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MASTER'S THESIS

Investigating Dyslexia-friendly EFL teaching

- A qualitative study of Norwegian EFL teachers' perceptions and practice in a dyslexia-friendly school

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I confirm that the work is self-prepared and that references/source references to all sources used in the work are provided, cf. Regulation relating to academic studies and examinations at the Western Norway University of Applied Sciences (HVL), § 12-1.

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Preface

My challenge

by a Norwegian junior high school student

*"Do you avoid reading ore writing if you can help it?
Do your reading takes so long that just one page tire you out?
Is your handwriting messy and your spelling poor?
Do you know you are bright, but at school results don't reflect it?
I do!*

*(...) I am suffering from Dyslexia.
That is a reading and writing problem.
It is something you are born whit and it is something you have to
challenge every day.
But you can make the problem get smaller for yourself.*

*(...) For most of the dyslexic it is not only their mother tongue that
is hard for them.
It is often there second language to.
I think my mother tongue is hard enough and that my second
language is nearly impossible.
And some dyslexic has problem wit matt to.*

*(...) Sow if you are still sitting there and shaking your head over
ole the words that is spelt wrong in this paper.
I don't blame you.
But if you are sitting there and shaking your head over how stupid
I am.
Then I have field.
For may challenges today was to chow you that dyslexic people is
not stupid but we just have a challenge tat you don't have."*

Solem (2015, p.95)

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1. Introduction

Understanding and accommodating to students with dyslexia is described as a challenging task in itself due to the complexity and conflicting aspects of the disorder (Nijakowska (2010), p.190). Additionally, Nijakowska (2014) found that English as a Foreign Language (EFL) teachers lacked the necessary skills to accommodate the needs of learners with dyslexia. Furthermore, EFL teachers also perceive their preparedness for accommodating these learners as being poor (Nijakowska, 2019, p.189). The challenge is not surprising, as EFL teachers need to understand what dyslexia is and which methods to use to meet the needs of these students (Johnston, 2019, p.339). For many years, teachers in Norway have flagged a need for competence development in educating students with specific needs (Carlsten et al., 2020, p.19). Knight (2018) found that 71% of teachers surveyed claimed that dyslexia had not been well covered in their teacher training program (p.214). Approximately 50% of Norwegian teachers work in a school where 10% or more students have specific needs (Carlsten et al., 2020, p. 19). In the face of these challenges, several schools have decided to undergo a program to be certified as dyslexia-friendly. The Norwegian advocacy group Dysleksi Norge certifies schools as dyslexia-friendly schools, after meeting a specific set of criteria (see appendix 5). A vital feature of these schools is that they do not accept subpar learning outcomes for students with dyslexia (Solem, 2015, p.3). However, this aim may not come without controversy. Official minutes from a parent-committee (FAU) meeting in one of the participants' school illustrates that: "Teachers believe that students and parents may have unrealistically high expectations to what a certification as dyslexia-friendly means"(*). Indicating that the teachers may have different perceptions about the certification. Currently, 144 Norwegian schools have been certified as dyslexia friendly (Dysleksi Norge, (n.d)). To my knowledge, there are no peer-reviewed studies on the effects of certifying schools as dyslexia-friendly, and no research has solely focused on EFL-teachers' perception of this process. As such this study uniquely contributes to insight into EFL teaching in the context of Norwegian dyslexia-friendly schools.

To understand the need for adaptation, it is important to understand the condition of dyslexia. Learning to read and write a language is a time-consuming and complex task

(Kormos & Smith, 2012). The ability entails the effective translation of written symbols into speech. The process of reading engages several intricate mechanisms in the brain, and the well-balanced interaction between these mechanisms enables a human to read fluently and spell correctly (Snowling, 2000, p.1). Nevertheless, despite the complexity of this process, most children who are given appropriate instruction will, over time, learn to spell and read with relative ease both their first and second language (Snowling, 2000, p.1). While there have been great debates on the definition, researchers agree that "The core of dyslexia is a difficulty in learning to decode and to spell" (Snowling et al., 2020, p.503). Research estimates that dyslexia affects the daily life and learning experiences of a significant part of the population. Broad estimates indicate that 5-10% of students are diagnosed with dyslexia (Siegel, 2006, p.582; Knight, 2018, p.207), which means that there on average are 1-3 students with dyslexia in every classroom. There are significant differences in the display of this disorder, hardly affecting some and paralyzing others (Snowling, 2001, p.4). Research also highlights the difficulties for students with dyslexia in learning a second language (Rice & Brooks, 2004; Siegel, 2006; Kelly & Phillips, 2016; Nijakowska, 2010; Snowling et al., 2020). English is a complex language with 44 sounds but only 26 letters with which to write them (Kessler, 2003). Difficulties arise, due to differences in orthography or spelling (Cain et al., 2000; Rice & Brooks, 2004; Siegel, 2006) and often unfamiliar sound-to-letter correspondences or phonology (Elley, 1992; Kelly & Phillips, 2016; Nijakowska, 2010). The poem on the previous page illustrates this: *"I think my mother tongue is hard enough and that my second language is nearly impossible"* (Solem 2015, p.95).

1.1 Research Questions

This study seeks to contribute to insight into EFL teaching in the context of Norwegian dyslexia-friendly schools. To investigate these aspects, two research questions were created:

- What are EFL teachers' perceptions of the dyslexia-friendly certification?
- How do EFL teachers implement dyslexia-friendly practices in the EFL classroom?

2. Theoretical Considerations

This chapter aims to present an overview of the definition of dyslexia, historical debates around the term, the causes of dyslexia, and the causes and theories. In addition, the theoretical overview includes chapters on dyslexia-friendly schools, dyslexia and EFL, methods of adaptation, and research on digital tools. Finally, the overview includes a subchapter on teacher cognition since this thesis investigates the perceptions of EFL teachers. Each subchapter seeks to understand the complexity of the arguments commonly accepted as facts and topics still connected to significant uncertainty. This chapter will form the foundation for discussions on how dyslexia is perceived and accommodated to, by EFL teachers in Norwegian dyslexia-friendly schools.

2.1 Historical Overview

To understand the development of the theory around reading and spelling difficulties that characterizes dyslexia today, we have to retrace the historical lines of the definition. The debate around dyslexia has been ongoing for centuries, from discussions on "word-blindness" to "dyslexia". The term dyslexia can be used in a vague manner that refers to something as undefined as difficulties with reading and spelling, which we do not understand. Therefore, a historical overview is essential to describe how the condition has been described in early research.

2.1.1 From "Word-blindness" to "Dyslexia"

One of the challenges clinicians face when diagnosing dyslexia is that its definition is contested (Snowling, 2001, p. 10). During the early debates on dyslexia, many educationalists doubted the condition's existence (Elliot and Gibbs, 2008, p. 487). Initially, the state was referred to as "word blindness," first identified by a German Professor of Medicine, Adolph Kussmaul, in 1877. The term 'word blindness' was (incorrectly) believed to be caused by some form of visual deficit (Kussmaul, 1877), meaning a deficit in eyesight or visual abilities. Berlin (1883) argued that the cause of these reading problems was not the result of visual impairments, and he attributed them to damages in the left hemisphere of the brain. Berlin coined the term "Dyslexia." The word has a Greek origin meaning the condition of having

difficulties (dys) and (lexia), meaning words (Kuerten et al., 2019, p.250). Berlin is given the ambiguous honor of '[the man] who named the ship even though he never became her captain' (Wagner, 1973, p. 57). In the 1890s, British physicians such as Pringle Morgan and James Hinshelwood were prominent figures in that field, and their studies align more closely with dyslexia as defined today. Today we know that not to be the cause of dyslexia, but as Hinshelwood (1917, p. 1) writes in his prologue: "[Kussmaul...] must be given the credit of first recognizing the possibility of this inability [to read] being met with as an isolated symptom." Hinshelwood found that "the difficulty in learning to read was due not to any lowering of the visual acuity, but to some congenital deficiency of the visual memory for words" (Hinshelwood, 1900, p. 1507). Pringle Morgan (1896) released a study on word blindness, credited as the start of the scientific discussion on dyslexia. While Morgan was not the first to remark on the observation of children who struggled to make sense of the script, the story he wrote about "Percy F" has been widely quoted:

"PERCY F. – a well grown lad, aged 14 – is the eldest son of intelligent parents, the second child of a family of seven. He has always been a bright and intelligent boy, quick at games, and in no way inferior to others of his age. His great difficulty has been – and is now – his inability to learn to read. This inability is so remarkable, and so pronounced, that I have no doubt it is due to some congenital defect."

(Pringle Morgan, 1896, p. 1378)

Today, sociologist Tom Cambell argues that Morgan's text should be understood as a paradigm shift in the scientific understanding of dyslexia (Cambell, 2013, cited in Kirby et al., 2020, p. 409). This debate is an excellent example of how research on a topic and the definition are not always linked. Even though the specific differences between "word-blindness" and "dyslexia" today are of limited relevance, it is relevant to understand the advances in the understanding of dyslexia. The early pioneers in dyslexia research created a foundation for future researchers. Essential findings from research shifted the focus of dyslexia from a visual disorder to a disorder rooted in how the brain understands linguistics, as Hinshelwood (1900) pointed out.

By the end of the 19th century, there was an increasing awareness of how children develop language and different deviations from the typical development. Several historical events can influence this increased focus on children's ability to read and write. For example, the Industrial Revolution changed society's structure, people moved to the cities, and children began attending compulsory schooling. With a large group of children at school, those who deviated from the norm were quickly noticed. (Helland, 2019, p.61).

The highlighted focus on reading and writing difficulties was linked to researchers' increased focus on the topic. Especially privileged societal groups contacted physicians to understand their children's learning difficulties. In the early stages of systematic research, dyslexia was perceived as a medical problem; therefore, most of the work was created by doctors (Kormos and Smith, 2012, p.34). Learning difficulties became more visible and began to be identified at a much broader scale. Furthermore, increasing pressure is reflected by the increasing importance of literacy to educational and career success (Kirby, 2020). Education was no longer a privilege but a necessity for the masses. In 1937 the American neurologist Dr. Samuel Torrey Orton published his influential work *Reading, writing, and Speech Difficulties in Children*. His observations of dyslexia had a significant impact on the understanding of dyslexia, and one year after his death, the Orton Dyslexia Society was created. Later, this organization was renamed the International Dyslexia Association (IDA) (Kuerten et al., 2019, p.251). Orton observed the difficulty dyslexic readers have with reversible printed symbols such as b/p, p/q, and was/saw. This difficulty sparked interest in the idea that dyslexia results from a problem in visual perception. Although we now know that dyslexia is related to the brain, the work by Orton is seen as influential in the field of dyslexia research (Snowling, 2000, p.34).

2.2 Definition of Dyslexia

The task of understanding and teaching a child with dyslexia can be daunting. Kerr (2001, p.82) argues that the term "dyslexia" appears to induce experienced teachers into a state of "learned helplessness." The main reason for this seems to be a lack of understanding, experience, or knowledge of the disorder. The tendency of teachers to perceive that dyslexia is a complex subject is shown in studies. Kerr's (2001) study provided a wide range of

opinions and attitudes, revealing that many teachers were confused about dyslexia, what it indicates, what causes it, and what to do about it, or even if it exists. This subchapter seeks to ensure the reader's understanding by providing an overview of the term "dyslexia" and building a shared understanding.

As mentioned earlier, "the core of dyslexia is a difficulty in learning to decode and to spell" (Snowling et al., 2020, p.503). In other words, the primary symptom of dyslexia is difficulties with reading words rapidly and correctly (Høien and Lundberg, 2012, p.48). Even though individuals with dyslexia can read words accurately, decoding is often tricky and time-consuming. Learning to decode and spell involves different strategies used simultaneously (Høien and Lundberg, 2012, p.50). This characteristic has been observed in literature for centuries (e.g., Kussmaul, 1877). Ever since Rudolf Berlin coined the term "dyslexia" in 1883, there have been numerous debates around the definition of dyslexia. This chapter explains the past definitions and decides on a working definition for this thesis.

The first definition that dominated the international field of education in the 1990s was based on students' expected ability to read and write concerning their IQ (Kormos and Smith, 2012, p.36). This was measured using IQ tests. During the 1960s, the notion was that people diagnosed with dyslexia pertained to a particular group regarded as having good intellectual abilities. This idea is presented in the definition provided by the World Federation of Neurology (WFN), which in 1968 defined dyslexia as such: "Dyslexia is a *disorder* manifested by a difficulty in learning to read, *despite conventional instruction, adequate intelligence, and sociocultural opportunity*. O'hare (2010) explains sociocultural opportunity as incorporating factors such as "lack of parents'/carers' reading to the child, anxiety which can interfere with a concentration in school, motivation, and application to read which is compounded by a disinterest in the child's achievements from the parents or low expectations from the teacher." (p.339). Sociocultural opportunity is not important in the sense that a lack of sociocultural opportunity does not cause dyslexia. This is argued by researchers that find that dyslexia "is dependent upon fundamental cognitive disabilities which are frequently of constitutional origin" (Critchley, 1970, cited in Catts, 1989, p.51). (World Federation of Neurology, 1968). The constitutional origin refers to the substantial evidence of the link between dyslexia and its heritability and links concerning the cognitive abilities of individuals

with dyslexia (Lyon, 1995, p.13). This definition by WFN was prevalent during the 60s but has been subject to criticism in modern times (Helland, 2019, p. 96). Firstly, this definition implies that if all other familiar reasons for difficulties with reading are excluded, one could conclude with a diagnosis of dyslexia. Secondly, the definition is claimed to be "exclusionary" to students without sociocultural opportunity or with a low IQ.

The WFN definition uses a discrepancy between the expected and actual outcomes, such as a discrepancy between IQ and reading ability. An example of the practical implication of such a definition is highlighted when measuring IQ using a Wechsler Test. The test was developed by American psychologist David Wechsler (1896-1981) and is a standardized IQ test. The test would categorize children into groups, where children under the IQ score of 85 would be put in the undefined area of general learning difficulties, even if the evidence would point to the problem of being isolated to reading and writing. On the other hand, children with similar traits but IQs over 85 would be diagnosed with dyslexia (Helland, 2019, p.97). One of the early critics of the discrepancy definition was Stanovich (1991), who argued two significant faults.

Firstly, children who are good at reading have a more significant opportunity to learn new information than children who struggle to read, making them unable to keep up with their peers (Snowling et al. 2020, p.502). This critique connects to a well-known phenomenon known as "The Matthew effect," namely that "the rich tend to get richer and the poor get poorer." (Perc, 2014, p.1). Children with dyslexia tend to read far less outside of school than their peers, whereas those who tend to read more acquire more new information, thereby increasing their reading ability (Cunningham and Stanovich, 2001, p.137). Secondly, research conducted by Stanovich and Siegel (1994) showed that pupils who struggle with reading experienced the same core phonological difficulties, regardless of differences in IQ. The discrepancy definition would entail using the diagnosis of "dyslexia" for all cases of poor reading, failing to capture the fact that it is early onset and persists over time. In other words, when using intelligence as a benchmark for defining dyslexia, it is difficult to differentiate the cognitive profiles of people with dyslexia from those of poor readers without dyslexia (Stanovich, 1991, p.269). In addition, research reveals that dyslexia is developed in childhood and is a lifelong condition (Snowling et al., 2020, p.502). The current

approach to identifying dyslexia is not defined against some reference IQ but rather an investigation across several factors (Vellutino et al., 2004, p.27-28).

After the discrepancy-based definition was discredited, the main question was how it was possible to identify dyslexia without a reference to general intellectual abilities (Kormos and Smith, 2012, p.36). Dyslexia is referred to as a specific learning disorder. The use of "specific" points to dyslexia as a problem with reading and spelling that is unexpected given the individual's IQ and age, therefore requiring a diagnosis, an explanation, and a specialist intervention (Snowling et al., 2020, p.502). Helland (2019) emphasizes that the term "specific learning disorder" is used in modern science to differentiate between children with specific or unexpected problems with language and other disorders such as autism, delayed development, reduced hearing, or mental disability. The difficulty with language is not due to an overall intellectual impairment; dyslexia is characterized by persistent and long-lasting difficulty in reading regardless of academic ability (Helland, 2019, p.63). Difficulties with language are a symptom of a disorder, and the degree of their problems is dependent on how the condition manifests itself (Helland, 2019, s.65). In other words, by using the term "Specific learning disorder," the research highlights how dyslexia is an unexpected problem in an otherwise physically and mentally capable individual.

2.3 Levels of Description

To gain a deeper understanding of the term dyslexia. It is relevant to understand Morton and Frith's (1995) three-level framework. This model is used to better understand the learning disorder by distinguishing the different levels of existing explanations of dyslexia (Kuerten, Mota, and Segart, 2019, p.253). Dyslexia is difficult to define because there are four levels that need to be considered: behavioral, cognitive, biological, and environmental (Firth, 1999, p.139). The debates around the definition of dyslexia motivated the developmental psychologists' John Morton and Uta Frith to create a more neutral framework to compare different theories (see figure 1).

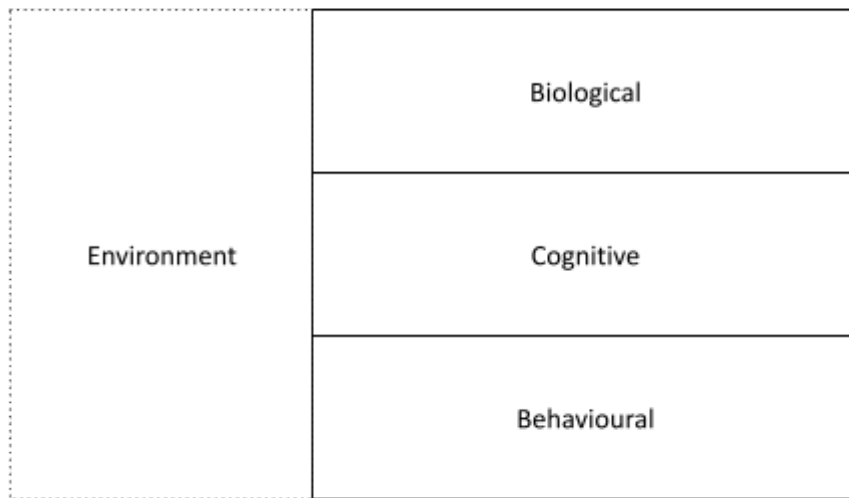


Figure 1: The Three-Level Framework by Morton and Frith (From: Frith, 1995, p.193)

The framework incorporates three levels of explanations: biological, behavioral, and cognitive levels. In addition, environmental factors are included as these may impact the other levels (Frith, 1999, p.193). Frith (1999) provides an example of how the model can be used. The researcher uses the causal model to differentiate between "true" and "false" dyslexia. An example case can be an individual struggling with reading and writing. An individual with "true" dyslexia would inhabit a cognitive deficit, whereas the individual with "false" dyslexia would not inhabit a cognitive deficit. The author explains that the person with "false" dyslexia struggles with reading and writing due to social-emotional problems of environmental origin, which environmental changes could remedy. On the other hand, an individual with "true" dyslexia would need an intervention adapted to their cognitive profile (Frith, 1999, p.197).

Today, one of the most influential definitions of dyslexia is that of the International Dyslexia Association (IDA) (Kormos & Smith, 2012, p.37) which provides an explanation to the four levels in Morton and Frith's (1995) framework:

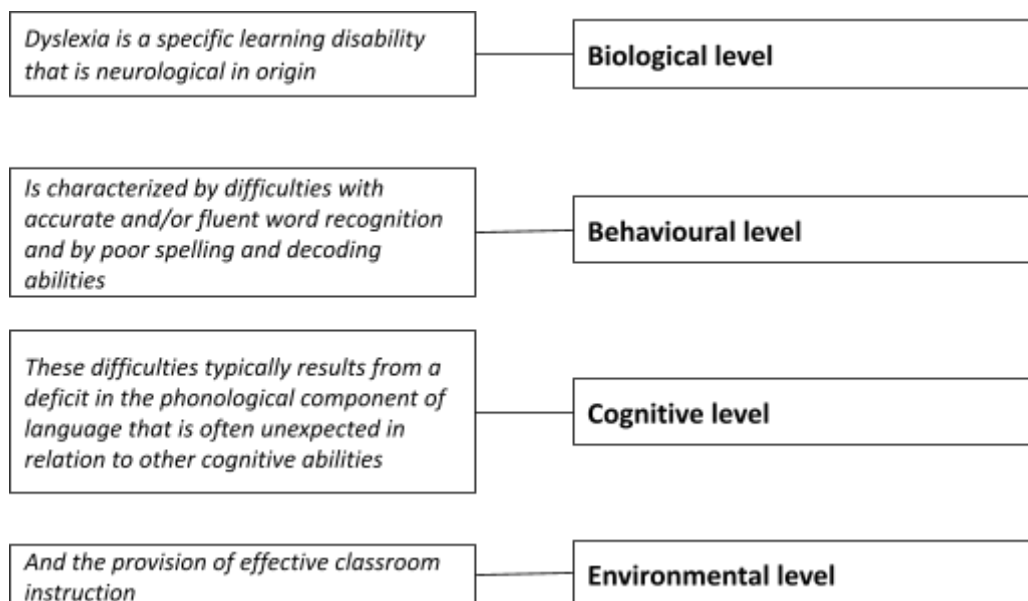


Figure 2 : Levels of description in the definition by the IDA (by author: cited in Kormos & Smith, 2012, p.37)

The current study will use this definition to explain further the different levels of description of dyslexia provided by the IDA.

