

**Independent Project with Specialization in English
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**Adapting English Courses to Support
Reading Comprehension for EFL Students
with ADHD**

*Att anpassa engelskakurser för att stödja läsförståelse för EFL elever
med ADHD*

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Abstract

This paper explores the connections between Attention Deficit Hyperactivity Disorder (ADHD) and the development of reading comprehension skills in upper-secondary English as a Foreign Language (EFL) contexts in Sweden. Addressing the challenges faced by students with ADHD, the study investigates diverse pedagogical adaptations, highlighting the imperative of inclusive education. The purpose is to understand the impact of ADHD on the development of reading comprehension skills in Swedish upper-secondary EFL students, with a specific focus on informing practical pedagogical adaptations. The results section outlines challenges encountered by students with ADHD, encompassing neurobiological aspects, attention-related struggles, and motivational deficits. It discusses the variability in ADHD's impact on language courses and explores adaptations implemented by educators to support ADHD students in EFL settings. Furthermore, the discussion analyses findings, emphasizing tailored assistance, collaboration among educators, students, and parents, and the integration of technology for inclusive learning. Implications for the Swedish upper-secondary curriculum and Skollagen are explored, advocating for adaptable pedagogical frameworks to support diverse student needs in EFL education. The highly likely prospect of instructing students with ADHD in EFL in future professional roles as an EFL teacher underscores and enhances the significance of this research.

Key terms: ADHD, reading comprehension, literacy, inclusive, ESL, EFL, adaptations, teaching strategies, tailored assistance, education, upper-secondary.

Individual Contributions

We hereby certify that all parts of this essay reflect the equal participation of both signatories below:

The parts we refer to are as follows:

- Planning
- Research question selection
- Article searches and decisions pertaining to the outline of the essay
- Presentation of method, findings, discussion, and conclusion

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Table of Contents

1. Introduction	4
2. Aim and Research Questions	8
3. Method	9
3.1 Implementation of Secondary Research Method	9
3.2 Inclusion and Exclusion Criteria	10
3.3 Search Results	11
4. Results	12
4.1 Challenges Faced by Students with ADHD	12
4.2 Adaptations to Aid Students with ADHD	15
5. Discussion	17
6. Conclusion	23
7. References	25

1. Introduction

In this study, we explore the issue of helping students with Attention Deficit Hyperactivity Disorder (ADHD) succeed in learning English as a foreign language (EFL). What approaches are practical, and in what way can teachers adapt English courses to support students in upper secondary school in reading comprehension? Through the exploration of current research, we attempt to find practical answers. Beyond academic importance, fostering an inclusive educational environment becomes essential due to the challenges associated with ADHD, such as focusing difficulties and impulsivity. During the past three years, there has been a nearly 50 percent increase in the proportion of children and youth diagnosed with ADHD in Sweden (The Swedish Welfare Board, 2023). Given the increasing number of students diagnosed with ADHD, it is important to address the challenges associated with it. This study seeks to offer valuable perspectives on customized teaching methods, specifically in the context of EFL. It acknowledges the importance of reading skills for academic achievement and aims to contribute to the overall well-being and self-esteem of students with ADHD.

According to the National Agency for Special Needs Education and Schools (2023), ADHD is a neuropsychiatric condition that presents challenges like focusing difficulties and impulsive behavior, affecting approximately 3.5-7 percent of children and teenagers, often in conjunction with other issues such as language problems or autism. While ADHD investigations are uncommon in preschool, challenges become more apparent in school, requiring tailored teaching methods and support. In the educational setting, ADHD may result in difficulty organizing tasks, planning, and maintaining focus. To address these challenges effectively, teaching strategies should align with the specific needs of students with ADHD, fostering a positive and structured learning environment. Educators play an essential role in recognizing and enhancing the strengths of students with ADHD, positively influencing their self-esteem, motivation, and engagement in school tasks (National Agency for Special Needs Education and Schools, 2023). Teaching EFL to Swedish upper secondary students with ADHD entails addressing various challenges and opportunities. Focused on EFL students dealing with ADHD, this study gives special attention to understanding the impact of this condition on their language acquisition and comprehension abilities. Additionally, it explores practical teaching strategies and adaptations within English courses that consider these students' unique needs. EFL is used in countries where English is seen as foreign but is

essential in education, research, and tourism (Lundahl, 2021). Similarly, English as a secondary language (ESL) refers to countries where English is a secondary language with a solid societal role (Lundahl, 2021). While Sweden was traditionally categorized as EFL, its current societal and educational use of English suggests it could be considered ESL (Lundahl, 2021). It is important to note that this study also considers research related to English as a Second Language (ESL), recognizing the relevance of individuals having multiple second languages.

