher in the classroom is not enough to meet all the needs of all students. Teachers need help and support to be able to provide assistance to the students with reading difficulties.

Interviewer: Thank you very much for devoting your time and providing very full and interesting answers. They were very helpful.

Appendix C

INFORMED CONSENT FORM

Barriers to Implementing Teaching Approaches that Support Children with Dyslexia

DESCRIPTION: You are being asked to take part in research with a purpose to understand what barriers prevent teachers from implementing appropriate pedagogical strategies in teaching students with dyslexia. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. Please read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information. As part of this research, you will be asked to participate in two consecutive interviews about your approach and experience in teaching children with reading difficulties. With your permission, the interview will be audio recorded to accurately record your answers. Your answers will be transcribed for the analysis in the Master's thesis. After defending the thesis all audio recordings and their transcripts the materials will be permanently deleted.

TIME INVOLVEMENT: Your participation will take approximately one hour.

RISKS AND BENEFITS: The research will not entail risks higher than an individual encounters in their daily life. This includes

bringing up some sensitive memories, saying something embarrassing. The benefit of this research is the potential to help to identify the needs of teachers working with students with reading difficulties, and assist students with reading difficulties more effectively.

PARTICIPANT'S RIGHTS: If you have read this form and have decided to participate in this project, please understand your **participation is voluntary** and you have the **right to withdraw your consent or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. The alternative is not to participate.** You have the right to refuse to answer particular questions. The results of this research study may be presented at scientific or professional meetings or published in scientific journals.

CONTACT INFORMATION:

Questions: If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, contact the Master's Thesis Supervisor for this student work, Rita Kasa, Associate Professor at Nazarbayev University Graduate School of Education, email: rita.kasa@nu.edu.kz.

Independent Contact: If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the NUGSE Research Committee at gse_researchcommittee@nu.edu.kz.

Please sign this consent form if you agree to participate in this study.

- I have carefully read the information provided;
- I have been given full information regarding the purpose and procedures of the study;
- I understand how the data collected will be used, and that any confidential information will be seen only by the researchers and will not be revealed to anyone else;
- I understand that I am free to withdraw from the study at any time without giving a reason;
- With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Signature: _____

Date: _____

The extra copy of this signed and dated consent form is for you to keep.

ФОРМА ИНФОРМАЦИОННОГО СОГЛАСИЯ

Препятствия для внедрения подходов к обучению, поддерживающих детей с дислексией

ОПИСАНИЕ: Вам предлагается принять участие в исследовании с целью понять, какие барьеры мешают учителям применять соответствующие педагогические стратегии в обучении студентов с дислексией. Прежде чем вы решите участвовать в этом исследовании, важно, чтобы вы поняли, почему исследование проводится и что оно будет включать. Пожалуйста, внимательно прочитайте следующую информацию. Пожалуйста, спросите исследователя, если есть что-то, что неясно, или если вам нужна дополнительная информация. В рамках этого исследования вас попросят принять участие в двух последовательных интервью о вашем подходе и опыте обучения детей с трудностями чтения. С вашего разрешения интервью будет записано на аудио для точной записи ваших ответов. Ваши ответы будут расшифрованы для анализа в магистерской диссертации. использовать информацию в диссертации. После защиты дипломной работы все аудиозаписи и их расшифровки материалов будут безвозвратно удалены.

ВРЕМЯ УЧАСТИЯ: Ваше участие потребует около одного часа.

РИСКИ И ПРЕИМУЩЕСТВА: Исследование не повлечет за собой рисков выше тех, с которыми человек сталкивается в своей повседневной жизни. Это включает вызывая некоторые деликатные воспоминания, говоря что-то смущающее. Преимущество этого исследования заключается в том, что оно может помочь определить потребности учителей, работающих с учащимися с трудностями в чтении, и более эффективно помочь учащимся с трудностями в чтении.

ПРАВА УЧАСТНИКОВ: Если Вы прочитали данную форму и решили принять участие в данном исследовании, Вы должны понимать, что Ваше участие является **добровольным** и что у Вас есть право **отозвать** свое согласие или **прекратить участие в любое время без штрафных санкций и без потери социального пакета, который Вам предоставляли.** В качестве альтернативы можно не участвовать в исследовании. Также Вы имеете право не отвечать на какие-либо вопросы. Результаты данного исследования могут быть представлены или опубликованы в научных или профессиональных целях.

КОНТАКТНАЯ ИНФОРМАЦИЯ:

Вопросы: Если у Вас есть вопросы, замечания или жалобы по поводу данного исследования, процедуры его проведения, рисков и преимуществ, Вы можете связаться с руководителям магистерского тезиса исследователя: Rita Kasa, Доцент Назарбаевского Университета, rita.kasa@nu.edu.kz.

Независимые контакты: Если Вы не удовлетворены проведением данного исследования, если у Вас возникли какие-либо проблемы, жалобы или вопросы, Вы можете связаться с Комитетом Исследований Высшей Школы Образования Назарбаев Университета, отправив письмо на электронный адрес gse_researchcommittee@nu.edu.kz.

Пожалуйста, подпишите данную форму, если Вы согласны участвовать в исследовании.

- Я внимательно изучил представленную информацию;
- Мне предоставили полную информацию о целях и процедуре исследования;
- Я понимаю, как будут использованы собранные данные, и что доступ к любой конфиденциальной информации будет иметь только исследователь;
- Я понимаю, что вправе в любой момент отказаться от участия в данном исследовании без объяснения причин;

- С полным осознанием всего вышеизложенного я согласен принять участие в исследовании по собственной воле.