2.3.1 Biological Level

Reading difficulties are hereditary, which has been known for many years (Snowling, 2000, p.138). This tendency has been observed in research since Orton (1937). Epidemiologist studies found that 40-60% of the individuals with dyslexia in their sample group had a history of dyslexia in their family (Rejnö-Habte Selasse, Jennische, Kyllerman, Viggedal & Hartelius, 2005, cited in Helland, 2019, p.145). Researchers have been searching for the "dyslexia gene" for several years, and previous studies have found that the biological disposition for dyslexia links to the 6th and 15th chromosomes. In humans, each cell typically contains 23 pairs of chromosomes, and this is similar between genders, except for the 23rd chromosome, which differs. As of today, there is no consensus on a "dyslexic gene". (Fagerheim et al., 1999 cited in Helland, 2019, p.143). Researchers today generally acknowledge that dyslexia has a neurobiological origin, meaning a structural and functional difference in the nervous system originating from the brain (Lyon et al., 2003, p. 3). The development of Functional Magnetic

Resonance Imaging (fMRI) scanners, which can scan the brain, provided evidence for the theory of differences in brain development showing "a failure of the left hemisphere posterior brain systems to function properly during reading" (Lyon, Shaywitz, S., Shaywitz, B., 2003, p. 3).

Dyslexia is not an attribute with a specific organic basis, and there is great variety in its manifestation (Helland, 2019, p.144). Researchers have found a strong case for the hereditary nature of dyslexia through twin studies. There are two types of twins: identical twins (monozygotic: MZ) and fraternal twins (dizygotic: DZ). MZ twins share 100% of their genes, while DZ twins share 50%. The findings show a higher probability of both twins being dyslexic if they are MZ, which implies that genetic factors are involved (Snowling, 2000, p.139). Recent studies estimate the concordance of MZ twins with dyslexia to be around 70% (Grigorenko, 2004; Scerri & Schulte-Körne, 2010; Christopher et al., 2013; Bishop, 2015, cited in Protopapas, 2019, p.4). For years, the belief was that males develop dyslexia at a ratio of 3:1 to females (Helland, 2019, p.145). Typically, males are diagnosed with dyslexia more frequently than females (Arnett et al, 2017, p. 719). However, some researchers point to referral bias as an explanation for the sex difference; in other words, males with dyslexia might typically attract a teacher's attention. Therefore, teachers will refer these students to clinicians (Helland, 2019, p.146). Researchers also agree that dyslexia often co-occurs with other developmental disorders, such as attention deficit disorder (ADHD) (Snowling, 2012, p.e3). Moreover, researchers now understand that dyslexia relates to a phonological deficit which will be explained further in chapter 2.3.3.

2.3.2 Behavioral Level

This level describes the observable characteristics of dyslexia. Kelly and Phillips (2016) state that dyslexia exists on a continuum and that several factors determine the different visual characteristics of dyslexia. Nevertheless, features such as difficulty in following instructions, confusion of letters (e.g., b/p, p/q, u/n), hesitancy in reading aloud, and transposition of words (e.g., saw for was or beard for bread) are common (Kelly and Phillips, 2016, p.22). When testing a learner's competence in English, one might want to use a combination of oral and written tests. However, dyslexic learners will often display an "uneven profile." For example, they often perform better at listening and speaking tests than in reading, spelling,

and writing (Kelly and Phillips, 2016, p.100). Helland (2019) emphasizes the importance of acceptance and encouragement for students with dyslexia. In the case of EFL, the teacher should emphasize the student's oral skills while focusing on structure and vocabulary in their written texts (p.298). Høien and Lundberg (2012) argue for the importance of emphasizing the abilities of dyslexic students. The authors also describe their unique ability to think outside the box. An example is that dyslexia is associated with remarkable artistic creativity, and dyslexic students are overrepresented in art schools (Wolff and Lundberg, 2002, p.34). Another fascinating finding comes from Logan (2009, p.328), who found a significantly higher incidence of dyslexia in entrepreneurs than in corporate management or the general population.

2.3.3 Cognitive Level

Nijakowska (2010) states that "the phonological deficit theory has become the most powerful theoretical framework for dyslexia" (p.51). Approximately 50 years ago, Liberman et al (1971) had a breakthrough in understanding dyslexia. Researchers previously assumed that dyslexia was related to visual difficulties, shown by defining it as "word-blindness." Libermann et al. (1971) recognized that speech and language form the basis of reading, meaning that children must be able to "map the written word onto the spoken word when learning to read" (Liberman et al., 1971, cited in Siegel, 2006, p.581). Today we know that people with dyslexia have problems with phonological processing, meaning, the ability to "segment words into their component sounds, and associate letters with their sounds and phonological awareness" (Siegel, 2006, p.581).

According to the phonological deficit theory, people with dyslexia have an impaired ability to detect speech sounds and process them. This theory is a cognitive theory, meaning that researchers assume that there is a biological explanation for the impairment (Rice and Brooks, 2004, p.50). Phonological processing refers to the ability to use speech without reflecting on the structure of the word. Researchers can use tasks to study phonological processing. Examples of these tasks are repeating words or non-words and distinguishing between them. Children with dyslexia will repeatedly find these tasks difficult (Nijakowska, 2010, p.43). Cain et al. (2000) explored this deficit through the *Odd-word-out task*, presenting four actual words, three of which shared a similar sound, e.g.,

plank-spank-tank-brank (odd word underlined) (p.35). According to the phonological deficit theory, the children with this deficit would perform worse on these tasks due to the challenge of differentiating the phonological sounds. The phonological deficit theory usually comprises three main elements: phonemic awareness, slow lexical retrieval, and poor short-term memory (STM) (Nijakowska, 2010, p.47). A phoneme is the smallest functional unit of a given language, and phonemic awareness is related to identifying and manipulating individual phonemes (Nijakowska, 2010, p.44). Phonemes allow us to identify unique sounds, e.g., the /p/ in "pin" and the /b/ in "bin" are perceived as different phonemes. Dyslexic people struggle with this differentiation due to problems with their phonemic awareness. (Nijakowska, 2010, p.44).

The English orthography can create difficulties for dyslexic individuals, and it is primarily due to being less consistent in its grapheme-phoneme correspondence, thereby creating a highly irregular orthography concerning other languages such as Spanish, Italian (Kelly and Phillips, 2016, p.21) or Finnish (Elley, 1992). The Norwegian orthography is semi-transparent (Helland and Kaasa, 2004, p.43). Elley (1992) created a continuum from 1-5, where Finnish was categorized as 5 (highly regular orthography), Norwegian scored 3 (together with German, Dutch, Swedish, Icelandic, and Greek), and English scored 5, meaning a highly irregular orthography (p.41).

2.3.4 Environmental Level

The Morton and Frith (1995) model emphasizes a relationship between the different levels and that all levels are affected by the environmental level (Kelly and Phillips, 2016, p.23). The biological level is affected by multiple factors, e.g., in the prenatal environment, and the cognitive and behavioral levels are affected through factors such as schooling, teachers, and parents. These environmental factors play a relevant role in the learners' motivation and how they learn strategies for compensating (Kelly and Phillips, 2016, p.24).

Some studies indicate that some people with dyslexia have difficulties succeeding in society. For example, a survey conducted in Norwegian prisons found that a large percentage of the incarcerated self-reported as having dyslexia (Jones et al., 2017, p.344). Moreover, a Swedish study that researched forensic psychiatric patients found that dyslexia or impaired

phonological abilities were predictors of anger and possibly future violence. Notably, the authors clarify that "dyslexia does not cause criminal behavior, but it may worsen aggressive behavior tendencies" (Selenius et al., 2006, p.201). These findings might show that people with dyslexia might be more vulnerable in the education sector and society. Helland (2019, p.158) stresses that many people with dyslexia find great success in education and societal life.

2.4 Dyslexia-friendly Schools

Available support for students with dyslexia may vary significantly between schools and even municipalities in Norway. While many teachers may be very competent, there is significant variation concerning teacher knowledge and awareness of dyslexia (Solem, 2015, p.8). As a result, Dysleksi Norge claims to have taken leadership of the current situation by creating dyslexia-friendly schools. As of May 2022, 145 Norwegian Schools are certified, and the price of the certification process is 20 000,- NOK (see appendix 5). Dysleksi Norge is a Norwegian advocacy group for everyone with reading- and writing difficulties, difficulties with math (dyscalculia), and difficulties with language (Solem, 2015, p.18). The dyslexia-friendly school project started in 2005, and the project offers an online course for teachers, courses, and collaboration with specialists (Solem, 2015, p.15). The information regarding dyslexia-friendly schools in Norway and Dysleksi Norge is primarily collected from the book by Solem (2015), who is the secretary-general of Dysleksi Norge. In addition, the Norwegian Directorate for Education and Training supported the production of the book. The certification is conducted by the organization Dysleksi Norge, inspired by the British Dyslexia Association (BDA). The BDA has been working on developing dyslexia-friendly schools since 1997 (Solem, 2015, p.16). If a student cannot attain specific skills, dyslexia-friendly schools maintain the attitude that the school needs to change rather than the student (Solem, 2015, p.16).

Dyslexia-friendly schools work within an ethos. According to Pavey (2007), the overall ethos is that the responsibility for helping dyslexic children is increasingly that of classroom practitioners (p.88). A vital feature of these schools is that they do not accept substandard learning outcomes for students with dyslexia (Solem, 2015, p.78). While the concept of dyslexia-friendly schools exists in other countries, this thesis focuses on the Norwegian

interpretation, as developed by Dysleksi Norge. When a school wishes to be certified as "dyslexia-friendly," the school needs to contact Dysleksi Norge. The organization will travel to the schools, hold courses for staff, and advise school administration. In addition, several schools will send their teachers on the online courses created by Dysleksi Norge (Solem, p.116). There is a 10-point criteria list that states all the criteria for becoming a dyslexia friendly school (see appendix 5). The maintenance or follow-up process is described through several factors. First, the certified schools are engaged in a "network," meaning the schools "use" each other through sharing experiences and maintaining frequent contact. Second, Dysleksi Norge has an annual gathering, where experiences are exchanged and feedback is given on areas that need higher competence. In addition, several schools in the program have been on study trips to other Dyslexia friendly schools. Third, Dysleksi Norge maintains regular contact with the schools, and the schools are required to submit a report every other year (Solem, 2015, p.117). Finally, Dysleksi Norge maintains the right to withdraw the certification if the schools no longer satisfy the criteria for dyslexia-friendly schools (see appendix 5).

2.5 Dyslexia and English as a Foreign Language

Despite the significant difficulties dyslexia can cause in EFL learning, relatively few studies on the connection between dyslexia and EFL learning. To my knowledge, most of the research on dyslexia concerns the field of special education and neurology. Nevertheless, EFL teachers in Norway are required by the Education Act (1998 §1-3) to be able to adapt their teaching to the abilities and aptitudes of each student. This will be discussed further in chapter 2.8; in this chapter, the focus is on relevant literature.

Knight (2018) conducted a large-scale study with 2600 teachers from England and Wales. The survey showed that most teachers were able to describe the symptoms of dyslexia, and a smaller number of teachers were also able to describe the cognitive and biological descriptions. Many teachers claimed that dyslexia was not covered well, or not at all, in their teacher training program. Some teachers had undergone additional training, which made them feel more confident when working with students with dyslexia (p.207-218). Ahmad et

al., (2018) identify some challenges English second language (ESL) teachers face in mainstream classrooms. Challenges identified are "big class size, limited special training related to dyslexia, difficulties in managing emotion, behavior, and motivation of pupils with dyslexia" (p.2176). Findings from the study suggest that ESL teachers generally find it hard to cater to the needs of students with dyslexia.

Kormos and Nijakowska (2017) investigated whether language teachers' self-confidence, self-efficacy, and attitudes toward including dyslexic students would differ before and after participating in a massive open online course (MOOC). After attending the course, "participants' attitudes and self-efficacy beliefs were firmer, and their concerns about implementing inclusive language teaching practices decreased" (p.37). A similar study by Nijakowska (2014) collected information concerning EFL pre-and in-service teachers' perceptions of their knowledge of dyslexia and their experience with dyslexic learners and aimed at identifying needs for training. Findings from the study confirm the demand for courses and materials on EFL and dyslexia to be incorporated into teacher training (p.148). In addition, previous teacher knowledge studies revealed limited knowledge of basic language concepts such as phonological awareness, phonemic awareness, phonics, and morphology which could be attributed to teacher training (Joshi et al., 2009; Goldfus, 2012, cited in Nijakowska, 2014, p.130).

There were some Nordic studies I found relevant to my thesis. One such was Szaszkievicz's (2013) master thesis which studied the experiences of Norwegian dyslexic students learning EFL. Each participant in the study found English as the most or second most challenging subject in school (Szaszkievicz, 2013, p.43). Participants reported difficulties with part of the subject, such as reading, writing, visual perception, and emotional responses. More relevant to this study, participants did not feel that teachers took their needs into account in their pedagogical decisions. Instead, they thought that the teachers' lacked an understanding of their challenges and were unwilling to help them appropriately. Furthermore, they felt that lessons and homework were designed in a way that left little chance of succeeding. In addition, they thought that the teacher did not appreciate how much effort they put into their work and gave too little praise and too much critique (Szaszkievicz, 2013, p.43-66). While the results from this study paint a dark picture of the relationship between dyslexic

pupils and teachers, it is relevant to note that the sample size was small, and the study is non-peer-reviewed. Nevertheless, findings from this study highlight the importance of teachers in the experience of dyslexic students learning EFL.

Another master thesis by Stagelund (2016) investigated whether Norwegian dyslexia-friendly schools positively affected dyslexic students learning EFL. This tested dyslexic students' performances in dyslexia-friendly and non-dyslexia-friendly schools using a test developed by Helland and Kaasa (2005) named *English 2 Dyslexia test*. The researcher compared the results to Helland and Kaasa's (2005) results. The results indicated that dyslexia-friendly schools positively impacted dyslexic students' oral and literacy skills. The author claims that the results are likely due to the schools becoming dyslexia-friendly and strategies implemented by teachers in these schools, such as multisensory learning and metacognition (Stagelund, 2016, p.81). A limitation of the study is that the researcher recruited eight dyslexic students and compared them to the 20 from Helland and Kaasa (2005). In addition, the time gap between the two studies is significant.

Researchers such as Humphrey (2002) found that children with dyslexia generally have lower self-esteem than their peers (p.4). Dyslexic children would describe "their least favorite features," which tended to be related to dyslexia (e.g., I cannot read fast) (Humphrey, 2002, p.4-5). Tsovoli (2004, p.82) argues that experiences of reading difficulty cause anxiety in children. In addition, teachers who expressed high or conflicting expectations toward the students without support created anxiety. Furthermore, a study conducted by Nelson and Liebel (2018) found higher occurrences of depression amongst students with dyslexia than with students without dyslexia (p.44).

A factor to keep in mind when analyzing the results of studies on dyslexia-friendly schools is a phenomenon widely cited in psychology, known as "the Hawthorne effect" (e.g., Cook, 1962; Amos, 2007). This effect is the idea that people modify their behaviors when being observed. Høien and Lunberg (2012) point to the Hawthorne effect as one problem when researching the impact of pedagogical measures introduced. Teachers tend to react enthusiastically to something new in the school. Meaning that the students of focus receive extra attention and consideration, therefore creating a result due to new attitudes on the

part of the teachers rather than the student's performance (p.244). In the case of dyslexia-friendly schools, EFL teachers and others may focus on the students with dyslexia and their development in the subject. This is not necessarily bad, although it could lead to teachers' false belief that dyslexic students have improved. This tendency was noted in a project conducted by Høien and Lundberg (2012). The authors noticed a significant and unexpected improvement in the dyslexic students' grades in reading shortly after the project, even though they had just undergone a couple of tests. They assume that the results are due to a change reported in parents' and teachers' attitudes regarding dyslexic learners (p.245). Teachers and parents from dyslexia-friendly schools might show the same tendencies as the school creates more awareness around the condition of dyslexia.

2.6 Methods for Adapting the Education for Learners with Dyslexia in EFL

In Norway, organizational differentiation was introduced along with the new law for nine-year compulsory schooling in 1959. Students would choose their curricula according to their perceived level (Mikaelsen and Sørheim, 2012, p.192). This policy was abandoned in the 1970s when the Ministry of Education stated that subjects should be taught similarly to all students but with pedagogical differentiation. This policy has been the standard for the different curricula since (Popkewitz and Lindblad, 2000, cited in Mikaelsen and Sørheim, 2012, p.192).

Today, the Education Act (opplæringslova, 1998, § 1-3) states that "Education must be adapted to the abilities and aptitudes of the individual pupil." Adapted education is therefore central to the educators' practice in Norwegian schools. "Adapted education" (AE) was born in the political context of Norway. As many terms in education are created in the political sphere, the challenge for educators and researchers is to understand the practical implications (Bachmann & Haug, 2006, p.8). The purpose of AE is to ensure that the learners receive an education that is compatible with the learner's ability and potential. However, the difficult questions are when and how one can adapt the teaching to yield the best results for the class as a whole (Bachmann & Haug, 2006, p.8). Repstad and Tallaksen (2006) state that

the teacher can contribute to AE by consciously working with methods concerning the student's abilities and the subject's content (Repstad & Tallaksen, 2006, as cited in Mikaelson & Sørheim, 2012, p.193). When teaching students with dyslexia, materials and tasks should be individualized and tailored to the student's needs (Nijakowska, 2010, p.195). Teachers have different opinions and attitudes towards the concept of AE and what it means for them and their practice. Therefore, it is essential to investigate some teaching methods for dyslexic students proposed in the research.

According to Nijakowska (2010), a teacher's teaching methods could theoretically be based on well-informed research findings. However, researchers observe teachers' reluctance to implement research-validated teaching methods (e.g., Phillips et al., 2008; Ritchey & Goeke, 2006, cited in Nijakowska, 2010, p.115). Over a century ago, American philosopher and educational reformer John Dewey (1904) discussed his observations of the gap between research and practice in education (cited in Korthagen, 2008, p.303). Even though this tendency was observed early, approaches to bridge the research-practice gap have not led to a straightforward and successful method for bridging this gap. Furthermore, the gap seems to have increased rather than diminished during the second part of the 20th century (Korthagen, 2008, p.304). The transformation process in education is complex and contains several steps, such as national policy, curriculum design, and classroom practice. Concerning dyslexia research, one can be confused by many conflicting outcomes, competing theories, and different alternative treatments. Therefore, Nijakowska (2010, p.115) agrees that teachers can justify some reluctance. Another contributing factor that is important to note is the availability of research articles. Pre-service teachers can read and find extensive literature through access provided by educational institutions; on the other hand, in-service teachers lose this access after graduating (Brøyn, 2015, p.22). As such, teachers would have to pay for access to some research articles.

2.6.1 Multisensory Structured Learning

Often, teachers instruct through only sight and sound. Although, research finds that students with dyslexia benefit from experiencing multiple sensations simultaneously (Mills, 2018, p.39). The multisensory structured learning (MSL) style has been arguably the most effective

method for accommodating dyslexic learners (Nijakowska, 2010, p.124; Høien & Lundberg, 2012, p.252; Johnston, 2019, p.340). The fundamental component of MSL is "the simultaneous activation of the auditory, tactile, visual and kinesthetic pathways" (Nijakowska, 2010, p.125), meaning the use of several senses simultaneously. The kinesthetic pathway refers to the body's movement, and the tactile pathway refers to the sense of feeling, e.g., tracing a letter with the fingertip. (Høien & Lundberg, 2012, p.252). This method builds on Orton's (1937) theories. The premise is that this method can compensate for the dyslexic individual's weaknesses with the auditory and visual modalities by integrating other modalities to strengthen different pathways to learning (Høien & Lundberg, 2012, p.252-253). According to the IDA (2018), MSL "emphasizes the structure of language across the speech sound system (phonology), the writing system (orthography), the structure of sentences (syntax), the meaningful parts of words (morphology), the relationships among words (semantics), and the organization of spoken and written discourse" (p.4).