To explore the details of reading, it is necessary to begin with the fundamental concept of reading comprehension, as highlighted by Skolverket (2016). Understanding what you read is an active process where meaning is derived through engaging with the written text. This includes the interaction between the reader, the text, and the reading task, demanding a combination of decoding skills and interpretation (Kirby, 2007). Skolverket (2016) emphasizes the importance of developing decoding skills and comprehension strategies to promote reading development and success. Decoding skills involve reading words with precision and ease by translating written symbols into sounds and words. It serves as an important element in reading, enabling readers to effortlessly recognize words and grasp the meaning conveyed in written text (Skolverket, 2016). Reading comprehension involves recognizing the significance of comprehension strategies. These strategies, outlined by Kirby (2007), are conscious, goal-oriented plans that readers employ to derive meaning from a text. Tactics within these strategies can vary, ranging from underlining complex words to creating mental simulations to assess the author's arguments. Integrating these deliberate approaches into the interaction between the reader and the text enhances overall comprehension, aligning with Skolverket's (2016) emphasis on the pivotal role of decoding skills and strategic comprehension for successful reading development.

Furthermore, Skolverket (2022) underscores the imperative of accommodating diverse educational needs in the Swedish curriculum for upper secondary schools (Skolverket, 2022). It stresses the requirement for educational equity, clarifying that while teaching methods should be uniform everywhere or resources evenly distributed, students with different learning needs must be considered. Skolverket (2022) acknowledges varied pathways to achieve educational goals, with a particular focus on students encountering difficulties meeting educational objectives. Recognizing that teaching can only follow a uniform approach for some, the text highlights the school's distinct responsibility towards students

with disabilities, emphasizing the necessity for tailored support. Skolverket (2022) supports personalized education, acknowledging that standardized methods are insufficient in addressing the needs of students with diverse learning needs and abilities. In essence, Skolverket (2022) advocates for inclusive education by urging schools to accommodate individual differences. Highlighting the importance of educational equity involves acknowledging and addressing the distinct needs of students, including those with ADHD.

The emphasis on inclusivity by Skolverket (2022) urges tailored teaching for students with ADHD, aligning with their vision of accommodating cognitive differences. This approach, known as differentiation in education, involves presenting a range of diverse learning opportunities for students. This includes offering students choices, designing assignments that accommodate various learning styles, and regularly assessing their progress (Bushie, 2015). Customizing teaching methods, materials, and assessments to suit the individual needs of each student better is important in fostering an inclusive educational environment. Understanding ADHD's impact on language acquisition within EFL classes aims to support educational progress and contribute to an inclusive educational environment, meeting diverse learning needs and empowering educators and students. The significance of researching this area lies in its potential to enhance educational outcomes and overall well-being. Making practical adjustments in teaching to fit the characteristics of ADHD could help students with ADHD improve their language learning and feel more confident in their academic journey. Examining this connection helps educators develop practices that create a supportive learning environment for all students, regardless of their cognitive diversity.

Moreover, Skolinspektionen (2014) highlights that schools in Sweden need to improve their approach to supporting students with ADHD and other learning disabilities. They note that previous inspections have shown deficiencies in identifying needs and supporting students with ADHD. According to Skolinspektionen (2014), lack of inclusion can lead to students with ADHD feeling isolated, misunderstood, and unsupported in their academic pursuits. They suggest that schools need to conduct pedagogical investigations to identify the specific needs of students with ADHD. Additionally, Skolinspektionen (2014) advises that schools should provide teachers with in-depth knowledge and training to ensure that students with ADHD receive the support they need to succeed academically. They also encourage schools to identify areas of improvement and ensure students with ADHD receive the support they need by following up on the effectiveness of the measures taken. Overall, Skolinspektionen

(2014) emphasizes the need for schools to improve their approach to supporting students with ADHD and other learning disabilities to ensure they receive the support they need to succeed academically and thrive in the school environment.