Подпись: _____

Дата: _____

Дополнительный экземпляр этой подписанной и датированной формы согласия остается у вас.

ЗЕРТТЕУ ЖҰМЫСЫ КЕЛІСІМІНІҢ АҚПАРАТТЫҚ ФОРМАСЫ

Дислексия белгілері бар балаларға қолдау көрсететін оқыту әдістерін енгізудегі кедергілер

СИПАТТАМА: Сізден түсіну мақсатында зерттеуге қатысу сұралады қандай кедергілер мұғалімдерге Дислексия белгілері бар оқушыларды оқытуда сәйкес педагогикалық стратегияларды жүзеге асыруға кедергі келтіреді. Бұрын

Сіз осы зерттеуге қатысуды шешсеңіз, зерттеудің не үшін жасалып жатқанын және оның нені қамтитынын түсіну маңызды. Келесі ақпаратты мұқият оқып шығыңыз. Зерттеушіден бірдеңе түсініксіз болса немесе қосымша қажет пе деп сұраңыз ақпарат. Осы зерттеудің бір бөлігі ретінде сізден өзіңіздің көзқарасыңыз туралы екі қатарынан сұхбатқа қатысу сұралады оқуда қиындықтары бар балаларды оқыту тәжірибесі. Сіздің рұқсатыңызбен жауаптарыңызды дәл жазу үшін сұхбат аудио жазба болады. Сіздің жауаптарыңыз магистрлік диссертацияда талдау үшін транскрипцияланады. дипломдық жұмыстағы ақпаратты пайдалану. Дипломдық жұмысты қорғағаннан кейін барлық аудиожазбалар мен олардың транскриптері материалдар біржола жойылады.

ӨТКІЗІЛЕТІН УАҚЫТЫ: Сіздің қатысуыңыз шамамен бір сағат уақытыңызды алады.

ЗЕРТТЕУ ЖҰМЫСЫНА ҚАТЫСУДЫҢ ҚАУІПТЕРІ МЕН АРТЫҚШЫЛЫҚТАРЫ:

Зерттеу олардың күнделікті өміріндегі жеке кездесулерден жоғары тәуекелдерге әкелмейді. Бұған кіреді

кейбір сезімтал естеліктерді тәрбиелеу, ұят нәрсе айту. Бұл зерттеудің артықшылығы оқуда қиындықтары бар оқушылармен жұмыс істейтін мұғалімдердің қажеттіліктерін анықтауға және оқуда қиындықтары бар студенттерге тиімдірек көмектесуге көмектесу мүмкіндігі болып табылады.

ҚАТЫСУШЫ ҚҰҚЫҚТАРЫ: Егер Сіз берілген формамен танысып, зерттеу жұмысына қатысуға шешім қабылдасаңыз, Сіздің қатысуыңыз **ерікті** түрде екенін хабарлаймыз. Сонымен қатар, **қалаған уақытта айыппұл төлемей және сіздің әлеуметтік жеңілдіктеріңізге еш кесірін тигізбей зерттеу жұмысына қатысу туралы келісіміңізді кері қайтаруға немесе тоқтатуға құқығыңыз бар. Зерттеу жұмысына мүлдем қатыспауыңызға да толық құқығыңыз бар.** Сондай-ақ, қандай да бір сұрақтарға жауап бермеуіңізге де әбден болады. Бұл зерттеу жұмысының нәтижелері академиялық немесе кәсіби мақсаттарда баспаға ұсынылуы немесе шығарылуы мүмкін.

БАЙЛАНЫС АҚПАРАТЫ:

Сұрақтарыңыз: Егер жүргізіліп отырған зерттеу жұмысының процесі, қауіп мен артықшылықтары туралы сұрағыңыз немесе шағымыңыз болса, келесі байланыс құралдары арқылы зерттеушінің магистрлық тезисі бойынша жетекшісімен хабарласуыңызға болады. Rita Kasa, Назарбаев Университетінің доценті, rita.kasa@nu.edu.kz

ДЕРБЕС БАЙЛАНЫС АҚПАРАТТАРЫ: Егер берілген зерттеу жұмысының жүргізілуімен қанағаттанбасаңыз немесе сұрақтарыңыз бен шағымдарыңыз болса, Назарбаев Университеті Жоғары Білім беру мектебінің Зерттеу Комитетімен көрсетілген байланыс құралдары арқылы хабарласуыңызға болады: электрондық поштамен gse_researchcommittee@nu.edu.kz.

Зерттеу жұмысына қатысуға келісіміңізді берсеңіз, берілген формаға қол қоюыңызды сұраймыз.

- Мен берілген формамен мұқият таныстым;
- Маған зерттеу жұмысының мақсаты мен оның процедурасы жайында толық ақпарат берілді;
- Жинақталған ақпарат пен құпия мәліметтерге тек зерттеушінің өзіне қолжетімді және мәлім болатынын толық түсінемін;
- Мен кез келген уақытта ешқандай түсініктемесіз зерттеу жұмысына қатысудан бас тартуыма болатынын түсінемін;
- Мен жоғарыда аталып өткен ақпаратты саналы түрде қабылдап, осы зерттеу жұмысына қатысуға өз келісімімді беремін.

Қолы: _____

Күні: _____

Қол қойылған және күні қойылған келісім пішімінің қосымша көшірмесі сізде сақталады.