As stated in chapter 2.5, students with dyslexia primarily struggle with a phonological deficit. Due to this deficit, researchers argue that a multisensory approach is needed to mediate the dyslexic student's problem with phonology (Johnston, 2019, p.341; Schlesinger & Gray, 2017, p.220; Ritchey & Goeke, 2006, p.171). Therefore, it is essential to teach the students the connection between pronunciation and spelling. Nijakowska (2010) supports this view and argues that a multisensory approach emphasizing phonology is the most effective training in the EFL classroom (p.153). This approach should aid individuals in identifying different sounds and manipulating them. Even as students with dyslexia benefit from individualized approaches, a multisensory approach can be used by teachers to meet the needs of all students (Mills, 2018, p.38).

2.7 The Digitalized Classroom

Today's readers, including those with dyslexia, have access to many different information sources through the internet, such as text, animations, pictures, and videos. Much research has been focused on the challenges of teaching children with dyslexia how to read in early grades (Elliot et al, 2007). One reason for this could be that reading and writing deal with the core of dyslexia: the ability to decode and spell (Snowling et al. 2020, p.503). For EFL

teachers in grades 5 to 10, research on the pedagogical use of digital tools is interesting. As schools become increasingly more digitalized, questions of the possible advantages and disadvantages students with dyslexia face with this reality arise. Issues that students with dyslexia in grades 5 to 10 might deal more with comprehension than teaching the technical sides of reading and writing. Although digital tools have been in several schools for decades, recent reviews in the area claim that few scientifically rigorous studies have investigated the benefits of this technology (Perellmutter et al., 2017; Svensson et al., 2021). On this topic, it seems that the research is lagging behind the widespread use of digital tools in school. This has implications for which degree teachers can rely on scientifically rigorous studies in their practice.

This thesis uses the term digital tools as an umbrella term for technological equipment (PC, internet, tablets, ect.) and software (grammar correction, text to speech, speech to text, ect.). Digital tools provide the students with dyslexia with several opportunities to utilize multimodality. Teachers may assume that combining different modes such as audio, visual, and text is beneficial for learners who have difficulties with reading. However, Aanmarkrud et al. (2018) found that combining different sources of information is not necessarily beneficial because of impairments in working memory. A similar study by Knoop-Van Campen et al., (2020, p.149) found that adding audio to text may cause redundancy effects. The redundancy principle of multimedia learning was developed by Mayer (2001) and is based on research suggesting that "people learn better from a computer-based multimedia lesson that contains graphics and narration rather than graphics, narration, and on-screen text." (Mayer, 2017, p. 409). In a sense, the different sources are competing for the working memory. This is based on the limited capacity principle (Mayer, 2001 cited in Fletcher and Tobias, 2005, p. 120) which states that humans are limited in the amount of information that can be processed in different channels at one time (e.g. visual and auditory channels) (Fletcher and Tobias, 2005, p.120-121). Students with dyslexia have an impairment in working memory (Smith-Spark and Fisk, 2005, p.34), as such, when they are presented with different modes at the same time, their working memory may be stressed and the learners can struggle with overload (Mayer, 2017, p.409).

This thesis is researching the classroom practices of Norwegian, and therefore it is helpful to detail the study by Andresen et. al (2018) which was conducted in the Norwegian context.

The aim was to investigate potential differences between students with and without dyslexia in an multimedia media environment and how the students integrated information across different sources of information. The sample consisted of 22 Norwegian 10th graders with dyslexia and 22 without the condition. They performed a test using different media to convey meaning on a computer, including text, pictures, and videos. The participants were given a researcher-generated website on "the relationship between sun exposure, health, and illness." The students created and performed a presentation based on the website. In other words, the study highlighted the differences between students with dyslexia and students without absorbed and integrated information from different sources in a brief presentation and a multiple-choice test. There are several exciting findings from the study.

Beforehand, the researchers hypothesized that the students with dyslexia would primarily use videos and pictures rather than text on comprehension tests. As one would expect, the students with dyslexia did watch the video and look at the pictures to form an understanding of the topic. However, even though the students with dyslexia viewed the videos and pictures when answering questions, they were more likely to "draw on textual sources when constructing their oral responses" (p.1165) than the control group, even though the students with dyslexia would read much slower. This was found by using the Tobii X2-60 eye-tracker (p.1164). A possible explanation for this could be that the students are more familiar with reading text to find the answer to a question. Secondly, while the students with dyslexia would use the different sources of information, they struggled at "constructing a coherent mental model of multimedia learning materials" (p.1168). This means that the students with dyslexia had difficulties taking all the different sources and creating a coherent story.

The surprising findings found that this is due to poor word-recognition skills because of dyslexia's limited working memory capacity (p.1168). It is well documented in research that people with dyslexia have an impairment in working memory (Smith-Spark and Fisk, 2005, p.34). The point of difficulty for the students with dyslexia was, in this case, to integrate the information from the different sources. These unique findings indicate that teachers should be aware that students with dyslexia may have difficulties if lessons are created around the students using multimedia. Multimedia learning can place a high demand on their limited

working memory. Although research can identify unique possibilities with multimedia, researchers also find that it can challenge students' working memory with dyslexia.

Sintef, commissioned by The Ministry of Education and Research, has reported on the state of digitalization in the Norwegian school since 2013 (Monitor) (Fjørtoft, Thun & Buvik, 2019, p.11). Several findings could be relevant for the discussion. First, teachers were asked to evaluate which methods impacted their digital skills development. The report finds that teachers develop through "trial and error" (83,1%) followed by "self-study" (64,7%) and "peer guidance" (58,3%). Methods such as "internal courses," "external courses," and "further education" have a smaller impact, which could likely be influenced by teachers' ability to attend courses or undergo further education. These findings align with previous reports from 2013 and 2016 (Fjørtoft et al., 2019, p. 82). While "trial and error" and "self-study" could be impactful for how teachers develop their digital competencies, however, for schools and teachers who seek to create effective science-based measures, "trial and error" and "self-study" will not be impactful enough. This is also acknowledged politically as the Norwegian government has created a national strategy, which among others, acknowledges the need for formal education on digital tools (Ministry of Education and Research, 2020, p.16). In addition, this need is also acknowledged by school leaders. The 2019 Monitor rapport found a 16% (40,7% to 65,2%) increase since 2016 in school leaders who reported that the school has a systematic plan for digital competence development (Fjørtoft et. al., 2019, p.50). The use of digital tools in schools may be helpful for students with dyslexia. Researchers find that digital tools have the potential to mitigate challenges with reading, writing and spelling for students with dyslexia (Dawson et al., 2018, p.228). Even as the tools have a vast potential, researchers have found some issues that can arise. In a meta-study, Perelmutter et al., (2018, p.24) reports issues such as difficulties with the technical aspects of the tools and a lack of training for students with dyslexia and educators. In addition, the authors conclude that there is a need for more research on frequency of use, methods and satisfaction.

2.8 Teacher Cognition

This study investigates teachers' perceptions and beliefs about dyslexia-friendly teaching and their thoughts about their practice. Therefore, teacher cognition is a critical aspect of the thesis. According to Borg (2003), the term refers to "the unobservable cognitive dimension of teaching – what teachers know, believe, and think." (p.81). The relationship between thinking and action is central to studying teacher cognition (Borg, 2019, p.1150). Teaching has a solid behavioral element, e.g., what we can see is what the teacher is doing. However, the teachers' knowledge, beliefs, and thoughts underpin these behaviors. For example, teacher cognition research argues that to understand teachers, one should research the psychological processes in which teachers make sense of their job (Borg, 2008, p.7-8). The work of Simon Borg is central to research on teacher cognition; Borg (2003) proposes a model (Figure 3) that includes different factors of teacher cognition and how they relate to each other.

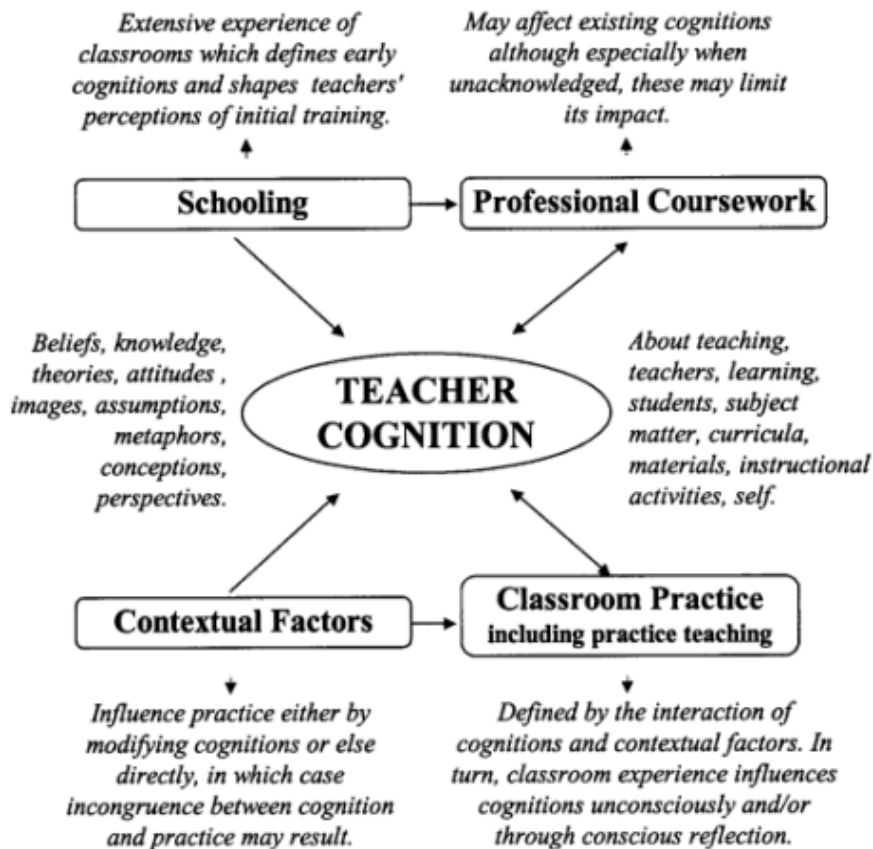


Figure 3: Simon Borg's model of teacher cognition (From: Borg, 2003, p. 82).

This model shows that teacher cognition is complex and may be influenced by schooling, professional coursework, classroom practice, and contextual factors (Borg, 2003, p.82). The teacher's prior experience of education can impact their experiences of professional coursework, which can, in turn, influence their cognition. Lortie (1975) refers to this as the "apprenticeship of observation" (cited in Borg, 2015, p.35). This refers to the observation that prior schooling impacts beliefs about teaching and how these beliefs become resistant to change during teacher education (Borg, 2015, p.35). An example of this could be the teacher's positive or negative experiences with learning strategies, which can influence how they use or do not use them in the classroom. Richardson (1996, p. 113) argues that previous incidents and schooling experiences can be more potent than their teacher education. The author explains that teacher education "is sandwiched between two powerful forces: previous life history, particularly that related to being a student, and classroom experience as a student-teacher and teacher".

Furthermore, several contextual factors affect the teachers' classroom practice. These factors can be expectations from school administration, students, and parents of students. In addition, practical factors can, for example, be the classroom itself or the availability of books and computers. According to Borg (2015), there are two ways contextual factors may interact with teacher cognition, either the teachers change their cognition, or the teacher changes their practice without changing the underlying cognition (p.324). For example, when a school becomes certified as dyslexia-friendly, the requirements and expectations of being a dyslexia-friendly EFL teacher can be seen as a new contextual factor introduced. Researchers often find a gap between teacher cognition and classroom practice (Borg, 2015, p.114). This means that there could be significant differences between how the EFL teachers in this thesis describe their classroom practice versus their actual practice. Therefore, the findings from the current study may not capture the teachers' actual practices. However, the results may indicate which methods the teachers prefer. According to Borg (2015, p.12), teacher cognition is deeply connected with classroom practice.

3. Methodological Considerations

Initially, the research question will be presented, followed by the choice of Grounded Theory as the research method, as well as the methodological approach. In addition to, descriptions of the data collection procedures and the data analysis. Finally, the research process, ethical aspects and limitations that were taken into careful consideration will be discussed.

3.1 Research Questions

This thesis is an empirical contribution to the debate concerning how EFL teachers perceive Dyslexia friendly certification and the practical implications of the certification. The study strives to have a practical value for the teachers, students in teaching training, and school administration. Comparing participants' perspectives at a certified school and another in a certification process has been appropriate to illustrate how different certification elements are perceived in different contexts. The thesis aims to reproduce EFL teachers' experience of the certification. The study is intended to shed light on some critical aspects of teaching students with dyslexia and to which extent a certification process aids teachers in their work.

The following subchapters describes the methodological approach used to answer the following research questions:

- What are EFL teachers' perceptions of the dyslexia-friendly certification?
- How do EFL teachers implement *dyslexia-friendly* practices in the EFL classroom?

3.2 Choice of Method

The purpose of the study is to illuminate an area that is almost absent in research. To my knowledge, there has not been much research conducted on EFL teaching in dyslexia-friendly schools. Corbin and Strauss (1990) state that a qualitative method often is used to uncover and study the background of a phenomenon where little has been studied or mapped. According to Corbin and Strauss (2015, p.5), the qualitative approach is suited for exploring the inner experiences of participants, which this thesis is seeking. Furthermore, a qualitative method can help researchers gain insight into the context and contextual conditions (the

certification process) that influence behavior or the experience of the situation (Silverman, 2020, p.3). A qualitative approach creates room to provide insight into which aspects EFL teachers themselves highlight as important for their experience with the certification process.

3.2.1 Grounded Theory

In line with a post-positivist perspective (Ryan, 2006), the study has sought to describe one objective reality, but at the same time based on the recognition that the researcher and participants' subjective understanding influences the perception of the phenomenon (Corbin & Strauss, 2015). To capture the experiences and perceptions of the EFL teachers, Grounded theory developed by Corbin and Strauss (2015) was chosen as the research method.

Grounded theory is a methodology that has been around for a long time and can be used to develop substantive theories and more general theories (Corbin and Strauss, 2015, p.11).

This method comprises a systematic, inductive, and comparative approach where theory is derived from the data and not chosen prior to the research process (Corbin and Strauss, 2015, p.7). Central to analysis within Grounded theory is the idea that analysis occurs in an iterative process of analysis and data collection (Corbin and Strauss, 2015, p.5). In a "traditional" qualitative research design, the researcher collects data on the phenomenon of interest through, e.g., interviews. Once data collection is complete, the researcher transcribes and codes the transcripts. Then the researcher analyzes the data looking for themes, comparisons, and explanations. In this example, the research process follows a linear path (see figure 4).

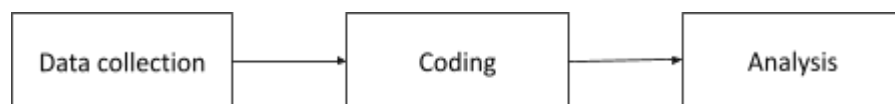


Figure 4: A "traditional" method of qualitative research (by author)

In contrast, the process of analysis in grounded theory strives for constant comparisons (Corbin and Strauss, 2015, p.7). This process, in short, argues for an interrelationship between data collection and analysis. Corbin and Strauss (2015, p.7) describe this process as such: "After the initial data is collected, the researcher analyses the data, and the concepts

derived from the analysis form the basis for the subsequent data collection". This means that insights and themes gained through analysis inform further data collection, such as creating new inquiry paths. This promotes a relationship between the data and analysis which is continually evolving (see figure 3).

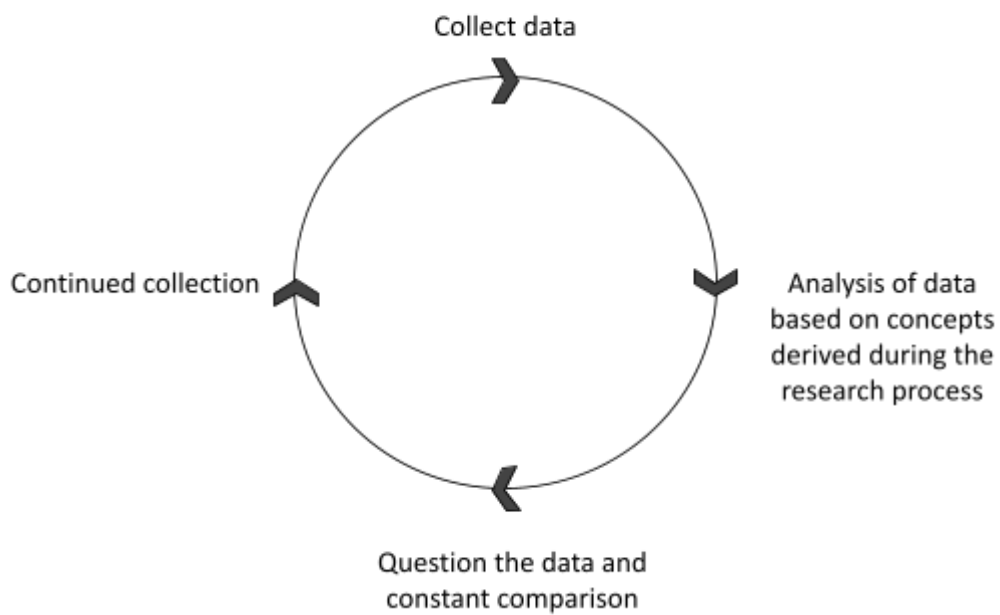


Figure 5: Made by author based on Corbin and Strauss (2015, p.8): The interrelationship between Data Collection and Analysis

Through these steps, I, as a researcher, was able to investigate different aspects that arose in the interviews purposefully and study the interrelationship between data collection and analysis. Furthermore, as the research on this phenomenon was limited, the continual analysis would enable me to gain deeper insight into the effect of the certification on EFL teachers. And finally, necessary steps such as memo writing was perceived as beneficial and helpful for my research process as a novice researcher.

3.3 Materials and data collection

The qualitative data for this study consisted of interviews with three teachers working in three different schools. The sample consists of two teachers from dyslexia-friendly schools and one teacher from a school that is becoming dyslexia-friendly. This allowed more profound insight into several topics, such as how EFL teachers at dyslexia-friendly schools adapt their teaching to dyslexic students and insight into the certification process. The participants for the study were chosen based on their relevance to the topic and issue. Since the sample pool of dyslexia-friendly schools is relatively small, the criteria set for participants were intentionally broad. Participants in the study consist of EFL teachers at Norwegian Schools from grades 5 to 10 (Upper-elementary- and secondary school). In addition, participants were contacted through networking and referral. This method is known as snowball sampling (Parker et al., 2019, p.3). The data was collected in two distinct rounds. First, the three participants were interviewed. Second, the concepts derived from the initial analysis process led to me generating new questions. As new paths of inquiry arose, the decision was made to focus on the three participants further and conduct a follow-up interview (see appendix 2 and 3). Corbin and Strauss (2015) describe this process of investigating early concepts further as Theoretical Sampling. However, the process of acquiring new participants for the research project was challenging. One reason for this could be that teachers may receive many requests to participate in interviews. For example, there might be some resistance to participating in a voluntary interview in the current pandemic situation. Therefore, non-probability sampling was used as opposed to probability sampling. This limits the sample's representativeness, e.g., EFL teachers with a particular interest in dyslexia might possibly be more inclined to participate.

3.3.1 Participant Characteristics

This list of characteristics aims to make it easier for the reader to understand and differentiate between the participants in the finding and discussion section. The participants have been anonymized and received a codename. Their statements are differentiated by the codes P1, P2, and P3. In addition, if their statement is followed by (2), meaning that it is from the follow-up interview. Some statements may include these brackets: []. The brackets are included to make the context understandable (e.g., *Jeg er stolt av det [sertifiseringen]*). The participant characteristics are intentionally general to ensure anonymity and will now be briefly presented in Table 1.

Code	Certification status	Grades
P1	Dyslexia-friendly	Secondary
P2	Dyslexia-friendly	Upper elementary
P3	In the process	Secondary

Table 1: The participant characteristics (made by author)

3.3.2 Conducting the interviews

The interviews were conducted at the EFL teachers' respective schools. To create a comfortable environment, the interviews were conducted in the participant's preferred language, Norwegian. This enables the participants to speak freely and not be worried about their English proficiency impacting the quality of data (Mackey and Gass, 2015, p.225). Before the interview, participants were informed about voluntary participation, confidentiality, and rights. All participants signed the information leaflet for informed consent (see appendix 6). The data was collected through semi-structured interviews. In semi-structured interviews, some topics are chosen at the start of a research process and allow the researcher to cover the same topics in each interview. In grounded theory, data are most frequently collected through interviews (Corbin and Strauss, 2015, p.7). This form also makes sure that all important aspects of research are covered. As well as they allow the participants to talk about other non-planned aspects as well (Corbin and Strauss, 2015, p.39).

Finally, many researchers employ Semi-structured interviews because they will enable the interviewer to be prepared (Cohen and Crabtree, 2006, p.1).

The interview guide was designed in collaboration with the supervisor and was based on prior experiences from my practice and themes designed to investigate teacher cognition. It is important to note that although grounded theory is an inductive method (Bryant & Charmaz, 2007, p.3), the interview guide was designed by grouping different questions into themes. Therefore, the thesis could not be characterized as entirely inductive as I had developed overarching categories from the dataset.