2. Aim and Research Questions

The primary aim of this study is to explore how ADHD influences the progression of reading comprehension skills among upper-secondary EFL learners. By delving into this relationship, we strive to uncover insights that will guide the creation of targeted pedagogical adaptations and approaches, shedding light on effective strategies to support students affected by ADHD in enhancing their reading comprehension abilities within EFL contexts. The specific research questions are formulated as follows:

- According to existing research, in what way does ADHD affect reading comprehension development for EFL students?
- What insights does existing research offer regarding in what way teachers adapt English courses to support reading comprehension for Swedish upper-secondary students with ADHD?

3. Method

Research analysis is used in our study. Norris and Ortega (2006) claim that this method stands as a robust methodological approach strategically designed to integrate and dissect existing research meticulously. This approach serves to deliver an encompassing comprehension of a specific topic or issue. According to Largan and Morris (2019), the methodology hinges upon a meticulous research question that acts as a compass, guiding the search for pertinent data within various sources aligned with the research objective. The ensuing process involves collecting and scrutinizing recurring themes, perspectives, and potential contradictions within the amassed data. In doing so, it forges a dependable and reproducible understanding of accumulated knowledge derived from an array of primary research studies addressing a given issue or query (Norris & Ortega, 2006). By analyzing and interpreting this information, writers show valuable insights, highlighting intricate patterns or uncovering data within the subject. (Largan & Morris, 2019).

3.1 Implementation of Secondary Research Method

In conducting our study, we explored the ERIC (Educational Resources Information Center) database via EBSCO to access peer-reviewed literature pertinent to our research focus in education and psychology. This selection granted us access to a diverse range of scholarly articles, reports, and studies pertinent to our study within the year range of 1999 and 2023. This time span encompassed nearly 25 years of research, offering varied perspectives, longitudinal analyses, and insights into evolving trends within education and psychology.

To initiate our search for primary sources, we cast a wide net of search terms, aiming to capture a broad spectrum of relevant materials. Initially, employing a boolean search with the keywords "ADHD" and "EFL" and "Reading comprehension" resulted in a significant yield of 32,911 sources, reflecting the breadth of our exploration. Amid this extensive pool, our attention was drawn to the first three sources by Akbasli et al. (2017), Liontou (2019), and Villalobos (2012). These sources stood out, specifically addressing ADHD and encapsulating our searched keywords. Despite the overwhelming number of results, these three sources

aligned closely with our research objectives, providing substantial insights into the intersection of ADHD and our study's focus.

However, we refined our search by introducing more specific keywords for a second exploration to manage the voluminous results. Introducing the terms "Attention Deficit Hyperactivity Disorder" and "Methods" and "Upper Secondary School" narrowed our sources down to a more manageable count of 15. We evaluated these sources, seeking publications that not only included our chosen keywords but also directly addressed our study's aims. Ultimately, from this refined pool, two publications by Kałdonek-Crnjaković (2018) and Marashi and Dalatdoos (2016) closely aligned with our criteria, offering valuable insights into ADHD and actionable adaptations.

Moving forward, we conducted a third search using the keywords "ADHD" and "Literacy" and "EFL" and "ESL" or "English as a Second Language" along with terms focused on teaching approaches "Teaching Strategies" or "Methods" or "Tools". However, this attempt yielded a count of 34 results, which, upon scrutiny, revealed that only three sources aligned closely with our research objectives. These three sources by Sparks et al. (2005), Arries (1999), and Sparks et al. (2004) were considered valuable and relevant due to their direct relevance to our study's specific focus on ADHD, literacy, and language education.

Prior to our initial primary searches, we had selected additional search terms to capture the breadth of the study. "ADHD" or "Attention Deficit Hyperactivity Disorder" or "Attention Deficit Hyperactivity-Disorder" and "Reading" or "Reading Comprehension" or "Literacy" and "EFL" or "English as a Foreign Language" or "ESL" or "English as a second language" and "Teaching Strategies" or "Methods" or "Tools" and "Secondary School" or "Upper Secondary School" and "Inclusion" or "Inclusive" were selected to capture diverse perspectives on ADHD adaptations in EFL reading education.

3.2 Inclusion and Exclusion Criteria

In selecting materials for ADHD and education in English courses, specific criteria are pivotal for relevance and applicability. Materials must directly address ADHD's impact on learning in English classes, employing evidence-based strategies validated through

peer-reviewed research. The focus on pedagogical approaches ensures practicality for Swedish education, emphasizing techniques fostering engagement and comprehension tailored to learners with ADHD.

Conversely, exclusion criteria acted as a filter, eliminating irrelevant, generalized, or dubious sources. Unrelated topics diverging from ADHD's direct correlation with English education were dismissed to maintain focus. Generalized information lacking specificity or depth failed to meet the criteria for addressing the nuances of ADHD in English courses. Non-peer-reviewed sources were omitted to ensure currency and reliability, preserving the integrity and accuracy of the educational materials sought for ADHD and English education integration. These exclusion parameters ensured a focused approach, upholding standards of quality and relevance when sourcing educational content.

3.3 Search Results

Table 1

Search Progress and Source Selection

Search Round	Keywords	Initial Results	Refined Results	Selected Sources
1	"ADHD" and "EFL" and "Reading comprehension"	32,911	-	Akbasli et al. (2017), Liontou (2019), Villalobos (2012)
2	"ADHD" and "Methods" and "Upper Secondary School"	15	2	Kaldonek-Crnjaković (2018), Marashi and Dalatdoos (2012)
3	"ADHD" and "Literacy" and "EFL" and "ESL" and "Teaching Strategies" or "Methods" or "Tools"	34	3	Sparks et al. (2005), Arries (1999), Sparks et al. (2004)

4. Results

This study addresses two key questions: first, how does ADHD impact the reading comprehension development of EFL students according to current research? Second, what insights does existing research offer about teachers adapting English courses to support reading comprehension among Swedish upper-secondary students with ADHD? By exploring these inquiries, we aim to unveil understandings and practical adaptations to enhance the educational experience for these students, contributing to discussions on inclusive education and tailored support for diverse learning needs.

4.1 Challenges Faced by Students with ADHD

ADHD affects neurological processes, shaping diverse aspects of cognition and behavior. The neurological facets of ADHD involve a presumed biological basis characterized by a chemical imbalance impacting neurotransmitters like dopamine and serotonin, which are pivotal in regulating focus and behavior (Villalobos, 2012; Marashi & Dalatdoos, 2016). In a study conducted by Villalobos (2012), the researcher focused on a practical intervention designed to support a student with ADHD in a language-learning setting in Costa Rica. The study involved observations, work sessions, and a variety of strategies aiming to enhance the academic performance of a 14-year-old student. Villalobos (2012) mentions that this imbalance notably affects the brain's executive functions, primarily managed by the prefrontal cortex, which is responsible for self-control, and often exhibits abnormalities in ADHD. The resultant dysfunction contributes to core symptoms like hyperactivity, impulsivity, and inattention, possibly influenced by varying neurotransmitter levels in affected individuals (Villalobos, 2012). Moreover, Marashi and Dalatdoos (2016) also note that ADHD's neurological impact encompasses cognitive and behavioral functioning, potentially leading to agitation and anxiety. Emphasizing ADHD's complex nature, its neurological underpinnings involve genetic, neurochemical, and brain structural factors, often running in families and indicating a multifaceted origin (Villalobos, 2012). This diagnosis' global prevalence, recognized as the most common childhood mental disorder in the United States, affects approximately 4.4 percent of the adult population in the country, persisting as a lifelong impairment from childhood into adulthood (Marashi & Dalatdoos, 2016). The neurological

dimensions of ADHD carry far-reaching implications across diverse cultures, varying in prevalence rates, necessitating tailored support and interventions to address individual needs (Marashi & Dalatdoos, 2016). This understanding establishes a foundation for comprehending the challenges faced by those with ADHD, highlighting the importance of personalized interventions to mitigate their distinct struggles (Villalobos, 2012; Marashi & Dalatdoos, 2016).