3.3.3 Memos

Another aspect of grounded theory's focus on the research process is the importance of writing memos (Corbin and Strauss, 2015, p.106). This is an important step in the continual analysis of the data; as such, memos were after each interview. I wrote the memos in Microsoft Excel shortly after the interview. Each memo highlighted the internal analysis of concepts that arose from data analysis. When interacting with the data, memos function as a tool for preserving the dialogue within the researchers' minds (Corbin and Strauss, 2015, p.107). It enabled me to sort findings that might not be obvious and find incomplete information in need of investigation. An example of how memos aided the analysis process can be found in the memo:

When inquiring about the last time the teacher adapted for a dyslexic student, the subject answered all the time. The idea here seems to be to integrate adaptation into everything. In some ways, I struggle to understand how adaptation can be conducted all the time. I wish I would have asked for a more specific example. Perhaps a follow-up interview is needed?

(Concept: Universal adaptation, P2, January 26, 2022)

This brief memo comments on how I conducted my interviews and questions that arose during the initial analysis of the data. Initial analysis of previous interviews and the mentioned memo found a lack of concrete methods or examples of what the teachers do in dyslexia-friendly schools. This could be due to several factors such as me not asking effective

questions, teachers finding it difficult to verbalize all the different things they do daily, or teachers not having specific methods for adapting the education for dyslexic students. Nevertheless, after writing the memo, I decided to conduct a follow-up interview. While it is complicated or extensive, writing memos functioned as a tool for me to dialogue with the data and helped the analysis move further. As a result, I gathered more rich data for further analysis. Furthermore, the habit of writing memos was beneficial for my research process, and how it familiarized me with my role as a novice researcher.

3.3.4 Data Transcription

The data was transcribed shortly after the interview so that the interviews would still be memorable. This was also done to start the initial stages of analysis as early as possible. The subjects preferred to speak in Norwegian, and therefore the transcripts were written in Norwegian. The excerpts included in the results and discussion are in Norwegian. The decision not to directly translate the transcripts to English was that I wanted to preserve the original meaning of the statements. Therefore, quotes in Norwegian are preceded or followed by an explanation in English.

3.3.5 Adjustments During the Interview Process

The present study began with the aim of understanding the experiences of EFL teachers at dyslexia-friendly schools. During the interviews, the questions focused on new themes and patterns identified in the data. This led to changes in the interview guide as some topics appeared more central to the study. After conducting interviews with two teachers from a dyslexia-friendly school and one teacher from a school in the process of becoming dyslexia-friendly, the analysis and subsequent study of the material provided by Dysleksi Norge created new areas that I wanted to explore. One major obstacle in the interview process was understanding the specifics of the EFL teachers' approach to dyslexia-friendly teaching.

Corbin and Strauss (2015) emphasize that grounded theory requires certain flexibility on the part of the researcher, and they state that "researchers must be willing to follow the leads in the data" (p.9). As such, I decided to approach the subjects for a follow-up interview. The follow-up interview would use the criteria for a dyslexia-friendly school set by Dysleksi Norge

(see appendix 5). Corbin and Strauss (2015, p.52) note that using nontechnical data to supplement interviews can be useful. Therefore, I created a second interview guide (see appendix 3). This adjustment was made to acquire deeper data on their perceptions of working in a dyslexia-friendly school and the criteria for their EFL teaching. The new addition of questions specifically related to the list of criteria enabled me to gather richer data for my thesis.

As the second interview relied on criteria related to expectations based on dyslexia-friendly criteria of the teachers' practice, I had a more considerable emphasis on making the subjects feel comfortable. This was a focus because the follow-up would be more challenging and maybe could make the teachers feel more defensive. For example, I would ask how they apply research-based interventions as Dysleksi Norge aims for in their criteria number 7. This could make the teachers feel that I was evaluating their teaching methods. Mackey and Gass (2016, p.226) highlight the importance of the participant feeling comfortable in the interview situation. Criteria not deemed relevant for the teachers' practice were omitted; as such, the interview focused on the following criteria:

3. The school is continually working on enhancing the competencies of teachers in the areas of reading and writing, math difficulties, and language difficulties, as well as good pedagogical use of digital tools.

7. The school must have a good plan for reading built on science-based and recognized training for reading. This must be a widespread practice in the classroom. The school has routines for implementing science-based measures for students in danger of developing reading and writing difficulties. The school evaluates the effect of the measures and adjusts accordingly to secure the best possible development.

8. The school works actively to promote adapted education through a variation of methods. The school uses methods which ensure understanding, and have routines for assessment for learning and involves students in their learning.

Each participant was handed a copy of the criteria list and was advised to read the criteria in focus before the question. The participants were also informed that this interview was not designed to study their knowledge, but rather how they practiced EFL teaching within their school context.

3.4 Coding

The first part of the process is open coding to ensure that the data organically formed categories and it prevented the data from being forced into predetermined categories (Corbin & Strauss, 2015). After transcribing, analysis was conducted in Microsoft Excel. The focus was on naming and concepts based on systematic review of the data material (Corbin & Strauss, 1990). While this Excel is more commonly used in quantitative data analysis and associated with number crunching, it can be used purposefully in qualitative research (Meyer and Avery, 2009, p.91). As I was familiar with the tool, I found it useful for handling the data and displaying the data in a structured manner. Each of the interviews was systematically reviewed and the data broken down. Line-by-line coding was used to uncover as many topics as possible. Through the open coding, events, thoughts, actions and interactions are coded to capture properties and dimensions of the concepts (Corbin & Strauss, 2015).

Secondly, there was a natural transition to axial coding as different concepts started to be grouped together in categories. Appendix 4 shows an example of text extracts and the coding process in line with the guidelines from Corbin and Strauss (2015). Axial coding is central to looking at contexts in the data material, as well as to conceptualize the codes and the beginning of concepts into more general categories (Corbin & Strauss, 2015). This part of the analysis process is a balance between inductive and deductive thinking (Strauss & Corbin, 1990). Some participants described aspects that were not in line with the original categories. Therefore it was important to investigate the new concepts. The processing of the data material led to my own interpretations and proposed connections between categories. To ensure that the categories were grounded in the data where there is a continuous comparison of data and questions to the interpretation process (Corbin and Strauss, 2015, p.7). Furthermore, this part of the coding made it obvious that I had to make changes to the interview guide and conduct a second interview with all the respondents.

In the last part, selective coding categories were integrated into main categories, or conditions that affect EFL teachers' experiences of the certification and practical implications. Central to grounded theory is to connect and integrate different categories into one theory. However in this study the theory is the result of two research questions and the theory therefore has two aspects. The integration of the categories was not different from axial coding, but should be done on one a more abstract level of analysis (Strauss & Corbin, 1990). For an overview of the process of analysis see Figure 4. Finally, the analysis compared the findings with the theoretical framework presented initially. According to grounded theory, this theoretical framework laid the foundation for theory formation and development of a visual representation in the form of a model (Model 1: Categories that characterize EFL teachers' experience of the dyslexia-friendly certification and how they affect their practice.)

3.4.1 Theoretical sensitivity

A challenge in Grounded theory is to be theoretically sensitive. Corbin and Strauss (2015, p.88) describe this as the ability of the researcher to distance themselves from the technical literature and personal experience, which might block their ability to arrive at new interpretations of data. In order to create a balanced study, I constantly went back to the categories and validated them through constant comparison, questions to data and memo writing. Through this process I was guided to create my own interpretations of the data and systematically compare the data material to the categories (Corbin & Strauss, 2015). Additionally, I focused on questioning the data and analysis at the start of the project, which enabled me to delve deeper into the research process. Asking questions allows the researcher to be observant of new themes and concepts in the data material. Questions about data increase the likelihood that new dimensions, properties of concepts and categories will be noticed (Corbin & Strauss, 2015). While interpreting the data, I tried to strive for neutral interpretations as I believed this would create more accurate interpretations. However, this idea would become challenging. The term neutrality implies that the interpretation is free of bias and separated from my perspectives, background, and other circumstances (Given, 2008, p. 555). Therefore it is important to enclose details about data collection, reflections on how I, the participants or context influenced the research process are aspects which strengthens the internal validity of the study (Johns, 2006).

Additionally, I find some previous experiences with dyslexia important to disclose. First, I have some close family members diagnosed with dyslexia. With this in mind, I am probably inclined to look at different solutions to impact students with dyslexia positively. This can affect how I analyze and interpret the data. I experienced that my prior knowledge and the ability to reflect on them became a resource for the thesis.

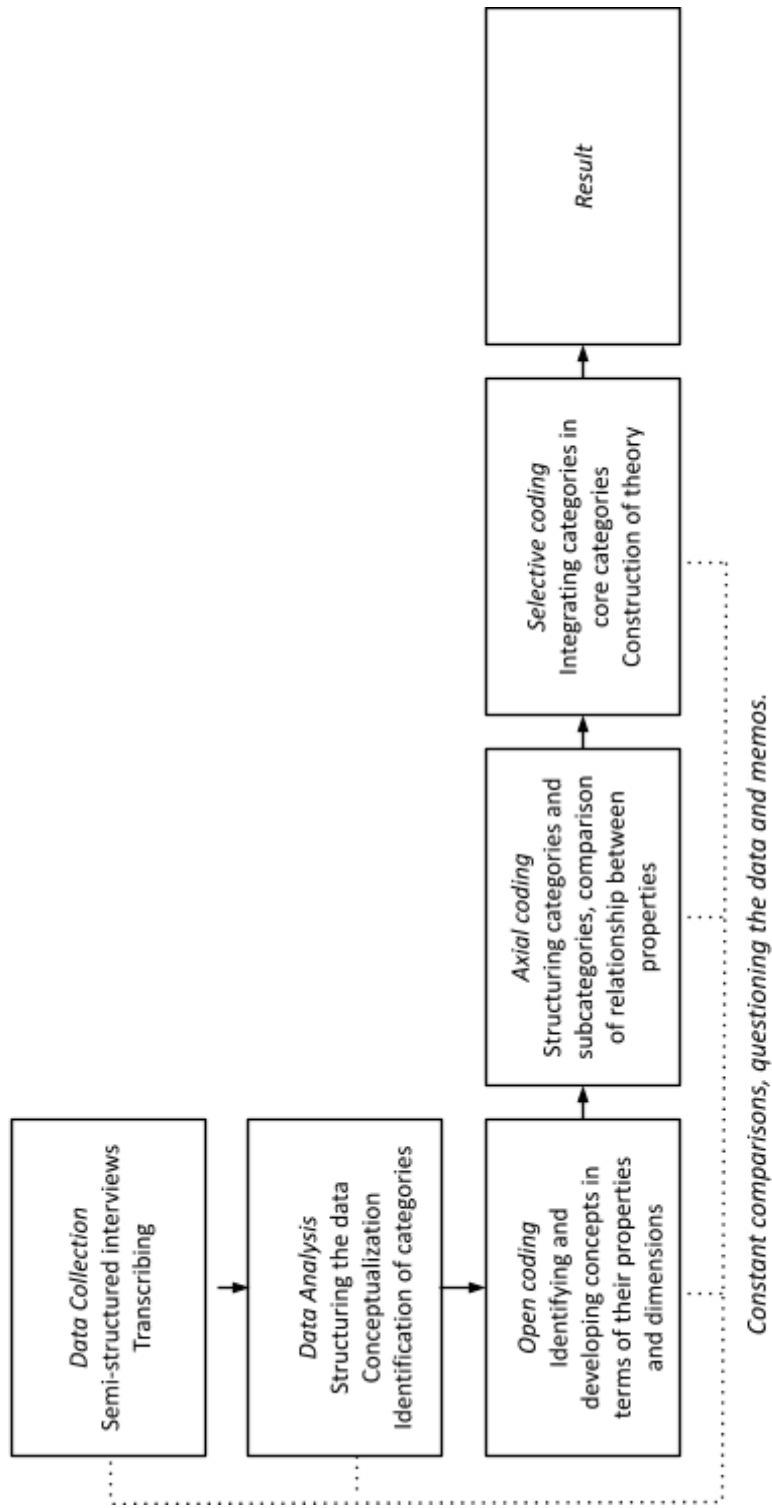


Figure 6: Visualization of analysis based on guidelines in Corbin and Strauss (2015) (made by author).

3.5 Limitations of the Study

A limitation of this thesis is the small sample size. It is important to stress that the effects on students, parents, or school administrations will probably be significantly different. Initially, I aimed for a larger sample size to define and develop the categories found in the data. The choice of Grounded theory is part of the reason for the small sample size of the thesis. Since the analysis was conducted simultaneously with the data collection, there were difficulties recruiting participants simultaneously. Ideally, the thesis would start with a small sample size and then select further participants based on the information gathered in the early interviews. The small sample size can mainly be attributed to time-constraint and my inexperience in conducting research. In addition, the representativeness is hurt as the sample consists of exclusively female EFL teachers. The sex of the participants were not regarded in the sampling process. These aspects mean that the results are difficult to generalize.

In addition, this thesis works with only one research method and may not provide a good overview of how EFL teachers work within a dyslexia-friendly school. The interviews will only give self-reported perceptions; therefore, one can not know with certainty how their cognition relates to their classroom practice. This limitation relates mainly to the research question that investigates how the teachers implement dyslexia-friendly practices in the EFL classroom. Therefore findings related to teacher practice are not necessarily scientifically rigorous. Research on teacher practices in dyslexia-friendly schools with observations at a larger scale over time would likely yield better results. However, this is beyond the scope of the current thesis. Another limitation is related to the concept Corbin and Strauss (2015, p.198) refer to as theoretical saturation. This means that if new information collected can be deemed redundant or lacking variety and each category has been well defined in terms of its properties, the criterion of theoretical sampling has been met (Corbin and Strauss, 2015, p.198). Although theoretical saturation is not contingent on a large sample, some new concepts arose in the final interviews, such as "common sense in teaching," which I would ideally investigate further.

3.6 Ethical Considerations

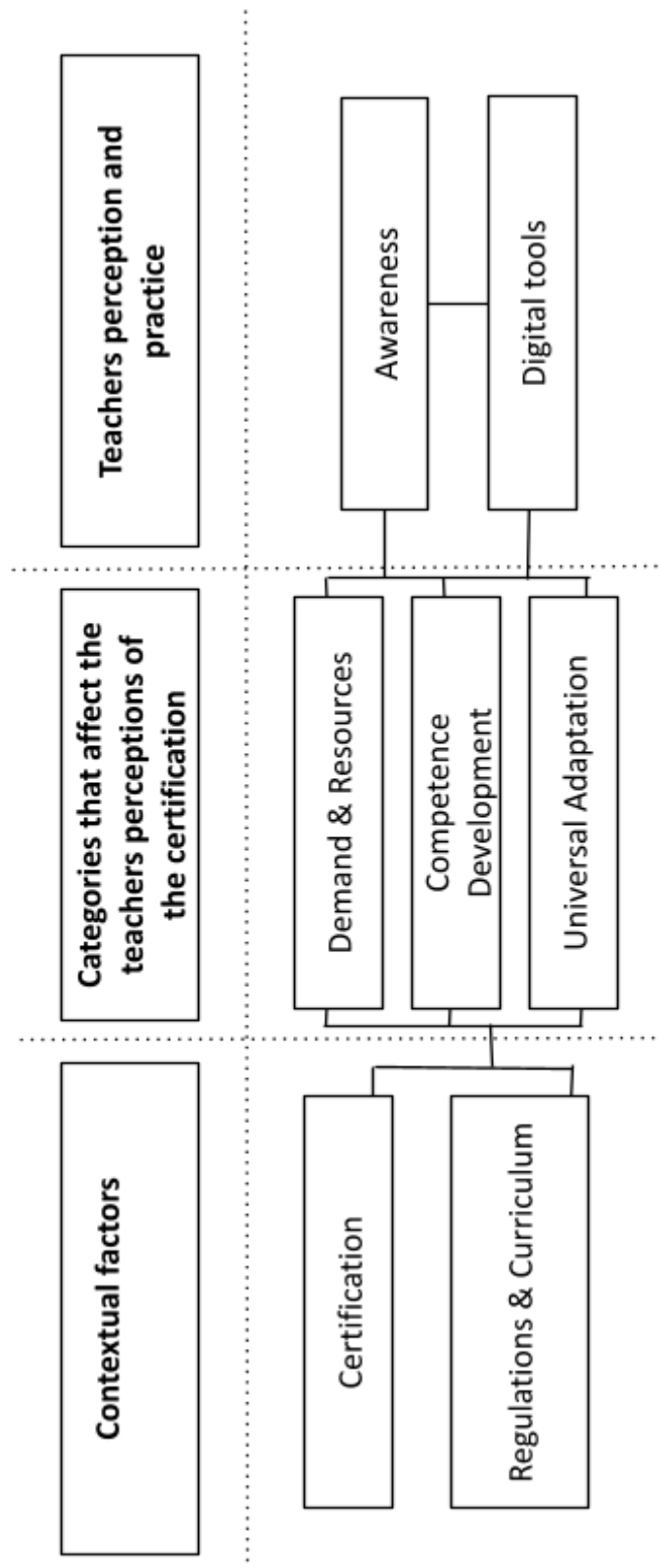
This study has been approved by Norsk Samfunnsvitenskapelig Datatjeneste (NSD). With a thesis that involves teachers as participants, there are several ethical considerations in need of consideration. The data collection was only carried out after the necessary approvals by the Norwegian center for research data (NSD) were in place (See appendix 1 for NSD approval). Voluntary participation, confidentiality, and anonymity were critical ethical considerations. All participants were informed of the purpose of the interview and research, confidentiality and anonymity, their rights, and how the data would be handled. All quotes used in the thesis are anonymized to avoid recognition by the participants or school. Information deemed sensitive or otherwise could not be satisfactorily anonymized has been omitted from the thesis. All data and audio files from the interviews were stored on the encrypted research server provided by Høgskulen på Vestlandet (HVL).

Informed consent is a cornerstone in qualitative research that involves human participants (Mackey and Gass, 2015, p.31). Before the interviews, each participant received an information letter with descriptions of the purpose and their right to withdraw from the study at any time without a negative consequence. Before recording the interviews, each participant was reminded of their rights, how I would handle the data, and that their anonymity was to be preserved. There are various steps made in order to ensure anonymity. Firstly, all participants' names and school names, and other identifying markers were omitted from the transcriptions. Secondly, all recordings and transcriptions were stored in an encrypted server with security such as a VPN, personal password, and the Microsoft authenticator app. Finally, the recordings and transcriptions were only available to my supervisor and me on the encrypted server.

4. Analysis

This chapter presents the results from the analysis of EFL teachers' experience with the dyslexia-friendly certification at three Norwegian schools from grades 5-to 10. Initially, the contextual factors: «The Certification,» and «Regulations and Curriculum» will be presented. Following, the key findings concerning the EFL teachers' perception of the certification: «Demand and Resources», «Competence Development» and «Universal Adaptation». Again, these categories had significance for the teachers' perceived «Awareness» of dyslexia and their practical implementation «Digital tools». Finally a grounded theory is proposed.

The result is demonstrated through quotes from the participants and visualized in *Figure 1: Concepts that characterize EFL teachers' experience of the dyslexia-friendly certification* (page 46). This figure presents the concepts and categories that evolved from the analysis based on Corbin and Strauss' (2015) Grounded Theory. This chapter provides a structured presentation of the findings with subchapters 4.1 Contextual factors, 4.2 Categories that affect the teachers' perception of the certification, and 4.3 Teachers perception and practice.



Model 1: Categories that characterize EFL teachers' experience of the dyslexia-friendly certification and how they affect their practice (made by author).

4.1 Contextual Factors

Corbin and Strauss (2015) point out that context is a critical element in order to generate a grounded theory. Context in this thesis refers to the situational and environmental elements that are likely to influence the teachers experience. In other words, the context affects either directly or indirectly various aspects of the informants' experience of the certification (Johns, 2006, p.386). By specifying what is distinctive about the situation, the reader can understand the context in which the participants teach. See subchapter 2.4 Dyslexia friendly schools for a full overview of the certification process. The following two subchapter presents findings on the teachers' perception of 4.1.1. The certification and 4.1.2. Regulations and curriculum as contextual factors.