Furthermore, attention-related challenges significantly impact individuals with ADHD in Foreign Language (FL) learning (Kałdonek-Crnjaković, 2018; Lontou, 2019). People with ADHD struggle with sustaining focus, shifting attention, and handling various stimuli, essential for successful foreign language learning (Kałdonek-Crnjaković, 2018). FL classrooms can pose particular challenges for ADHD students, especially in tasks necessitating sustained attention, like listening or reading comprehension and handling complex information. Their struggles with processing verbal material further impede language learning (Kałdonek-Crnjaković, 2018). In Lontou's (2019) study, which focused on establishing a dynamic learning environment for young EFL learners diagnosed with ADHD, the researcher defines ADHD as a neurodevelopmental disorder characterized by persistent inattention, often accompanied by hyperactivity and impulsivity. Lontou's (2019) study specifically involved 10 EFL students aged 9 to 12 years old, all officially diagnosed with ADHD. According to Lontou (2019), these students may exhibit distractibility, restlessness, and difficulty following instructions or completing tasks on time. Despite varying levels of hyperactivity, individuals with ADHD, as outlined by Lontou (2019), commonly face challenges related to concentration, behavioral control, and organizational skills. Furthermore, they may display impulsive behaviors and verbal outbursts when frustrated, emphasizing the importance of exploring innovative approaches to create an effective learning environment for these learners. These intricate challenges associated with ADHD emphasize the necessity for tailored teaching approaches and specialized assessment practices to effectively support these learners in educational settings (Kałdonek-Crnjaković, 2018; Lontou, 2019).

Additionally, Akbasli et al. (2017) explore the complex dynamics of ADHD and motivation. They elucidate the hurdles learners, young and adults alike, face in initiating and persevering through tasks. Apart from the difficulties in solitary tasks such as reading, the absence of

study skills and strategies for complex tasks compounds the challenge (Akbasli et al., 2017). Negative experiences, anxiety, and comparisons to peers further erode motivation, creating a cycle that inhibits learning. According to Akbasli et al. (2017), the detrimental impact of anxiety on motivation, hindering learning in stressful environments, is a central concern, emphasizing the need for secure and supportive atmospheres to encourage learning and growth. Furthermore, Lontou (2019) adds a broader perspective, acknowledging that while diagnoses like ADHD are not directly attributed to sensory or socio-economic factors, they undeniably impede the development of cognitive skills in students who would otherwise demonstrate average abilities. Lontou (2019) highlights the varied nature of challenges faced by students with ADHD, encompassing motivational aspects that hinder their learning. In essence, the authors collectively shed light on the nuanced facets of motivation for students with ADHD, stressing the need for tailored, positive, and supportive adaptations to cultivate their engagement, confidence, and success in learning.

However, it is important to understand that ADHD's impact on students varies significantly. Sparks et al. (2004) examined the performance of college students diagnosed with ADHD in FL courses. The research challenged the conventional assumption that students with ADHD would encounter difficulties in FL classes. The participants included 68 college students, with 25 classified as having ADHD prior to attending college and 43 classified after entering college. Notably, the participants' academic performance was similar to that of the general student population at the university. Sparks et al. (2004) revealed that students classified as having ADHD not only achieved average to above-average grades in FL courses but also completed these courses and withdrew from very few of them. Furthermore, the participants utilized various instructional accommodations, such as extended time, testing in a distraction-free environment, alternative test formats, comprehension checks, advanced lecture notes, and tape-recording classes, to support their success in FL courses. Similarly, another study by Sparks et al. (2005) aimed to investigate the performance of college students classified as Learning Disabled (LD), ADHD, and LD/ADHD in FL courses. The study included 158 participants, and the results showed that students classified as ADHD and non-petition students classified as LD and LD/ADHD who fulfilled the FL requirement by passing FL courses performed equally well in FL courses. Sparks et al. (2005) suggested that these students did well in FL courses because of their average to above-average cognitive ability and academic achievement in language-related skills. Sparks et al. (2005) also found

that a student's classification as ADHD may not be indicative of whether they can pass FL courses.

4.2 Adaptations to Aid Students with ADHD

Liontou's (2019) study underscores the significance of specialized training for educators, emphasizing its role in delivering effective education tailored to the unique needs of each student. The research highlights the adverse effects of a lack of teaching expertise on the academic progress of students with ADHD, underscoring the imperative for educators to acquire the necessary skills. Furthermore, the study advocates for cautious planning of the teaching methods to cater specifically to the requirements of students with ADHD. A key takeaway from Liontou's (2019) research is the affirmative impact of integrating technology into the learning process. The findings reveal that the incorporation of technology in the classroom not only enhances engagement and motivation among students with ADHD but also has the potential to bolster their self-confidence. An important note from the research is that students not only find favor in technology-driven learning experiences but also express appreciation for them (Liontou, 2019). This highlights the fact that students not only welcome but also embrace technology-driven methods, suggesting a possible change in how education is approached. Essentially, Liontou's (2019) research positions technology as a valuable asset for meeting the varied needs of students, especially those with ADHD, and creating a positive and empowering learning atmosphere.

Expanding the discourse, Arries (1999) suggests using a collaborative method where teachers work together to design instructional strategies and overcome these challenges in inclusive foreign language courses. This approach involves identifying the characteristics of students with learning disabilities, designing inclusive and easily accessible courses, and evaluating effectiveness through summative evaluation. Specific strategies for inclusive course design, such as the use of mnemonics, color-phonics systems, frequent mini-quizzes, and technology integration, are proposed (Arries, 1999). Nevertheless, implementing such a comprehensive model in varied educational settings can create logistical challenges and require substantial resources. A combination of CALLA and think-aloud protocols is recommended in a cognitive strategy model proposed by Akbasli et al. (2017). CALLA focuses on academic language proficiency and cognitive skills, supplemented by think-aloud protocols where

learners verbalize thoughts during reading. This combined method benefits learners, including those with ADHD (Akbasli et al., 2017). Similarly, Kałdonek-Crnjaković (2018) advocates for a supportive and structured learning environment for students with ADHD, emphasizing multisensory teaching methods, technology integration, and games. Visual aids, movement, and frequent breaks create an inclusive and positive learning atmosphere (Kałdonek-Crnjaković, 2018).

In Villalobos's (2012) study, the primary objective was to address the challenges faced by the student, teacher, and family in managing ADHD within the language learning context. The findings of Villalobos' (2012) study shed light on the practical support for ADHD and underscored the condition's impact on language acquisition and learning. The study highlighted ADHD as a significant challenge for language instructors, necessitating specific strategies for adequate student support. According to Villalobos (2012), the student had difficulties with inattention, hyperactivity, and impulsivity, which directly influenced his ability to concentrate and actively participate in the language classroom. To address these challenges, the author emphasized the importance of tailoring interventions to the individual needs of students with ADHD. The implementation plan incorporated specific techniques and strategies, such as utilizing highlighters, implementing post-checklists for tasks, providing rewards for in-school work, and integrating physical and mental activities to enhance concentration and engagement. Villalobos (2012) demonstrated that these interventions positively impacted the student's behavior and performance in the EFL classroom. Furthermore, Villalobos (2012) stressed the significance of cultivating a positive and non-threatening learning environment for students with ADHD. Marashi and Dalatdoos (2016) also underscore the need to acknowledge individual differences and provide personalized assistance for students with ADHD. Success in foreign language courses hinges on offering extended time, note-taking help, and tutoring (Marashi & Dalatdoos, 2016). Furthermore, Sparks et al. (2004) emphasize the effectiveness of various instructional accommodations, including extended time, a distraction-free environment, alternative test formats, comprehension checks, advanced lecture notes, and tape-recording classes. These tailored accommodations proved instrumental in supporting the success of students with ADHD in foreign language courses (Sparks et al., 2004).

5. Discussion

This study sought to explore the complex relationship between ADHD and the development of reading comprehension skills in EFL settings. Simultaneously, our exploration extends to evaluating contemporary research on a spectrum of pedagogical adaptations and methodologies. Understanding the nuances of teaching strategies and support mechanisms is important in catering to the diverse needs of students with ADHD. This discussion explores how different teaching methods, teamwork, and personalized approaches come together to create an inclusive educational space for students with ADHD. The analysis of these studies unravels vital themes: the significance of tailored interventions to address individual needs, the pivotal role of collaborative efforts among educators, students, and parents, and the integration of technology and inclusive teaching methods. Emphasizing the importance of a supportive and structured learning atmosphere, this discussion focuses on how these themes intersect, creating a framework for educators to adapt and optimize their teaching strategies. By extracting insights from these studies, the study sought to provide an understanding of the various adaptations that empowered students with ADHD to thrive in foreign language learning settings.