4.1.1 The Certification

The participant perceive that the certification is positive for students with dyslexia

Vi har hatt veldig fokus på dette med at vi skal ha en undervisning og en opplæring der alle kan delta på en lik linje uavhengig av om de har dysleksi eller ikke. The school focused on providing all students the same education regardless of dyslexia. P1 highlights that

dyslexia-friendly practices is incorporated in everything: ***(...) vi inkorporerer [nå]***

dysleksivennlighet i alt vi gjør (P1). A vital feature of these schools is that they do not accept subpar learning outcomes for students with dyslexia (Solem, 2015, p.3). When I visited the

certified schools, a visible plaque in the entrance hall stated that the schools were certified as dyslexia-friendly. P1 believed that the plaque was there because the school is proud of

the certification: ***Det tror jeg er fordi at vi er stolt av at vi har fått den utmerkelsen(P1(2)).***

This served as a reminder to teachers and students arriving at their school that they are a dyslexia-friendly school. The participants in dyslexia-friendly schools emphasized that the

certification was a source of pride: ***Jeg er stolt av det [sertifiseringen]. Jeg synes alle skoler burde være det, men jeg er stolt av at vi har valgt å bruke tid på dette. (P2(2)).***

P1 exemplifies this when asked about what their belief of dyslexia friendly practices are based on : ***Det er jo basert på vår skoles forståelse av dysleksi. Det som vi har fått***

opplæring i kursene fra Dysleksi Norge. De hadde veldig fokus på det digitale, det skulle bli muligheter og det var viktig at de med dysleksi ikke skulle bli sittende med at de må gjøre noe annet i klasserommet, at de blir sett rart på. Det skal være sånn at det er helt greit å ha den vansken, de skal gjøre det samme som de andre. Det tror jeg er en felles enighet her (P1). Summarised, the teacher perceive that Dysleksi Norge recommends an inclusive approach through widespread use of digital tools. The teacher aims for a classroom where students with dyslexia participate in the same way as other students.

As P3s school was in the process of becoming certified, the participant had formed a perception of what the certification entailed: *Det er jo en form for sertifisering som vi skal få. Da må vi jo gjøre noen grep, vi må på en måte prøve å tilpasse til dette i all undervisningen vi gjør og at alle lærerne må gjøre dette. At det ikke bare blir noe som vi gjør av og til, men at det må gjennomsyre det arbeidet vi driver med.* P3 believes that a dyslexia-friendly school requires that all teachers will have to integrate dyslexia-friendly practices into all work, not occasionally, but continually. Furthermore, P3 discuss some possible problems with a dyslexia-friendly certification: *Jeg er redd for at vi tenker "check" da er det gjort, flott over og ut, da kan vi gå videre til neste prosjekt. Da blir det litt en sånn sovende greie. (P3).* P3 was afraid that the school would not focus on the certification after receiving the certificate. The participant recalled another certification that the school had received, which was related to environmentally friendly practices. The participant recalled that the school put in great effort to obtain the certificate: *For en stund siden så ble vi en "grønn skole", da var vi veldig interresert i å få det grønne flagget og da fikk vi det grønne flagget og etter det så var det ingen som snakket om det (P3(2)).* Nevertheless, after school had received the certification, the participant claimed that the focus disappeared, and teachers and staff hardly mentioned environmentally friendly practices afterward. This experience created doubts about the longevity of future certifications, such as the dyslexia-friendly certification. *Så jeg håper at det faktisk skal få en praktisk påvirkning på undervisningen at dette er noe vi gjør fordi vi vet hva vi skal gjøre og fordi at vi ser at dette er viktig å gjøre (P3(2))* At the same time, the schools that have undergone the certification will have more teachers who have undergone training on dyslexia than schools without the certification. One could argue that the participant's concern is more emblematic of their

school's systems and procedures for the expert group transfer of knowledge to all the teachers.

Even though the participants initially described themselves as proud of the certification, the same participants questioned whether there is a substantial difference between schools with the certification and schools without. In addition, the participant believed that their practice would not change depending on a certification: *Jeg tror ikke jeg hadde gjort noe annerledes samme hva skolen heter (P2)*. Similarly, P1 feels that: *... [sertifiseringen] er ikke det som får oss til å bruke mer tid på [tilpasset undervisning]*. On a follow up question about why the school needed to become dyslexia-friendly P2 stated: *Jeg vet ikke. Jeg tenker at alle skoler ønsker å være dysleksivennlig. Selvfølgelig vil vi det beste for alle våre elever. Det var noen som brant for det og de fikk jo alle med*. P2 clarified that they want the school to be dyslexia friendly but questions why this is not universal: *Jeg har så lyst at alle skal være det. Hvorfor skal noen være det og noen ikke? Jeg er opptatt av at vi skal være en dysleksivennlig skole*. When asked if all schools should be dyslexia-friendly, the participants unanimously agreed, in addition, there were doubts if the system of certifying select schools was beneficial.

4.1.2 Regulations and Curriculum

A core concept in the Norwegian school system is the idea of the comprehensive school. The characteristics of the comprehensive school are that all schools ought to integrate students regardless of sex, ethnicity, intellectual abilities, or geographical affiliation. This has been a foundational ideology of today's school system and has been fundamental for school politics in the last century (Innst. S. nr. 15 (1995-1996)). P2 describes a complete change in the understanding of dyslexia: *Det er jo mer forståelse på samfunnsplan. Jeg tror ikke det hadde navn engang da jeg begynte å undervise*. This notion is echoed by P3: *Vi har blitt mer obs på alle de ulike utfordringene elever kan ha*. In addition, the teacher described that students with dyslexia would historically be viewed as "stupid": *[tidligere] ble folk dumpet [gå ned en klasse] fordi de var "dum". de var "dum" fordi de ikke klarte å lese og skrive. Slik er det heldigvis ikke lenger. (P2(2))*. All participants acknowledge a change over time in awareness of dyslexia. *Nå får dyslektikerne hjelp og har krav på oppfølging. Det*

med krav har kommet i senere tid (P2). P3 points out some of the aspects that has been implemented to accommodate students with dyslexia: ***Blant annet dette med digitalisering, nå er det vanlig på ungdomstrinnet at vi bruker mye chromebook og digitale arbeidsbøker, men at det kanskje også må brukes lengre nedover og at det er lettere for elever med dysleksi å skrive på maskin istedenfor å skrive for hånd.*** The participant presupposes that dyslexic students have an easier time due to digital tools being available on the students' personal Chromebooks.

However, all participants expressed concerns about a lack of universal practices for all schools instead of schools that decide to undergo a certification process. The participant also believe that all schools should be dyslexia-friendly: ***Jeg tenker at det skulle vært en plikt på alle skoler å kjørt gjennom et program som gjorde at alle ble det.*** This view is shared by P3: ***Jeg tenker at alle skoler burde være dysleksivennlige egentlig, at det ikke burde være opp til den enkelte skole om de skulle lære om dysleksi. Det er jo slik at alle elever med dysleksi burde få de samme mulighetene uavhengig om skolen deres velger å bli dysleksivennlig.*** The participant questions that some schools become certified as opposed to all schools. In addition the participant notes that there are other conditions that a school should be friendly for: ***Vi skal være god på alle ting. vi skal være en angstvennlig skole, vi skal være en spiseforstyrrelsevennlig skole, vi skal være en depresjonsvennlig skole. Vi skal være vennlig for alle, men vi kan ikke drive med sertifisering nødvendigvis på alt. (P3).*** The participants also note that a certification is not possible for everything.

P2 was positive about their own ability to teach students with dyslexia. However, this should not be dependent on the certification: ***Så tenker jeg på naboskolene våre som ikke har fått sertifiseringen. Jeg er sikker på at de har gjort kjempebra arbeid med sine elever(P2).*** P2 explicitly states that this issue should be addressed politically and nationally and refers to the principles of Norway's comprehensive schools: ***Jeg tenker at det skal være en selvsagt ting at man er dysleksivennlig. Det skal ikke være sånn at noen er det og noen er ikke det. Det skulle vært et pålegg om at som skole skal dyslektikerne ha disse tilbudene og at det skal jobbes sånn og sånn for at de skal ha det bra.*** P2 refers to this concept: ***de påstår at vi er en enhetsskole, så da må dette komme ovenfra [fra myndighetene].***

4.2 Categories that Affect the EFL teachers' Perception of the Dyslexia-friendly Certification.

Based on the informants' descriptions, certain categories appeared to be central to the first research question concerning EFL teachers' perception of the certification. The critical dimensions are: «demand/resources», «competence development» and «universal adaptation ». The categories are presented through the informants' quotes. See Model 1 (p.51) for identified categories that characterize EFL teachers' experience of the dyslexia-friendly certification and how they affect their practices.

4.1.3 Demand and Resources

An important concept from the early data collection was the balance between resources and demand. After the first interview process, I decided to investigate the concept of external demands in a dyslexia-friendly school. A question on the different benefits for groups in the school was created to investigate this concept (see appendix 3). The participants were in agreement that parents and students would benefit in the sense that the adaptation would not be dependent on the teachers. For example: ***Foreldre vil føle seg trygg på at det ikke er læreravhengig om barnet deres får hjelp eller ikke (P2(2))***. The certification led to parents feeling that students with dyslexia would receive the help they need. Parental control was also mentioned by P2. Surprisingly, when asked what teachers got out of the certification the participant stated: ***Altså, man har det i bakhodet. Da har man foreldre som passer på ... da må man virkelig skjerpe seg (P2(2))***. The participant did not mention competence development but rather that parents would be more aware of the certification.

The participants from dyslexia-friendly schools were asked if the certification led to more work on their part. P2 felt that the certification led to more preparatory work: ***Det har blitt mer forberedende arbeid. [eksempel]Det å ta kopier av ting og scanne de. (P2(2))***. The task of copying and scanning was a new practice after the certification. Although, this routine was created because the teacher had many students with dyslexia and parents who would nag: ***Jeg har fått en rutine fordi jeg har mange dyslektikere og foreldre som maser hele tiden.***

(P2(2)). P1 was not of the opinion that the certification created more work: *Ikke oppgaver, men vi gjør ting på en litt annen måte. P1(2)*. The participant felt that the certification did not lead to new tasks but a overall different approach. However, in the same interview the participant also discussed challenges in giving students with dyslexia the possibility to use speech to text: *...Hvis en elev ønsker å snakke inn og så skriver datamaskinen det de sier [...] Er vi avhengig av å ha et rom som er tilgjengelig. P1*. In addition, P1 did not report more hours spent on dyslexia-friendly lessons: *Det er ikke så mange ekstra timer, men man har det i tankene P1(2)*. The participant is aware of the certification when creating lessons, however they do not have extra time in implementing new methods.

4.2.1 Competence Development

Criteria 3 for dyslexia-friendly schools requires the schools to work continually on competence development in areas such as reading and writing difficulties (see appendix 5). The participants were asked how the school works continually on competence development. P1 refers to the joint-teacher meetings, which is a weekly meeting for all teachers: *Noen av fellestidene blir brukt til kompetanseheving, for eksempel erfaringsdeling. At ulike lærere deler ulike opplegg som de har fått til. Det går for eksempel på IntoWords*. During these meetings, teachers share their experiences with different lessons, e.g. different functions utilized in IntoWords. *Fellestiden ble brukt til litt sånn tips og triks om hva vi kan gjøre i klasserommet for å tenke mer dysleksivennlig (...) men mye av fellestiden har blitt ødelagt pga. korona (P3)*. Joint-teacher meetings were used for tips about practical implications, however the pandemic affected the meetings. All the teachers mentioned their weekly joint-teacher meetings as an arena where teachers could share their competence and discuss how to create dyslexia-friendly lessons. The teachers characterize these meetings as positive for their understanding of dyslexia-friendly practices. On the other hand, these meetings contain several different agendas weekly.

The certification does not grant more resources in the form of time or financial assets (see appendix 5). This means the teachers are not offered several new resources to deal with new demands. P2 reported that the certification received less focus due to the new curriculum: *Vi blir minnet på det, men det har ikke vært sånn i fokus*. It was not clear who reminded the

teachers but P2 stated the reminder: **vi blir påminnet at vi ikke må glemme at vi er en dysleksivennlig skole, vi må bruke disse redskapene vi har (P2)**. As the whole school becomes certified dyslexia-friendly, one could reasonably assume that teachers at these schools had received extensive training. For P3, in the certification process, the experience thus far is that the school has appointed a group of teachers in charge of the competence development. As P3 experience the certification, the school sends a group of teachers on courses, and these teachers are to relay the information in joint teacher meetings: **Det som skjer nå er at vi har en prosjektgruppe som reiser på kurs og så skal de fortelle det videre til oss**. While the topic has been a subject of discussion at joint-teacher meetings, the participant has not received extensive training yet: **Jeg som lærer har ikke fått noe egen sånn kompetanseheving. I forhold til om det er noen strategier, om det er noe jeg spesielt bør gjøre eller ikke gjøre. Så ja vi trenger nok noe mer konkret inn mot oss som jobber på gulvet og, ikke bare de som sitter i gruppen (P3(2))**. The participant questioned the certification process in the sense that a group of teachers received extensive training, which might create an expert group as opposed to competence training on a collegiate level: **Jeg tror nok de som drar på kurset lærer mye. De kursene jeg har vært på har jeg lært mye, men når man skal lære det til andre så blir det litt sporadisk og tilfeldig**. P3 believes that courses are valuable for the teachers who attend. However, it becomes more random and sporadic when the teachers are supposed to teach other teachers. It is important to note that the interviews with P3 were conducted before the certification process was finished. Therefore, some of the statements will not include the entire process.

As I remarked to P3 that the whole school would be certified, P3 responded: **Jeg tror at hvis vi skal være ærlig så er det nok noen lærere som blir veldig dysleksivennlige og så er det andre som blir med**. Interestingly, P3 believes that the certification will lead to a group of teachers that focus on the certification, not necessarily all teachers at the school. P3 discuss some possible problems with how the school worked on competence development. P3 agreed that the school did not have the resources to send all the teachers: **Klart det er sånn fordi vi ikke har økonomi til at alle skal sendes på kurs og da blir det litt sånn "jaja de kan det". De kan det istedenfor "jeg kan det". Fordi da trenger ikke jeg egentlig å ha peiling siden jeg kan gå til de (P3)**. On the other side, the participant felt that this could hinder other teachers from developing their competence on dyslexia. P3 wanted more time for the

courses: *Ønske å bruke mer tid på kursing, men det skjer gjennom en prosjektgruppe og de skal fortelle videre til oss. (...) Problemet er at det blir indirekte at vi må høre "ja vi var på et kurs og der snakket vi om ..." for da distanserer man seg litt fra det (P3).* When the expert group are to relay the information the teacher would feel distanced from the certification. The participant stated that teachers are responsible for reading about dyslexia-friendly practices, however: *Det blir nok dessverre litt "stemoderlig" behandlet av andre enn de som sitter i den ressursgruppen.* Because the certification process includes an "expert group," some teachers may involve themselves in the process while others might not. The expert group is also present at P1s school: *Vi har et team på skolen som har ansvar for organisere arbeidet med dysleksivennlig skole hos oss.*

The concept of research-based teaching was central as it relates to criteria 7 (see appendix 5). Two of the participants questioned the concept of science-based training for reading, for this P3 stated: *Jeg vet ikke hva det betyr. Alt dette forskningsbaserte.* P2 works at a middle school and is not aware of any science-based measures: *Jeg vet ikke om det finnes engang. Jeg har aldri hørt om noe i engelsk.* P1 also do not seek research: *Det er ikke slik at jeg som vanlig lærer går rundt å leter etter forskning P1(2).* The teachers are unsure if science-based measures related to teaching students with dyslexia exist. As academic research was not central to any of the teachers' perception of dyslexia or their methods for adapting, the interview focused on where the teachers derived their practice and perceptions of dyslexia. P2 appeals to their common sense: *Vi bruker sunn fornuft. Så kan man si "er det godt nok?". For hva er min sunne fornuft og hva er min kollegas sunne fornuft.* The participant acknowledges that common sense is an individual experience. However, on further questioning, P2 believes that their common sense is an effective measure for creating a dyslexia-friendly environment in the EFL classroom. In the last interview with P2 I asked if the teachers did anything other than digital tools: *Det er så innarbeidet. Hadde noen kommet å sett på så hadde de nok kunne sagt hva jeg gjør.* The participants found it difficult to express their practice. Experience seems to be a salient resource for how the teachers adapt the education for dyslexic students. As P2 states when asked if anyone is securing that their lessons are according to dyslexia-friendly practices: *Vi har ingen over oss som passer på at vi gjør det. Så det er tillit. Det er stor tillit, men jeg tror at vi er verdige tilliten.* The evaluative dimension for this teacher is based on how the

teacher perceives the students develop and behave in the EFL classroom. The participant explains that if they observe progress over time for students with dyslexia, the teacher is succeeding at dyslexia-friendly practices: ***De har en utvikling i faget. Da er jeg fornøyd. Når jeg ser at de ser fornøyd ut i et fag der de i utgangspunktet har store utfordringer (P2 (2)).***

4.2.2 Universal Adaptation

Early in the interviews, I asked the participants to describe the last time they adapted their education in English to facilitate students with dyslexia. Prominent in their accounts was the idea of universal adaptation. ***Ja man har jo som oftest elever med dysleksi i klassen sin, så den tilpasningen gjør jo vi, eller gjør jeg hele tiden, eller prøver jeg å gjøre hele tiden. Så sist gang det var gjort var vel forhåpentligvis sist engelsk time (P1).*** Correspondingly P3 tries to make accommodations for the entire class: ***Jeg prøver å gjøre tilpasningen universell, men jeg tenker på de med dysleksi når jeg planlegger sånn at jeg ikke trenger å gjøre egne grep for den ene eller den andre. (P3).*** This idea seems crucial to teachers that seek to implement dyslexia-friendly practices. The teacher made adaptations all the time and believed that the last time was the last EFL lesson. P2 also described making accommodations all the time: ***hver time.*** P2 continues on to talk about the last English class they had: ***Idag har vi sett film om Australia fordi at vi skal begynne på prosjekt om Australia. Så denne timen var ikke tilpasset.*** On further thought P2 remembers one way they had adapted the education: ***jo jeg hadde tilpasset den siden denne timen siden jeg lot teksten på norsk stå på.*** P2 states that applying subtitles to a video is adapting the lesson for students with dyslexia. The participants did not report a common practical approach but that everyone implemented the elements that were perceived as most fitting. For instance: ***Vi har ikke en felles metode, men jeg jobber helt bevisst fordi jeg har mange dyslektikere (P2(2)).*** The participants focused on creating a classroom where dyslexic students are able to engage as "normal" students.

P3s understanding of how teachers adapt their education in a dyslexia friendly school: ***Det er ikke nødvendigvis at en må gjøre tilpasninger bare til den ene eleven eller de to elevene som har dysleksi i en klasse, det kan være tilpasninger som gjøres til hele klassen, men det gjøres på en måte som gjør at de med dysleksi også kan ha nytte av det.*** The participant tries to make adaptations for the whole class in a way that benefits students with dyslexia.

Questions about how the teachers adapt the education for dyslexic students would lead to answers about how the lessons are designed for the whole class with dyslexia friendly-practices in mind, e.g., IntoWords or scanning material so that it is available on the student's Chromebook.

4.3 EFL teachers' Perception of the Practical Implications of the Certification.

Through categories and the second research question two core categories appeared to be central concerning EFL teachers' perception of the practical implications of the certification: «Awareness» and «Digital tools» . They are presented through the participants' quotes. See Model 1 (p.51) for identified categories that characterize EFL teachers' experience of the dyslexia-friendly certification and how they affect their practices.

4.3.1 Awareness

All the participants highlighted awareness as a key result of the certification. More than a unified practical approach, the participants P1 and P2 describe an increase in awareness of dyslexia as a result of the certification. When asked if any changes occurred after the certification, P1 stated: **Absolutt, fordi vi har blitt mye mer bevisst på det.** The participant regarded awareness as important for change and noted that the school had better practices on kartlegging as well as better integration of digital tools in the classroom. P2 stated that the process of awareness is time-consuming: **Vi bevisstgjør hverandre som lærere, det tar tid (P2(2)).** The teacher create awareness amongst each other. P1 believes that teachers should be aware of the different things students with dyslexia might struggle with: **Det er noe med det å vite at ting kan være problematisk for elever med dysleksi som for eksempel vanskeligheter med å lære klokken P1(2).** The example used is that some students with dyslexia may have some trouble with learning an analog clock. P1 believed that the school administration and teachers had developed their competence and awareness: **Jeg tror at både administrasjonen og engelsklærere kjenner på at vi har hevet kompetansen vår på området og fått en bevisstgjøring på det, som vi ikke hadde før (P1(2)).** The teacher believed that the certification was positive for the administration and teachers. The teacher

from the school in the process hoped the certification would make teachers more aware of and competent on how to adapt for students with dyslexia: **bevisst på hva vi driver med og mer observante i forhold til hva vi skal se etter og at vi vet mer om hvordan vi kan tilrettelegge (P3(2)).**

The teacher P2 also noted distinctions between students with "pure" dyslexia and students with dyslexia and comorbidities: **De rene dyslektikerne er enkle, men vi har også flere elever med dysleksi som sliter med andre lærervansker.** Furthermore, the individual differences created a need for different adaptations. **De er skikkelig forskjellige disse dyslektikerne. For en del er dysleksi en av flere ting, motsetning til de rene dyslektikerne. For de som er skikkelige dyslektikere som sliter de med å skrive to bokstaver sammenhengende, så tar jeg det muntlig med dem (P2).** For students who struggle with "writing to letters coherently" the teacher tries to enable the students to speak. Even though students with dyslexia are better at oral tasks, they are often more focused on their writing: **De er veldig opptatt av det skriftlige, men det er det muntlige som de er god på (P2).** After the courses by Dysleksi Norge, P1 believed that all dyslexic students preferred to write with the aid of digital tools. Experiences with dyslexic students changed the teachers' perception: **Så jeg fikk en litt aha opplevelse. Etter kursingen trodde jeg at det å skrive for hånd ikke var en greie for noen med dysleksi, men så har jeg erfart elever som ønsker å skrive for hånd.** Experiences with students changed the teachers belief that all students with dyslexia prefer to write on their computer.