The results and exploration of ADHD's multifaceted impact on learning reveal recurring themes across diverse studies. Villalobos (2012) and Marashi & Dalatdoos (2016) align in their focus on the neurobiological foundations of ADHD, highlighting abnormalities in executive function and imbalances in neurotransmitters that manifest as inattention, impulsivity, and hyperactivity. These factors profoundly impact cognitive and behavioral functioning. Moreover, Kałdonek-Crnjaković (2018) elaborates on ADHD's disruption of attention, working memory, and language acquisition, impeding information processing and language skill development. These insights underscore the complex challenges individuals with ADHD face across academic domains, magnifying the need for adaptive strategies. In addition, motivation emerges as an important factor in navigating ADHD-related learning hurdles, as highlighted by Akbasli et al. (2017). Addressing motivation becomes essential in sustaining engagement and countering negative self-perceptions. Lontou (2019) widens the lens, acknowledging the impact of sensory factors on cognitive skill development in students with ADHD and accentuating the multifaceted nature of their challenges. Collectively, these studies stress the necessity for tailored, positive, and supportive adaptations to nurture

engagement, confidence, and success in learning for individuals with ADHD. However, Sparks et al. (2004) and Sparks et al. (2005) challenge stereotypical assumptions about ADHD's impact. Their studies on college students diagnosed with ADHD reveal that those with ADHD not only performed comparably to peers in FL courses but also utilized accommodations effectively, achieving average to above-average grades. These findings suggest that cognitive abilities and academic achievement, rather than ADHD classification alone, significantly influence success in FL courses, prompting a reconsideration of preconceived notions about ADHD's direct correlation with academic performance. While ADHD presents complex challenges across cognitive, behavioral, and motivational domains, it is important to acknowledge the variability in its impact. The studies collectively advocate for nuanced adaptations, recognizing individual strengths and providing tailored support to maximize the potential for academic success among individuals with ADHD.

A recurrent theme resonating through a series of studies on supporting students with ADHD revolves around the implementation of adaptive strategies within educational settings. Lontou (2019) supplements this by showcasing the efficacy of technology-integrated learning environments in boosting self-confidence and motivation among young EFL learners with ADHD. Similarly, Arries (1999) emphasizes collaborative approaches among teachers to design inclusive foreign language courses, incorporating mnemonic techniques, color-phonics systems, and technology integration, though acknowledging logistical challenges in implementation. Further, Akbasli et al. (2017) propose a cognitive strategy model merging CALLA and think-aloud protocols to benefit learners with ADHD, focusing on academic language proficiency and cognitive skills. Kałdonek-Crnjaković (2018) advocates for a supportive, multisensory, structured learning atmosphere, emphasizing visual aids, movement, and frequent breaks. Villalobos (2012) explores practical interventions for a student with ADHD in a language learning context, stressing tailored strategies such as highlighter use, post-checklists, and integrating physical and mental activities to enhance concentration. The necessity for personalized assistance surfaces prominently in Marashi & Dalatdoos (2016), Sparks et al. (2004), and Sparks et al. (2005) studies, emphasizing extended time, note-taking support, tutoring, and various instructional accommodations such as a distraction-free environment and alternative test formats. These adaptations proved pivotal in supporting the academic success of students with ADHD in foreign language courses, demonstrating the significance of tailored interventions. Overall, these studies converge on the importance of tailored, collaborative, and adaptable strategies to effectively

support students with ADHD, acknowledging the diverse needs and challenges they encounter in educational settings.

While the majority of our sources may not explicitly address the challenges faced by students with ADHD in reading comprehension, some connections can still be drawn to illuminate the relationship between ADHD and difficulties in understanding and interpreting written content. As Kirby (2007) emphasized, understanding a text requires acknowledging the importance of employing comprehension strategies. These strategies may span various approaches, from decoding complex words to constructing mental simulations (Kirby, 2007). Kałdonek-Crnjaković's (2018) observation that individuals with ADHD face challenges in processing verbal material resonates with Kirby's (2007) emphasis on decoding skills, highlighting an aspect of comprehension hindered in this population. Additionally, the reported difficulties in solitary tasks such as reading, as highlighted by Akbasli et al. (2017), align with Kirby's (2007) broader framework. This alignment suggests that ADHD-related challenges extend beyond social contexts, manifesting as hindrances in comprehending written information during independent reading endeavors. Highlighting these insights unveils the nature of the potential struggles students with ADHD encounter in reading comprehension.