Another perspective raised by P1 was a concern from a parent that some dyslexic students prefer books in real life rather than screens: **vi har jo hatt veldig mye fokus på det digitale, men nå hørte jeg en på et foreldremøte jeg var på som mor, en som snakket om at noen med dysleksi er helt avhengige av å ha bøker og ikke det digitale for å klare å få med seg noe. Så det er helt sikkert store forskjeller innenfor de som har dysleksi og ulike typer og ulike vansker man har.** Finally, an important aspect is that the teachers don't see dyslexia as only a disadvantage. P2 believes that dyslexia may be an advantage for students: **de har faktisk en potensiell fordel i livet videre hvis det er kun dysleksi de har og ikke andre ting. De lærer seg arbeidsmetoder og arbeidsstrategier på en helt annen måte enn de andre som jeg tror vil være nyttig for de videre i livet (P2)** The advantages come from the students

abilities to learn different methods and strategies. This might be positive for the students' self-esteem.

4.3.2 Digital Tools

According to Dysleksi Norge, the purpose of digital tools is not used to teach a skill, but rather as an aid to compensate for a lack of skill (Solem, 2015, p.125). The three subjects emphasized the importance of digital tools as a dyslexia-friendly practice. Digital tools were also central at P2s school. When asked what the school gained from the certification the participant responded: ***det førte til at alle måtte tenke likt. Alle måtte sette seg inn i de samme digitale programmene, alle måtte bli bevisstgjort samtidig og på samme måte, vi stod sammen som et kollegiet.*** The certification led to a common understanding of digital tools. Participants described digital tools as a means for aiding dyslexic students in their work with both reading and writing.

There seemed to be an overarching focus on digital tools in the schools, P2 had experienced a substantial change in how teachers adapt to students with dyslexia. Surprisingly, the participant remarked that this was not due to the certification but because: ***...ikke pga. at vi er en dysleksivennlig skole, men pga. at vi har fått redskaper som gjør det enklere, for eksempel chromebook. (P2)*** New digital tools made it easier to adapt the education for students with dyslexia. P1 states that : ***Det som skolen har lagt vekt på er at alle elevene har sin egen digitale enhet altså en chromebook og så har vi da fått opplæring i ulike hjelpemidler. Vi har hatt mye fokus på ulike digitale hjelpemidlene som Intowords som vi skal lære alle elevene å bruke og så er det litt opp til dem selv hvor mye de ønsker å bruke disse digitale hjelpemidlene, men alle skal få opplæring i det (P1).*** One key goal for dyslexia-friendly schools seem to be the idea that aid e.g. IntoWords creates a classroom where dyslexic students can participate in regular class activities alongside their peers. This is done through training the students in different digital tools which the students received training in. The students themselves decide whether to utilize the digital tools. According to P1, Digital tools makes it possible for teachers to focus more on comprehension and sentence structure: ***Tidligere har det gjerne vært at de [Elevene] ikke kom videre fordi det var så mye skrivefeil og så ble det det de måtte fokusere, mens de kanskje kunne lært seg***

masse spennende ord og setningsbygning. Previously, the students would have to focus on spelling. Now the teacher can focus more on exciting words and sentence structure. Digital tools has the possibility of aiding the students with grammar correction, word suggestion and writing: **tilpasning gjennom at de har tilgang til rette funksjoner i Google og IntoWords som hjelper med for eksempel å foreslå neste ord eller å lese opp egen tekst eller at det ligger skriverammer ute P1 (2).** P1 describes the changes happening in the EFL subject: **Før i tiden så leitet vi gjerne etter skrivefeil når vi rettet en tekst, det var en del skrivefeil og jobben som engelsklærer ble å lære de å skrive riktig. Men, med de gode hjelpemidlene de har nå så er ikke det noe særlig stort problem lenger fordi når de skal skrive tekster så har alle tilgang til gode hjelpemidler som gjør at tekstene blir ganske feilfrie. Sånn at det som vi må jobbe med er å utvikle ordforråd og utvikle språk og utvikle tekstoppbygging. Og da klarer de seg like godt som alle de andre.** Due to the digital tools the main challenge for students with dyslexia is no longer to write words correctly. The access to digital tool is highlighted as one of the most effective means to help students with dyslexia.

P3 believed that visual support was essential: **Jeg tenker at visuell støtte er kjempeviktig. Beskjeder må gis muntlig og skriftlig, gjerne skrevet med dysleksivennlig font og utheve det viktigste med fet skrift slik at man kan finne de viktigste ordene (P3).** The participant focus on delivering messages both written and orally. The written text should be in dyslexia-friendly fonts and in bold to highlight key words. The participant explains that teachers need to aware of how to present information: **Vi må passe på støy på et ark, altså hvor mye effekter, bilder, dupperingser og grafer vi presenterer - det kan hjelpe men også være forstyrrende (P3).** Several sources of information may be distracting according to P3. Additionally, the teacher would advise students with dyslexia to create a list of words that are often mixed: **(lærer) rådgiver elevene til å ha en liste med blandingsord, så vi lett kan unngå feilene ettersom dette ikke handler om kunnskapsfeil, men om dysleksi (P3).** The participant remarks that grammatical error are not related to knowledge in the case of students with dyslexia. As mentioned above the preferred tool was IntoWords: **Vi har blitt opplært i IntoWords, altså at vi skal passe på at de som trenger det bruker det til enhver tid.** The teacher has received training on IntoWords and sees it as their task to make sure the students who need Intowords use it. All three participants refer to the reading and writing

assistant tool *IntoWords*. They focused on *Intowords* function of translating words into speech and error correction: ***Man kan få opplest egen tekst eller tekster på internett og du kan også få den til å foreslå neste ord, så det er også en veldig god hjelp for de med dysleksi hvis selvfølgelig den foreslår det ordet du trenger, så slipper du å bekymre deg for skrivemåten, så det var et redskap som vi allerede kjente til før vi ble dysleksivennlig. (P1)*** The tool's main advantage is that it simplifies reading and writing for increasing their confidence in writing correctly.

While some students seem to use *IntoWords* consistently others do not: ***Jeg ser jo at noen er veldig kjappe og har for eksempel alltid IntoWords oppe når de skriver uansett hvilket fag, da er de liksom drillet i det, mens andre bruker det bare absolutt bare når de må .***

P2 raised another point concerning the use: ***Dette med intoWords glir ofte vekk for de som skal bruke de. Jeg har mange dyslektikere i min klasse, jeg har fire nå og to som kommer, men å få de til å bruke intowords er en kamp.*** These findings amplify that having access to the tool will not ensure the students' use of the tool. Although digital tools may be effective it depends on how it is implemented. One participant explained three different factors: ***En ting er å ha tilgang verktøyet, en annen ting er å ha kunnskapen til bruke det, en tredje ting er å velge å faktisk bruke det. (P3).*** The effect depends on availability, usage and abilities of students and teachers. This point may indicate some challenges with solely relying on digital tools. Digital tools have been important for the participants' understanding of what they regard as dyslexia-friendly practices. As the school becomes more digital, the teachers view the assistant tools as being helpful for the students with dyslexia.

4.4 Grounded Theory

Summarized, the participants perceive an increased awareness of dyslexia in dyslexia-friendly schools. According to the participants, dyslexia-friendly practices are deeply connected to the use of digital tools in the EFL classroom. Teachers use tools to make the text available to listen to, correct misspellings, and suggest words for students. The participants believe that dyslexia-friendly practices should be universal, meaning that adjustments can be made for an entire class with dyslexia-friendly practices in mind. Contextual factors such as the certification process and joint-teacher meetings affect the teachers perception of the

certification. The participant from the school in the certification process problematized in- and out-group mechanics related to the certification process. In addition, other contextual factors affect the teachers' perception of the certification such as demands and resources, teacher agency and experience.

Through the two research questions, this grounded theory is proposed: *"The act of certifying a school as dyslexia-friendly affects EFL teachers' awareness of dyslexia and the main practical implication is the use of digital tools in the EFL classroom."*

5. Discussion

This thesis focuses on EFL teachers' perceptions of the dyslexia-friendly certification and their perceptions of how it affects their practice and daily work. Even with a limited sample size and specific context, these findings can increase the understanding on how to realistically and insightfully ensure the well-being of students with dyslexia, while creating an environment where both EFL teachers and students with dyslexia can thrive. To answer the two research questions and to argue the importance and relevance of the study the following chapters aim to discuss the proposed grounded theory: *"The act of certifying a school as dyslexia-friendly affects EFL teachers' awareness of dyslexia and the main practical implication is the use of digital tools in the EFL classroom."*

5.1 What are EFL teachers' Perceptions of the Dyslexia-friendly certification?

To understand how the EFL teachers perceive the certification, findings will be connected to Borg's (2003) model for teacher cognition and previous research on dyslexia. The core finding of this research question is related to the EFL teachers' increased awareness of dyslexia after the certification.

The term awareness seems to mean that teachers are aware of the condition of dyslexia and some methods for adaptation. All participants repeatedly mentioned and described the term awareness (bevissthet) and focused on a sense of increased awareness of the needs of students with dyslexia (e.g. ***alle måtte bli bevisstgjort samtidig og på samme måte (P2); [Lærere og administrasjon] Vi har fått en bevisstgjøring på det (P1(2))***), and for the teacher in the certification process: ***ønsket mitt er at [...] vi blir mer bevisst på hva vi driver med [angående dysleksi] (P3(2))***. These findings showcase that the teachers described the label of a dyslexia-friendly school as a positive attribute for awareness of dyslexia. The certification could also have a significant symbolic effect on teachers and the school's overarching values and aims. In my opinion, the certification may create a signaling impact on the teachers' cognition due to a "collective awareness." The teachers are aware that their school highly prioritizes creating a dyslexia-friendly environment. Thus, they may seek to pay more attention to students with dyslexia. The certification may lead to a shared principle that students with dyslexia ought to be able to have favorable learning conditions. This is similar to findings from a widely cited by Breen et al. (2001); findings from the study indicated that teachers that worked under similar contexts would implement shared principles, but in different ways; Breen (2001) named this phenomenon a "collective pedagogy." However, the more detailed questions displayed nuances in what awareness means for each participant. On one side of the specter P1 believed that the certification raised the competence of teachers: ***Jeg tror at både administrasjonen og engelsklærere kjenner på at vi har hevet kompetansen vår på området og fått en bevisstgjøring på det, som vi ikke hadde før (P1(2))***. On the other side, P2 described a fundamental positive change over time in how students with dyslexia were viewed and how their rights were ensured,

independently of a certification process: ***Jeg tror ikke jeg hadde gjort noe annerledes samme hva skolen heter (P2)***. The difference in perception of the certification is striking. It is challenging to pinpoint precisely why the certification outcomes were perceived differently.

An interesting aspect was raised by P3 who told a story about a different certification that the school had received: ***For en stund siden så ble vi en "grønn skole", da var vi veldig interresert i å få det grønne flagget og da fikk vi det grønne flagget og etter det så var det ingen som snakket om det (P3(2))***. During the certification process, the school was united in getting the certificate. However, there was no increased focus or actions implemented after the certification. The implications of this finding are very relevant for the discussion. First, this story serves as a cautionary tale for other certifications that seek longevity. For dyslexia-friendly schools, there is a possibility that the focus shifts to other aspects after the school receives the certificate. Dysleksi Norge mitigates this threat by maintaining the right to revoke the certification if the school does not satisfy the dyslexia-friendly criteria (appendix 5). According to P3, the longevity of the certification is contingent on a structure created by school leadership: ***Jeg tenker at fra ledelsens hold så må det være en ramme. At man tar det opp ofte, det må ikke være sånn at det oppleves som en sånn stunt greie. Det handler om faktisk kompetanseheving P3(2)***. It seems that the certification may lead to different outcomes depending on how school leadership supports teacher competence development and if teachers perceive the certification as more than a stunt. Secondly, there is a possible challenge with certifying a school as dyslexia-friendly without teachers perceiving themselves as competent enough to accommodate students with dyslexia. Borg's model (2003) describes this dynamic in contextual factors as an incongruence; there seems to be a perceived difference between the school's stated competence (practice) and the teachers' actual competence (cognition). P3 discussed the competence and practical aspects: ***Så jeg håper at det faktisk skal få en praktisk påvirkning på undervisningen at dette er noe vi gjør fordi vi vet hva vi skal gjøre og fordi at vi ser at dette er viktig å gjøre (P3(2))***. The participant hoped that the certification would have practical implications and that teachers would believe in dyslexia-friendly practices. As the participant notes, the certification process is only one fraction of the work needed to ensure dyslexia-friendly teaching.

Another part of the equation is that the certification is influenced by the balance between demand and resources. The EFL teachers were all very open to measures that would increase their competence on the topic of dyslexia. Nevertheless, they cited factors such as time, different school programs, administrative work, and updates to the curriculum as barriers to the implementation of dyslexia-friendly practices. The teachers stated factors that affected their practice, such as parents, societal trends, and new possibilities with digital tools. The context in which teachers teach has a powerful impact on their cognition (Borg, 2003, p. 94). These findings relate to the contextual factors in Borg's framework of teacher cognition (Borg, 2003). While an underlying "collective awareness" and "collective pedagogy" may be a possible advantage for dyslexia-friendly schools, one participant suggested there are differences between teachers and not one common methodology. ***Vi har ikke en felles metode, men jeg jobber helt bevisst fordi jeg har mange dyslektikere (P2(2))***. An example of this was displayed between P3's first interview (November, 2021) and the second interview (February, 2022). In that period, the school had created an expert group of teachers who would travel to courses by Dysleksi Norge. P3 states a problem with this method: ***Problemet er at det blir indirekte at vi må høre "ja vi var på et kurs og der snakket vi om ..." for da distanserer man seg litt fra det (P3)***. The teacher described that they wanted to learn more about dyslexia. However, the certification process seems to revolve around a group of teachers who, in turn, relay the knowledge to other teachers. An essential and possibly tricky dimension of this structure is that it may create an in-group and out-group of teachers at the school: ***Det blir nok dessverre litt "stemoderlig" behandlet av andre enn de som sitter i den ressursgruppen. P3(2)***. This structure where an elected few is trained and responsible for conveying the knowledge to the rest of the teaching staff may be perceived as problematic. Differences between how teachers perceived the certification were also discussed by P2: ***Det var noen som brant for det og de fikk jo alle med***. Interestingly the teacher also describes a group of teachers who advocate for the certification. This might be frustrating for some teachers and a relief for others. Meaning that the teachers themselves, to some degree, can choose whether to interact with the resource group or not.

Another aspect of the certification was discussed by P3(2) when asked if the criteria list had an impact on their EFL teaching: ***Nei, sånne kriterier blir fort en sånn dårlig samvittighet. Som en sånn "det burde vi gjøre eller det burde vi ha gjort"***. The criteria list could become a

source of bad conscience. The criteria by Dysleksi Norge are probably not intended as such. However, the criteria describe requirements for a dyslexia-friendly school and, therefore, may serve as an evaluative source for teachers. At the same time, most of the criteria list prescribe the requirements to "the school," not teachers specifically. It could be discussed whether the list of criteria is relevant to the teachers' daily practice. The participants assume that there are expectations from both school administration and parents regarding how they adapt to these students. Dysleksi Norge might be aware of this dimension, as seen in how the criteria are worded. For example, their criteria seem to signify that the schools are responsible for the implementation rather than individual teachers. Even though this may be the intention, the certification may potentially create a discrepancy between parents' expectations and teachers' competence since the entire school is labeled as dyslexia-friendly.

Some of the teachers described that the certification leads to parents' perception that all teachers have received extensive training because the whole school is labeled as dyslexia-friendly. From a teacher's perspective, while the certification highlights areas of awareness, the relationship between demands and resources is central to their practical application. Borg (2015, p.324) states that "The social, institutional, instructional and physical settings in which teachers work have a major impact on their cognitions and practices." In this case, the teachers are affected by a new certification that signalizes that their school is dyslexia friendly, even if some teachers may perceive that they lack the competence to adapt the education for students with dyslexia. The teachers believed that the certification would give parents a sense of security that their child's needs would be cared for more than in a school without it. This may be because the students with dyslexia communicate frustrations directly to their parents or that the parents perceive that teachers at the school need competence development to meet the needs of their children. In P1's school, the parent committee (FAU) initiated the certification, which could signify that parents felt that the school and teachers should increase their awareness and competencies in dyslexia-friendly practices. As P2 explained: ***Altså, man har det i bakhodet. Da har man foreldre som passer på ... da må man virkelig skjerpe seg (P2(2))***. Parents would remark that the school was dyslexia-friendly and therefore expect more from EFL teachers at dyslexia-friendly schools than teachers from non-dyslexia-friendly schools. P3 and P2 would also remark that they wished for a national strategy as opposed to the certification of some schools (e.g.

Jeg tenker at alle skoler burde være dysleksivennlige egentlig, at det ikke burde være opp til den enkelte skole om de skulle lære om dysleksi. Det er jo slik at alle elever med dysleksi burde få de samme mulighetene uavhengig om skolen deres velger å bli dysleksivennlig. (P3); de påstår at vi er en enhetsskole, så da må dette komme ovenfra [fra myndighetene] (P2)). These teachers problematized the certification because they believed that this should be the standard and not contingent on initiatives from individual schools, parent committees, or teachers. In my opinion, the statements from P3 and P2 can be interpreted in different ways. One interpretation is that the teachers believe that the certification is very effective; therefore, this should be replicated nationwide. Another interpretation is that the certification may paint an unrealistic picture of the teachers' competence. The latter interpretation is supported by this statement from P2(2): *Så tenker jeg på naboskolene våre som ikke har fått sertifiseringen. Jeg er sikker på at de har gjort kjempebra arbeid med sine elever.* The participant believes that other schools without the certification probably do some great work with their students. At the same time, statements from the participant that routines have been created to appease parents: *Jeg har fått en rutine fordi jeg har mange dyslektikere og foreldre som maser hele tiden. (P2(2))* This indicates that the teacher may feel that there is an excessive amount of parental involvement concerning their teaching methods. This should be investigated further so that administration and teachers implement the most effective and realistic measures to accommodate students with dyslexia.

To summarize, the EFL teachers' from dyslexia-friendly schools raise "awareness" (bevissthet) as a positive outcome of the certification. Participants describe the term as relating to awareness of the condition of dyslexia and of dyslexia-friendly practices. The study emphasizes a "collective awareness" and "collective pedagogy" among the teachers due to the certification. However, closer investigation shows contrasting views of the certification. The participant from the school in the certification process also envisaged awareness as a positive outcome. Even so, the same teacher raised concerns about in-group and out-group and disparities in competence development. Participants from the dyslexia-friendly schools were of opposed perceptions regarding the outcome of the certification. One believed that the certification led to competence development for teachers at the school, and the other believed that their practice would not change due to a certification. There seems to be a discrepancy between the access to resources to match the new demands. The teachers

stated factors such as parents, societal trends, and new possibilities with digital tools that affected their practice. These findings raise discussions of how the certifications affect the EFL teachers' classroom practice.

5.2 How do EFL teachers Implement Dyslexia-friendly Practices in the EFL Classroom?

During the first round of data collection and analysis, difficulties with understanding how the EFL teachers created a dyslexia-friendly classroom arose. It became apparent that it was crucial to understand how the EFL teachers perceived their classroom practice from a dyslexia-friendly perspective. As such, follow-up interviews were conducted with a second research question in mind. As mentioned before, the findings are based on interviews. Therefore, the following findings can only be viewed as the teachers expressed thoughts and beliefs about their practice. On the other hand, Borg (2015, p.12) states that teacher cognition and classroom practice are deeply connected. The core finding indicates that digital tools were central to EFL teachers' work for adapting the education for students with dyslexia.

The teachers from dyslexia-friendly schools experienced the certification as making them more aware of dyslexia and using digital tools. For instance, P2 states that all the teachers developed an understanding of digital tools: ***Alle måtte sette seg inn i de samme digitale programmene***. Each participant used the digital tools to accommodate students with dyslexia before the certification. However, one participant described better digital competence and another described new routines as the result of the certification (***Jeg tror at både administrasjonen og engelsklærere kjenner på at vi har hevet kompetansen vår på området ;Det har blitt mer forberedende arbeid. [for eksempel] Det å ta kopier av ting og scanne de. (P2(2))***). Research suggests that digital tools may help immediate some of the challenges students with dyslexia face, such as error correction (Johansson, et al., 2017, p.120; Dawson, et al, 2018, p.228;). The participants describe that when school becomes dyslexia-friendly, teachers and the school seem to focus on incorporating digital tools, with functions such as grammar correction, text to speech, and word suggestions. This was also noted by one participant who stated that the error correction aspect was helpful: ***Før letet vi***

mye etter skrivefeil men nå gjør hjelpemidlene at tekstene blir ganske feilfrie (P1). All participants highlighted the digital tool IntoWords and described the functions such as text to speech (TTS) and speech to text (STT), and word suggestions as beneficial for students with dyslexia in the EFL classroom. In other words, programs that allowed students with dyslexia to listen to the text, create text orally, and suggest words were seen as favorable. Perlmutter et al. (2017, p.196) found in a meta-study that researchers tend to report positive results with TTS and STT. However, the authors identify gaps that require more research: such as the frequency of use, how to use and what tools to use.

Interpretations of the data suggest that teachers believe that digital tools create effective ways for accommodation. Firstly, it enables students with dyslexia to write better texts with fewer grammatical errors. Secondly, as the teachers cannot create individualized lessons, digital tools can be utilized for more effective differentiation. Finally, the participants perceive that advances in technology have diminished the gap between students with dyslexia and students without dyslexia. In my opinion, there are positive effects of implementing new routines and increasing teacher competence and awareness on digital tools. However, the findings can make one question the significant reliance on digital tools. The same tools that have the potential for radical change in EFL teaching also have the potential for a false sense of security if touted as the only means of adaptation in dyslexia-friendly schools.

It seems that the pedagogical use of digital tools is more central to outcomes than just the access to the tools. One participant (P3) described factors for successful implementation, such as access, how digital tools are used, and digital competence, which impacted the success of the implementation: **En ting er å ha tilgang verktøyet, en ting er å ha kunnskap til bruke det, en tredje ting er å velge å faktisk bruke det. (P3).** Implementing digital tools is about more than just providing access to students with dyslexia. The effects are contingent on the teachers' pedagogical use of the tools, how the teachers and students are taught to utilize them, and the abilities possible within the tools themselves.

This is supported by several studies indicating that implementing digital tools may have mixed results for students with dyslexia. For example, Bjørklund (2011, p.7) found that

learners with dyslexia exhibit different preferences for digital tools, despite being identified with the same learning needs. P2 described that students with dyslexia are often reluctant to use digital tools: ***å få de til å bruke intowords er en kamp (P2)***. The teacher would struggle to make students with dyslexia utilize Intowords. P1 emphasized that the school provides the students with a personal computer and training on digital tools. However, the participant also stated that the use of the tools was up to each student. Another challenge relates to facilities: ***Hvis en elev ønsker å snakke inn og så skriver datamaskinen det de sier. Men, da er vi avhengig av å ha et rom som er tilgjengelig (P1)***. The student is dependent on an available separate room. For teachers and students, digital tools can provide new opportunities in areas such as differentiation and writing aid. Although, in my opinion, the same tools may be a source of frustration and misuse. An example of this could be a student with dyslexia that prefers to write by hand. This, in turn, can make their adaptation vulnerable if a student with dyslexia does not want to use the digital tools that the teacher can provide.

Parallels to this can be drawn to research from Andersen et al. (2019), who found that students with dyslexia would have problems with integrating the information from multiple sources, which was due to limitations of working memory. When students with dyslexia are presented with different sources of information (e.g. video, text, animation, and speech), they may have difficulties due to an impairment in their working memory (Smith-Spark & Fisk, 2005; Mayer, 2001). As such, dyslexia-friendly teachers should consider how to present information in ways that do not overload working memory. Interestingly, P3 highlighted the importance of concise information: ***Vi må passe på støy på et ark, altså hvor mye effekter, bilder, duppedingser og grafer vi presenterer - det kan hjelpe men også være forstyrrende (P3)***. The participant believes teachers should be aware that several inputs may be distracting. Contrary to research, P2 considered their previous EFL lesson to be adapted because the movie had subtitles. This is interesting because researchers such as Knoop-Van Campen et al. (2020) found that students with dyslexia had trouble integrating information from both video and text at the same time. While digital tools can be helpful, the findings show an apparent lack of methods other than digital tools designed to remedy challenges that students with dyslexia face. If digital tools such as Intowords are perceived as the end all be all of the dyslexia-friendly practices, I believe that teachers lose the opportunities within

the digitalized classroom. Dawson et al. (2018) support this view, and emphasize that "Assistive technologies (AT) is not a replacement for effective intervention strategies."

Nevertheless, all the participants perceived that the way to create a dyslexia-friendly EFL classroom is through universal adaptation with the use of digital tools accessible to all. (*...vi inkorporerer [nå] dysleksivennlighet i alt vi gjør (P1), [Jeg tilpasser for dyslektikere] hver time (P2); Den tilpasningen gjør vi, eller gjør jeg hele tiden, eller prøver jeg å gjøre hele tiden (P3);*) Even though the strategy chosen is universal adaptation, the teachers are aware that there are differences between students with dyslexia. P2 described differences between students with "pure" dyslexia and dyslexia with comorbidities (e.g., ADHD): *De reine dyslektikerne er enkle, men vi har også flere elever med dysleksi som sliter med andre lærervansker. (P2).* The students with "pure" dyslexia were viewed as easy compared to students with dyslexia and comorbidities. Researchers agree that dyslexia often co-occurs with other learning difficulties (Nijakowska, 2010, p.5). With the many variations of dyslexia, it may be difficult to accommodate students with dyslexia. Nevertheless, the foundational premise of the universal approach seems to be that it is possible to create lessons that promote learning for all students at the same time. This is interesting as Nijakowska (2010, p.195) argues that teachers should create individual material and tasks tailored to the students with dyslexia. The need for individual adaptations comes from the fact that dyslexia manifests differently in individuals (Helland, 2019, p.144). Therefore, the idea of universal adaptation and dyslexia could be viewed as an oxymoron. In other words, as dyslexia manifests differently in students, teachers and students may have problems with a "one size fit all" solution in a dyslexia-friendly school. On the other hand, universal adaptation through digital tools may be the only realistic option for the EFL teachers in a situation where teachers are without formal education on dyslexia, and time and resources have to be allocated to several different places. For example, researchers site common problems concerning digital tools in school, such as limited training, limited funding, lack of shared vision, access to support, and a lack of teacher time (e.g., Flanagan, Bouck and Richardson, 2013; Copley & Ziviani, 2004; Ault, Bausch, and McLaren, 2013). Furthermore, the idea of universal adaptation seems to stem from the objective of creating a classroom where students with dyslexia can participate on equal terms. This view was central to the certification according to P1: *De hadde veldig fokus på det digitale, det skulle bli muligheter*

og det var viktig at de med dysleksi skulle ikke bli sittende med at de må gjøre noe annet i klasserommet, at de blir sett rart på. Det skal være sånn helt greit å ha den vansken, de skal gjøre det samme som de andre. Det tror jeg er en felles enighet her. The participant believed that the school was united in the belief that students with dyslexia should be able to participate in the class in the same ways as students without dyslexia. Studies by researchers (e.g., Humphrey, 2002; Tsovili, 2004; Nelson & Liebel, 2018) have found that the condition of dyslexia may be harmful to the students' self-esteem in school. Therefore, it may be advantageous for these students to feel like they are able to succeed academically regardless of their dyslexia. At the same time, a universal approach through digital tools presupposes that this is the most effective means of accommodating students with dyslexia. Interestingly, Dysleksi Norge states that dyslexia-friendly methods are methods that ensure understanding, the use of multiple senses e.g., MSL, and routines for assessment for learning. More critically, Dysleksi Norge acknowledges that there are differences across students with dyslexia and that there is no universal method; these criteria are more concerned with the teachers' repertoire of different methods (Solem, 2015, p.56).

While this thesis did not seek to investigate the teachers' knowledge of dyslexia or observe their classroom practices, the findings suggest that the teachers are more reliant on practical and experience-based knowledge than science-based measures. Findings related to the teacher's reported implementations are interesting as the research recommends a multisensory approach for teaching students with dyslexia (Johnston, 2019; Schlesinger & Gray, 2017; Ritchey and Goeke, 2006 & Nijakowska, 2010). Even though researchers recommend multisensory approaches, questions regarding the feasibility of introducing this method to EFL teachers arise. First, reading extensive literature with opposing views and learning unfamiliar teaching methods is challenging in a busy workday with continuous challenges. Statements such as: **Jeg vet ikke hva det betyr, alt dette forskningsbaserte (P3)** and **Jeg vet ikke om det finnes engang [forskningsbaserte tiltak] (P2)** substantiate the theory of a gap between research and practice. The research was viewed as far-removed from the participants' daily work experience. This was further emphasized by P1(2): **Det er ikke slik at jeg som vanlig lærer går rundt å leter etter forskning.** Second, even if EFL teachers investigate research on the multisensory approach, the practical implications of such methods may be challenging to realize. In-service teachers have developed their

classroom practice over time, and their experiences have had a considerable impact on their cognition (Borg, 2015, p.126). In my opinion, teachers would need more than the methods prescribed by research articles to adopt multisensory approaches. On dyslexia, researchers have found that teachers report a lack of formal education (Knight, 2018, p. 214) and that teachers lack the necessary skills to accommodate students with dyslexia (Nijakowska, 2010, p.190). With this reality, it is possible to assume that many EFL teachers have to rely on trial and error regarding how they adapt to students with dyslexia. This is supported by P2's statement about common sense: ***Vi bruker sunn fornuft (P2(2))*** and the SINTEF's monitor rapport (2019, p.85) which found that "trial and error" was the predominant method by which teachers increased their digital competence.

These findings could be attributed to the gap between research and practice, historically observed in teaching practices (e.g., Dewey, 1904; Korthagen, 2008; Nijakowska, 2010). The findings from this study substantiate that teachers often do not seek teaching methods from research. In my opinion, Dysleksi Norge can not be given the sole responsibility of educating teachers on dyslexia or digital tools. The certification can be viewed as one step towards teacher competency in these areas. On the other hand, I believe that teacher training institutions have a special opportunity to educate pre-service EFL teachers on dyslexia and the practical implications of research-based methods. Without this, the gap between research and practice will likely continue.

6. Conclusion

This thesis aimed to investigate EFL teachers' perceptions of the certification and the practical implications. Through the two research questions, this grounded theory is proposed: *The act of certifying a school as dyslexia-friendly affects EFL teachers' awareness of dyslexia and the main practical implication is the use of digital tools in the EFL classroom.* While the small sample size hurts the generalizability of the results, the Grounded theory method strengthened these findings as it enabled continuous questioning on EFL teaching in dyslexia-friendly schools. Findings suggest controversy between the wanted effect of the certification and the perceived effects reported by the EFL teachers.

Firstly, a specter of reasons was described as to why the certification is valuable, such as an increased "collective awareness," "collective pedagogy," and an increased focus on digital tools. This perspective indicated that the certification could potentially create a unified vision for a dyslexia-friendly school. Furthermore, the findings illustrate that the EFL teachers perceive that digital tools are helpful for students with dyslexia and a measure to minimize differences in the classroom. However, for some teachers, the certification was perceived as a positive label for the school and parents, without actual competence development or new resources for the teachers. The need for balance between accessible resources to meet the new demands, their belief in universal adaptation, and the individual teachers' need for competence development was described as essential to create a dyslexia-friendly school successfully. Finally, this thesis did not seek to evaluate the certification itself. However, an apparent lack of scientifically rigorous studies on the long-term effects of certifying a school as a dyslexia-friendly school creates uncertainties about the effect.

6.1 Further research

The research that has been conducted in the present thesis has highlighted several areas which could be the subject of further research. In effect, findings create a case for a broader focus on dyslexia for teacher education and in-service teacher development. When teachers understand the nature and characteristics of dyslexia, they are better equipped to adapt the education for students with dyslexia. This thesis urges the Directorate of Education and Training (UDIR) and Norwegian policymakers to investigate the potential for national action toward dyslexia-friendly schools and teacher training with a more significant emphasis on how to create a dyslexia-friendly classroom. The current situation creates differences for students with dyslexia based on their school's priorities. This thesis is a small-scale study, and therefore I would argue for a more extensive investigation of how the certification affects teachers, administrators, students, and parents. For instance, future studies might investigate the differences between dyslexia-friendly schools and non-dyslexia-friendly schools. As more schools become dyslexia-friendly, the need for investigation on the effects of the certification multiplies. Research on this certification and dyslexia should not be left to

the field of special pedagogy or neurology. In my opinion, the field of EFL research needs to investigate how teachers can create a dyslexia-friendly classroom.

7. References

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English summary

Research shows that English as a Foreign Language (EFL) teachers perceive their preparedness for accommodating learners with dyslexia as being poor. For many years, teachers in Norway have flagged a need for competence development in educating students with specific needs. In the face of these challenges, several schools have decided to undergo a program to be certified as dyslexia-friendly. The Norwegian advocacy group Dysleksi Norge certifies schools as dyslexia-friendly. However, the certification is not without controversy, some teachers believe that it may create unrealistically high expectations concerning the teachers competence on dyslexia. To the author's knowledge, there has not been much research conducted on EFL teaching in dyslexia-friendly schools.

While the small sample size hurts the generalizability of the results, the Grounded theory method strengthened the findings as it enabled continuous questioning. The study proposed the following grounded theory: *The act of certifying a school as dyslexia-friendly affects EFL teachers' awareness of dyslexia and the main practical implication is the use of digital tools in the EFL classroom*. This theory claims that the certification could potentially create a unified vision for a dyslexia-friendly school and that EFL teachers perceive digital tools as a measure to minimize differences in the classroom and create a dyslexia-friendly environment.

According to the teachers, the certification was mainly perceived as a positive label for the school and parents, while some teachers perceived it as coming without actual competence

development or new resources. These findings suggest a disparity between the wanted effect of the certification and the perceived effects reported by the EFL teachers. Finally, this thesis did not seek to evaluate the certification itself. However, an apparent lack of scientifically rigorous studies on the long-term effects of certifying a school as a dyslexia-friendly school creates uncertainties about the effect. Consideration of the findings supports the view that there is a need for research to explore the teachers' experiences of the certification process and the certification in itself. The relationship between teacher cognition, resources and teacher competency is central to understanding the practical implications. As well as, how external demands from organizations, parents, and school administration affect the teachers work. Research on these concepts are necessary to provide support for EFL teachers in a dyslexia-friendly school.

Norwegian summary

Forskning viser at lærere i Engelsklærere oppfatter deres beredskap for å imøtekomme elever med dysleksi som dårlig. Lærere i Norge har i mange år markert et behov for kompetanseheving for opplæring av elever med spesifikke behov. I møte med disse utfordringene har flere skoler bestemt seg for å gjennomgå et program for å bli sertifisert som dysleksivennlig. Den norske interesseorganisasjonen Dysleksi Norge sertifiserer skoler som dysleksivennlige. Sertifiseringen er imidlertid ikke uten kontroverser, noen lærere tror at den kan skape urealistisk høye forventninger til lærerens kompetanse på dysleksi. Så vidt forfatteren vet, har det ikke vært mye forskning utført på Engelskundervisning i dysleksivennlige skoler.

Mens et lite utvalg skader generaliserbarheten til resultatene, styrker Grounded theory metoden funnene ettersom den muliggjorde for kontinuerlige spørsmål. Studien foreslo følgende Grounded theory: Handlingen med å sertifisere en skole som dysleksivennlig påvirker Engelsklærers bevissthet om dysleksi og den viktigste praktiske implikasjonen er bruken av digitale verktøy i Engelsk Klasserommet. Denne teorien hevder at sertifiseringen potensielt kan skape en enhetlig visjon for en dysleksivennlig skole og at Engelsklærere oppfatter digitale verktøy som et tiltak for å minimere forskjeller i klasserommet og skape et dysleksivennlig miljø. Sertifiseringen ble ifølge lærerne i hovedsak oppfattet som en positiv

merkelapp for skolen og foreldrene, mens noen lærere oppfattet den som å komme uten egentlig kompetanseheving eller nye ressurser. Disse funnene tyder på en forskjell mellom den ønskede effekten av sertifiseringen og den opplevde effekten rapportert av Engelsklærerne. Til slutt, denne oppgaven søkte ikke etter å evaluere selve sertifiseringen. Men, en tilsynelatende mangel på grundige vitenskapelig studier på langtidseffektene av å sertifisere en skole som en dysleksivennlig skole skaper imidlertid usikkerhet rundt effekten. Betragtning av funnene støtter oppfatningen om at det er behov for forskning som utforsker lærernes erfaringer med sertifiseringsprosessen og sertifiseringen i seg selv. Forholdet mellom lærerens kognisjon, ressurser og lærerens kompetanse er sentralt for å forstå de praktiske implikasjonene. Samt hvordan eksterne krav fra organisasjoner, foreldre og skoleadministrasjon påvirker lærernes arbeid. Forskning på disse konseptene er nødvendig for å gi støtte til Engelsklærere på en dysleksivennlig skole.

APPENDIX 1 - NSD Approval

Meldeskjema / [Investigation Dyslexia-friendly EFL teaching: A qualitative study of dyslexia friendly schools and schools](#) - / Vurdering

Vurdering

Referansenummer

133240

Prosjekttittel

Investigation Dyslexia-friendly EFL teaching: A qualitative study of dyslexia friendly schools and schools without the certification

Behandlingsansvarlig institusjon

Høgskulen på Vestlandet / Fakultet for lærerutdanning, kultur og idrett / Institutt for språk, litteratur, matematikk og tolkning

Prosjektperiode

01.09.2021 - 15.05.2022

Meldeskjema

Dato	Type
15.10.2021	Standard

Kommentar

Det er vår vurdering at behandlingen av personopplysninger i prosjektet vil være i samsvar med personvernlovgivningen så fremt den gjennomføres i tråd med det som er dokumentert i meldeskjemaet med vedlegg den 15.10.2021, samt i meldingsdialogen mellom innmelder og NSD. Behandlingen kan starte.

TYPE OPPLYSNINGER OG VARIGHET

Prosjektet vil behandle alminnelige kategorier av personopplysninger frem til 15.05.2022.

LOVLIG GRUNNLAG

Prosjektet vil innhente samtykke fra de registrerte til behandlingen av personopplysninger. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 og 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse som kan dokumenteres, og som den registrerte kan trekke tilbake. Lovlig grunnlag for behandlingen vil dermed være den registrertes samtykke, jf. personvernforordningen art. 6 nr. 1 bokstav a.

PERSONVERNPRINSIPPER

NSD vurderer at den planlagte behandlingen av personopplysninger vil følge prinsippene i personvernforordningen om:

lovlighet, rettferdighet og åpenhet (art. 5.1 a), ved at de registrerte får tilfredsstillende informasjon om og samtykker til behandlingen

formålsbegrensning (art. 5.1 b), ved at personopplysninger samlers inn for spesifikke, uttrykkelig angitte og berettigede formål, og ikke viderebehandles til nye uforenlige formål

dataminimering (art. 5.1 c), ved at det kun behandles opplysninger som er adekvate, relevante og nødvendige for formålet med prosjektet

lagringsbegrensning (art. 5.1 e), ved at personopplysningene ikke lagres lenger enn nødvendig for å oppfylle formålet

DE REGISTRERTES RETTIGHETER

NSD vurderer at informasjonen om behandlingen som de registrerte vil motta oppfyller lovens krav til form og innhold, jf. art. 12.1 og art. 13.

Så lenge de registrerte kan identifiseres i datamaterialet vil de ha følgende rettigheter: innsyn (art. 15), retting (art. 16), sletting (art. 17), begrensning (art. 18) og dataportabilitet (art. 20).

Vi minner om at hvis en registrert tar kontakt om sine rettigheter, har behandlingsansvarlig institusjon plikt til å svare innen en måned.

FØLG DIN INSTITUSJONS RETNINGSLINJER

NSD legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1 f) og sikkerhet (art. 32).

For å forsikre dere om at kravene oppfylles, må dere følge interne retningslinjer og eventuelt rådføre dere med behandlingsansvarlig institusjon.

MELD VESENTLIGE ENDRINGER

Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til NSD ved å oppdatere meldeskjemaet. Før du melder inn en endring, oppfordrer vi deg til å lese om hvilke type endringer det er nødvendig å melde: <https://www.nsd.no/personverntjenesten/fyle-ut-meldeskjema-for-personopplysninger/melde-endringer-i-meldeskjema> Du må vente på svar fra NSD før endringen gjennomføres.

OPPFØLGING AV PROSJEKTET

NSD vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.

Kontaktperson hos NSD: Simon Gogl

Lykke til med prosjektet!

APPENDIX 2 - Interview guide 1

Interview guide

Researching teacher practices regarding dyslexia in Norwegian EFL classrooms

Case: Dyslexia-friendly school X

1. Introduction and information

- 1.1. About me
- 1.2. Purpose of the study
- 1.3. Recording
- 1.4. Confidentiality and anonymity
- 1.5. Handling of data
- 1.6 Start taping

2. Background

- 2.1. Job title
- 2.2. Age
- 2.3. Years employed at X
- 2.4. Education
- 2.5 Subjects

3. Classroom practices

Dette spm er viktig for å forstå hvordan engelsk lærerne forholder seg til å jobbe i en d i skolen i dag.

- 3.1. When did you become familiar with the term dyslexia-friendly school?
What is your understanding of this term?
- 3.2. Did the certification lead you to change your classroom practices?
 - 3.2.1 Physical changes?
 - 3.2.2 Practical changes?
- 3.5. Are there other schools where you have been employed?
 - 3.5.1. How do you experience working with pupils with dyslexia at that school?
 - 3.5.2. Is the dyslexia-friendly school different?

- 3.6. Do you prefer working at a dyslexia-friendly school?
 - 3.6.1. Why?
 - 3.6.2. What are the differences? Any similarities?

4. EFL Teaching

- 4.1. When and where did you learn about dyslexia in education?
- 4.2. Do you use digital tools?
- 4.3. What types of adjustments do you make for dyslectic students?
- 4.4. Do you experience being a dyslexia-friendly school as an asset in your EFL classroom practices?
 - 3.2.1 What benefits in particular?
- 4.5. In your opinion, what are the attitudes of dyslectic pupils when it comes to the English subject?

5. How does being a dyslexia-friendly school affect your assignments at work?

Your subjective opinion

- 5.1. Is the school arranging for (Dyslexia work):
 - 5.1.1. Cooperation?
 - 5.1.2. Office time?
 - 5.1.3. New ideas and innovation?
 - 5.1.4. Cooperation with parents?
- 5.2. Which of the above is the most important for you?
- 5.3. Are these points generally important in your teaching practice?
- 5.4. If so, why are the points addressed important for teachers?
- 5.5. Anything to add?

6. If the teachers at the school discuss dyslexia, are these topics discussed? If so, what is your impression of attitudes? (regarding dyslexia)

- 6.1. Digital tools?
- 6.2. Tilpasset oppl ering?
- 6.3. Testing?

7. Time constraints?

En antagelse jeg har er at lærere vil peke på begrenset tid som en viktig faktor hvis de føler at de ikke tilpasser like bra som de ønsker.

7.1. Is your workday set up in a way where you feel that you have the time to follow up on dyslectic pupils?

7.1.1. Why?

7.1.2. How do you think your workday should be set up? In order to follow up with these pupils.

7.2. Did the school allocate more time to the topic of dyslexia after you became certified?

8. Has becoming a dyslexia-friendly school been helpful to dyslectic pupils?

8.1. Which changes have you observed in the pupils?

8.2. Any changes you have observed in the teaching staff?

8.3 Do you think that all schools should be dyslexia-friendly?

9. In your opinion, are there any measures that could help you when teaching pupils with dyslexia?

11.1. Are there any measures that you currently employ?

11.2. What are the reasons for these measures?

11.3. How effective are they? (in your opinion)

10. Other

12.1. Is there anything you want to add or something else I should have asked you about?

12.2. Are you ok with me returning with a couple of questions if needed?

APPENDIX 3 - Interview guide 2

Intervjuguide: oppfølgingsintervju.

1. Viser listen over kriteriene. Les opp deler av kriteriene.

Punkt 3 - 3. Skolen arbeider kontinuerlig med kompetanseheving av lærere på områdene lese- og skrivevansker, matematikkvansker og språkvansker, samt god pedagogisk bruk av IKT-hjelpemidler.

- Hvordan arbeider skolen kontinuerlig med kompetanseheving på de nevnte områdene?
- Føler du at du har tilstrekkelig kompetanse på de områdene?

Punkt 7. Skolen må ha en god leseplan som bygger på forskningsbasert og anerkjent opplæring i lesing. Dette må være utbredt praksis i klasserommet. Skolen har rutiner for å sette inn forskningsbaserte tiltak for elever som står i fare for å utvikle lese- og skrivevansker, matematikkvansker eller språkvansker. Skolen evaluerer effekten av tiltakene underveis og justerer tiltakene for å sikre best mulig utvikling.

- Vet du om dere har en leseplan i Engelsk?
- Vet du noe om hvilke forskningsbaserte tiltak du kan gjøre? Eksempler?

Punkt 8 - Skolen arbeider aktivt for å fremme tilpasset opplæring gjennom å legge til rette for varierte arbeidsmåter. Skolen benytter metoder som sikrer forståelse, har gode rutiner for «vurdering for læring» og involverer elevene i egen læring.

- Hvordan gjøres dette?
- Varierte arbeidsmåter og gode rutiner for "vurdering for læring". Har du eksempler på dette?
- Metoder som sikrer forståelse. Hvilke metoder mener du sikrer forståelse? Har du eksempler?
- Hva betyr "vurdering for læring"?

Punkt 10 - Foresatte skal få god informasjon og skolen sikrer foreldremedvirkning?

- Hvordan gjøres dette?

Endring etter innføring av tiltak:

1. Hvordan mener du konkret disse tiltakene bedrer engelskundervisningen din for elever med dysleksi?
2. Hvordan er dette sammenlignet med før sertifiseringen?

3. Hvem mener du er ansvarlig for at du skal kunne tilpasse undervisningen din for barn med dysleksi?
4. Hvem følger deg opp? Og hvordan følges det opp?
5. Har du fått nye arbeidsoppgaver som følge av sertifiseringen? Hvilke?
6. Iløpet av en uke, hvor mange timer bruker du på å tilpasse engelskundervisningen og følge opp dine elever med dysleksi?
7. Har dette endret seg etter sertifiseringen trådte i kraft?
8. Har du fått tilgang til nye ressurser som følge av sertifiseringen? Hvilke?
9. "Dette er et anekdotisk spørsmål, men etter din mening, hvis vi deler skolen opp i engelsklærere, administrasjon, elever med dysleksi, foresatte for elever med dysleksi." Hva tror du de ulike gruppene får ut av at skolen er sertifisert dysleksivennlig?

APPENDIX 4 - Excerpt of coding sheet

	Integre kategorier i hovedkategorier. Konstruksjon av teori.	Result
Integre kategorier i hovedkategorier. Konstruksjon av teori.	Selective Coding Digitale hjelpemidler Oppfølging av lærere og elever	Bruk av Digitale hjelpemidler
Integre kategorier i hovedkategorier. Konstruksjon av teori.	Selective Coding Bevisstgjøring Praksis vedrørende digitale hjelpemidler	Bevisstgjøring Digitale hjelpemidler
Integre kategorier i hovedkategorier. Konstruksjon av teori.	Selective Coding Kompetanseutvikling og støtte fra Dysleksiforbund Norge	Kompetanseutvikling og støtte fra Dysleksiforbund Norge

APPENDIX 5 - Application form and criteria

Søknadsskjema, Dysleksivennlig Skole.

Skolens navn:		
Kort om skolen:		
Visjon:		
Postadresse:		
Rektor:		
	Telefon:	
	E-post:	
Kontaktperson:		
	Telefon:	
	E-post:	
Antall elever:		
Avgjørelse om å bli dysleksivennlig er tatt av:		
Er skolen medlem av Dysleksi Norge (krav)?:		
Vilkårene er lest og akseptert (står nederst i dokumentet):		

Beskriv under hvert punkt hvordan skolen jobber med kriteriene. Dette kan være beskrivelser av kriterier det er jobbet med tidligere, men også kriterier det beskrives at skolen har som intensjon om å nå. Merk at det er forventet at skolen har jobbet med prosjektet over tid, og at når man sender inn søknaden er det ment at skolen skal være ferdigstilt for å bli sertifisert. Eventuell veiledning, kompetanseheving, kursing o.l. bør gjøres i forkant av innsending av søknad.

<p>1. Skoleledelsen og lærerne har drøftet hva skolen kan gjøre for elever med lese- og skrivevansker, matematikkvansker og/eller språkvansker og har besluttet at skolen har som målsetting å være en dysleksivennlig skole. En dysleksivennlig skole skal til enhver tid etterstrebe å jobbe etter faglige retningslinjer. Søknaden bør behandles i alle skolens organer og ligge inne i virksomhetsplanen.</p> <p><i>HUSK: Beskriv i korte trekk hvordan prosessen har forløpt. Ta med hele personalet, foreldre og elever i dette arbeidet.</i></p>
<p>2. Dysleksivennlige skoler skal være gode skoler for elever med lese- og skrivevansker, men også matematikkvansker og språkvansker.</p> <p><i>HUSK: Beskriv hvordan dere som skole jobber med matematikkvansker og språkvansker. Det er ønskelig på sikt å ha et godt planverk for alle tre områder.</i></p>

3. Skolen arbeider kontinuerlig med kompetanseheving av lærere på områdene lese- og skrivevansker, matematikkvansker og språkvansker, samt god pedagogisk bruk av IKT-hjelpemidler.

HUSK: Beskriv både hva dere har gjort, og hva dere planlegger for å videreutvikle/ opprettholde kompetansen.

4. Skolen har et læremiddeltilbud som sikrer alle elever tilgang til alt fagstoff. Skolen har innarbeidet gode rutiner for bruk av lese- og skrivestøttende teknologi (LST), digitale lærebøker og/eller lydbøker. Skolen har en rutine for hvordan elever som trenger kompensering, får opplæring, oppfølging og tilgang til disse.

HUSK: Legg ved skolens plan for IKT.

5. Skolen arbeider aktivt for å skape et godt læringsmiljø og har fokus på klasseledelse og god struktur i undervisningen. Det foregår et kontinuerlig holdningssskapende arbeid ved skolen for å sikre at alle elever føler seg trygge og respekterte. Skolen har gode rutiner for både elevmedvirkning og foreldresamarbeid. Det er viktig at en dysleksivennlig skole jobber målrettet med åpenhet rundt det å ha spesifikke vansker.

6. Skolen har innført en rutine for kartlegging av elevene som gjør at elevenes utvikling eller mangel på utvikling overvåkes. Skolen har prosedyrer for hva som skjer når en finner elever med spesifikke vansker.

HUSK: Legg ved skolens kartleggingsplan.

7. Skolen må ha en god leseplan som bygger på forskningsbasert og anerkjent opplæring i lesing. Dette må være utbredt praksis i klasserommet. Skolen har rutiner for å sette inn forskningsbaserte tiltak for elever som står i fare for å utvikle lese- og skrivevansker, matematikkvansker eller språkvansker. Skolen evaluerer effekten av tiltakene underveis og justerer tiltakene for å sikre best mulig utvikling.

HUSK: Legg ved skolens leseplan.

8. Skolen arbeider aktivt for å fremme tilpasset opplæring gjennom å legge til rette for varierte arbeidsmåter. Skolen benytter metoder som sikrer forståelse, har gode rutiner for «vurdering for læring» og involverer elevene i egen læring.

9. En dysleksivennlig skole skal ivareta rettighetene til elever med lese- og skrivevansker, matematikkvansker og spesifikke språkvansker. Skolen må ha satt seg godt inn i de rettigheter og regler som finnes, og ha gode rutiner for å gi informasjon om eventuelle konsekvenser, herunder om fritaksregler, for elevene.

Skolen gir elevene (kryss av):

- rett til å bruke lese- og skriveteknologi (LST) i alt skriftlig arbeid
- rett på tilpassede lekser (Husk: reell tilpasning, ikke mengdedifferensiering)
- rett til å vise sin kompetanse gjennom muntlige besvarelser der det er mulig
- rett til å bruke digitale lærebøker/lydbøker i alle fag
- rett på utvidet tid på prøver/eksamener
- rett til å få oppgavene opplest

10. Foresatte får god informasjon om hva som er skolens plan for oppfølging av eleven. Foresatte medvirker til hvordan skolen kan tilrettelegge for eleven på best mulig måte. Skolen bør lage egnet skriftlig foreldreinformasjon.

HUSK: Legg ved skolens plan for god foreldreinformasjon.

Følgende personer har satt seg inn i søknaden, har godkjent den, og går god for at den sendes Dysleksi Norge:

	Navn:
Rektor:	
Representant for lærerne:	
Representant for FAU:	

Klikk eller trykk for å skrive inn en dato.

Dysleksivennlig skole

Vilkår og betingelser ved søknad

Sist oppdatert: 01.01.2020

Prosess

1. Skolen sender inn sin søknad.
2. Søknadsfrist vår: 01. desember. Søknadsfrist høst: 01. juni.
3. Søknader delegeres til en rådgiver i Dysleksi Norge.
4. Rådgiveren tar kontakt for å avtale besøk.
5. Rådgiveren anlegger skolen et sertifiseringsbesøk. Under besøket skal skolen stille personale, elever og foreldre til disposisjon for samtaler med rådgiver.
6. Rådgiveren kan etterspørre ytterligere informasjon/dokumentasjon før eller etter besøket.
7. Rådgiveren skriver et førsteutkast på rapport som sendes skolen for gjennomlesing for å oppklare eventuelle misforståelser.
8. Rådgiveren ferdigstiller sin rapport som inneholder en konklusjon som enten anbefaler eller fraråder at skolen blir dysleksivennlig. Konklusjonen begrunnes og inneholder informasjon om veien videre.
9. Der rådgiver anbefaler at skolen godkjennes som dysleksivennlig skole går søknaden til behandling i landstyre.
10. Der rådgiver ikke anbefaler at skolen godkjennes som dysleksivennlig skole, kan skolen velge å trekke sin søknad.
11. Landstyret behandler søknaden og fatter vedtak.
12. Etter at skolen er godkjent, får skolen tilbakemelding. Hvis skolen ønsker besøk av Dysleksi Norge for overvåking tar skolen kontakt.

Kostnader

Prisen er 20 000 kroner eks mva. Prisen inkluderer sertifiseringsbesøk og en rapport som inneholder en beskrivelse av skolen basert på observasjon og forslag til forbedringer. Prisen gjelder uavhengig av konklusjonens anbefaling. Faktura sendes etter avgitt rapport.

Medlemskap

Dysleksivennlige skoler må være medlem av Dysleksi Norge. Medlemskap koster 500 kr. pr. år.

Deltagelse i nettverk

Deltagelse i den årlige nettverkssamlingen for dysleksivennlige skoler er forventet, men ikke et absolutt krav. Dersom en skole unnlater å delta år etter år vil det inngå i en totalvurdering om skolen fortsatt kan beholde sin godkjenning som dysleksivennlig skole.

Revisjon/rapportering

Godkjente skoler vil bli bedt om å rapportere sitt arbeid hvert annet år. Rapporteringen vil kun følges opp av et besøk dersom det blir funnet nødvendig og hensiktsmessig.

Tap av godkjenning / inndragelse av godkjenning

Dysleksi Norge forbeholder seg retten til å inndra godkjenningen som Dysleksivennlig skole dersom skolen ikke lenger tilfredsstiller kriteriene som er satt for dysleksivennlige skoler. Det vil skje gjennom en totalvurdering. Skolens samarbeidsvilje til å la Dysleksi Norge vurdere om skolen fortsatt tilfredsstiller kriteriene. Deltagelse i nettverkssamlinger og innlevering av rapporteringskjema vil vektlegges sammen med skolens vilje til å utføre nødvendige utbedringer.

APPENDIX 6 - Consent form

Vil du delta i forskningsprosjektet "Investigating Dyslexia-friendly EFL teaching: A qualitative study of teacher beliefs in dyslexia friendly schools and schools without the certification"?

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å undersøke læreres tanker om dysleksi. I dette skrevet gir vi deg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

Formål

Dette er et spørsmål til deg som jobber som engelsk lærer ved en norsk barne- eller ungdomsskole. Som en lærer i et språkfag skal man ifølge opplæringsloven tilpasse undervisningen, denne studien ønsker å finne mer ut om hva lærere tenker om tilpasning for elever med dysleksi. Formålet med prosjektet er å få informasjon om hvordan engelsklærere forstår tilpasning av denne elevgruppen og hvilke tanker de har rundt deres rolle i tilpasning av undervisning for elever med dysleksi. Det vil bli utført intervjuer med lærere fra tradisjonelle norske skoler og lærere fra skoler som har fått sertifiseringens dysleksivennlig.

Dette prosjektet inngår i min masteroppgave ved Høgskulen på Vestlandet.

Problemstillingene er følgende:

- What are teachers' beliefs of dyslexia-friendly EFL teaching.
- How do teachers from dyslexia-friendly schools and non-dyslexia friendly schools adapt their teaching to dyslectic pupils.
- Are there differences in perceptions of teaching dyslectic pupils between teachers from dyslexia-friendly schools and teachers from non-dyslectic schools?

Dette prosjektet er en masteroppgave.

Hvem er ansvarlig for forskningsprosjektet?

Høgskulen på Vestlandet er ansvarlig for prosjektet.

Hvorfor får du spørsmål om å delta?

Du har blitt spurt om å delta i prosjektet fordi du er en engelsklærer ved barne/ungdomstrinnet. Jeg har valgt et utvalg med deltakere fra 4-6 ulike skoler hvor minst to av dem er sertifisert dysleksivennlig. Totalt vil det være ca. 6 deltakere i studien.

Hva innebærer det for deg å delta?

Dersom du velger å delta i prosjektet vil du bli bedt om å delta på et intervju. Intervjuet vil ta rundt 45-60 minutter. Intervjuet vil handle om hvordan du forholder deg til undervisning av elever med dysleksi og dine tanker rundt hvordan man skal tilpasse undervisningen for elever med dysleksi.

Jeg vil be om noen opplysninger om deg i intervjuet. Dette vil være opplysninger om stilling, alder, utdanning, ansenitet og undervisningsfag. Intervjuet vil bli tatt opp på lydopptak med diktafon, og jeg vil notere underveis, slik at jeg lettere kan bearbeide datamaterialet i etterkant.

Det er frivillig å delta

Det er frivillig å delta i prosjektet. Hvis du velger å delta, kan du når som helst trekke samtykket tilbake uten å oppgi noen grunn. Alle dine personopplysninger vil da bli slettet. Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg.

Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger

Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrivet. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket. Datamaterialet vil bare være tilgjengelig for meg (Axel Morken Owusu) og min veileder Dania Jovanna Bonness .

Datamaterialet vil bli kodet, slik at navn og kontaktinformasjon ikke blir lagret sammen med den innsamlede dataen. Datamaterialet vil oppbevares på HVL sin forskningsserver, dette vil sikre at dataene er trygge og at ingen andre får tilgang til den. Under transkripsjonen av intervjuene vil hver deltaker få et alias, i tillegg vil sensitiv informasjon bli anonymisert eller fjernet før publikasjon. Opplysningene om deg vil bli behandlet konfidensielt og i samsvar med personregelverket.

Hva skjer med opplysningene dine når vi avslutter forskningsprosjektet?

Opplysningene anonymiseres når prosjektet avsluttes/oppgaven er godkjent, noe som etter planen er 15.05.2022. Lyddoptak og annen personinformasjon vil da slettes, og transkripsjoner anonymiseres.

Hva gir oss rett til å behandle personopplysninger om deg?

Vi behandler opplysninger om deg basert på ditt samtykke.

På oppdrag fra Høgskulen på Vestlandet har NSD – Norsk senter for forskningsdata AS vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

Dine rettigheter

Så lenge du kan identifiseres i datamaterialet, har du rett til:

- innsyn i hvilke opplysninger vi behandler om deg, og å få utlevert en kopi av opplysningene
- å få rettet opplysninger om deg som er feil eller misvisende
- å få slettet personopplysninger om deg
- å sende klage til Datatilsynet om behandlingen av dine personopplysninger

Hvis du har spørsmål til studien, eller ønsker å vite mer om eller benytte deg av dine rettigheter, ta kontakt med:

- Høgskulen på Vestlandet ved Førstemanuensis Dania Jovanna Bonness på Tlf: +47 55585723
- Vårt personvernombud: Trine Anniken Larsen, via epost: personvernombud@hvl.no eller på telefon: +47 55301031

Hvis du har spørsmål knyttet til NSD sin vurdering av prosjektet, kan du ta kontakt med:

- NSD – Norsk senter for forskningsdata AS på epost (personvertjenester@nsd.no) eller på telefon: 55 58 21 17.

Med vennlig hilsen

Dania Jovanna Bonness
(Forsker/veileder)

Axel Morken Owusu

Samtykkeerklæring

Jeg har mottatt og forstått informasjon om prosjektet [*sett inn tittel*], og har fått anledning til å stille spørsmål. Jeg samtykker til: Å delta i intervju og at svarene mine brukes i avhandlingen

Jeg samtykker til at mine opplysninger behandles frem til prosjektet er avsluttet

(Signert av prosjektdeltaker, dato)