Exploring tailored adaptations reveals potential advantages in addressing challenges with reading comprehension faced by students with ADHD. In reading comprehension, Kirby (2007) emphasizes the need for conscious, goal-oriented plans to derive meaning from the written content, encompassing decoding skills and interpretation. Villalobos' (2012) insights into an implementation plan utilizing specific techniques like highlighters underscore the conscious strategies Kirby (2007) advocated and offer a practical example of how these strategies can be employed. In this context, highlighting becomes a tangible tactic that could aid individuals with ADHD in focusing on and extracting essential information from the text, potentially contributing to improved reading comprehension. Marashi and Dalatdoos (2016) reinforce the importance of acknowledging individual differences and providing personalized assistance for students with ADHD. This also resonates with Kirby's (2007) call for goal-oriented plans, suggesting that tailored support could enhance comprehension outcomes for these students. Furthermore, Sparks et al. (2004) mention various instructional accommodations, such as extended time, a distraction-free environment, alternative test formats, and comprehension checks. In the context of Kirby's (2007) points, these

accommodations can be viewed as conscious plans to facilitate meaning extraction from texts for individuals with ADHD. Extended time, for instance, directly addresses the need for a goal-oriented approach, allowing these students to engage more thoroughly with the material. The emphasis on a distraction-free environment and alternative test formats indirectly supports Kirby's (2007) notion of the active reading comprehension process, recognizing the multifaceted nature of the interaction between the reader, the text, and the reading task. In essence, the collective insights converge to advocate for personalized strategies and accommodations to enhance reading comprehension for students with ADHD, underscoring the intricate interplay between cognitive processes and learning environments.

The findings gleaned from these studies on supporting students with ADHD hold significant implications within the broader context of the Swedish upper-secondary curriculum and Skollagen, aligning with both theoretical frameworks and practical implementations. Within the Swedish educational landscape, the emphasis on inclusive education and student support aligns closely with the core principles of Skollagen, advocating for equal opportunities and tailored assistance for diverse student needs (SFS 2010:800, 3 kap. 5 §). The identified adaptive strategies, such as structured, individualized approaches, technology integration, and collaborative teacher efforts, resonate with Skolverket's (2022) goal of providing equitable education. These findings underscore the need for nuanced, adaptable methodologies, aligning with Skolverket's (2022) principles of personalized learning. Additionally, the emphasis on collaboration among teachers, students, and parents echoes Swedish education's collaborative and participatory ethos. These findings suggest a reevaluation and potential enhancement of existing support adaptations within upper-secondary, emphasizing the importance of flexible teaching methods and technology integration to accommodate diverse learning styles. Theoretical implications highlight the necessity of moving beyond a generic approach, recognizing the multifaceted nature of student needs, and advocating for a more comprehensive, adaptive pedagogical framework within the Swedish educational system. Moreover, these findings stress the significance of fostering positive, non-threatening learning environments for students with ADHD, aligning with Skolverket's (2022) goal of creating supportive and inclusive educational atmospheres. Ultimately, these findings' practical and theoretical implications emphasize the imperative for tailored, collaborative approaches that align with the inclusive principles of the Swedish upper-secondary curriculum and Skollagen, aiming to provide equitable educational opportunities for all students, including those with ADHD.

However, our study encountered several limitations that have implications for the depth and scope of our findings. Firstly, the scarcity of existing research concerning the correlation between ADHD and EFL presented a significant challenge. This scarcity hindered our ability to draw upon a wide range of academic sources, leading to potential gaps in understanding the nuanced relationship between ADHD and EFL learning processes. Furthermore, among our primary sources, not all were explicitly focused on reading comprehension, for example, Marashi and Dalatdoos (2016) and Villalobos (2012). This limitation restricted our capacity to gain insights tailored to this facet of language learning in the context of ADHD. Additionally, while our study proposed adaptations and interventions to aid students with ADHD in EFL classrooms, the feasibility and practicality of implementing these adaptations in Swedish upper-secondary schools remain uncertain. This uncertainty casts a shadow on the applicability and real-world effectiveness of the adaptations. Reflecting on these limitations, a more expansive approach that incorporates interdisciplinary collaboration and a broader array of adaptations could have enhanced the study's depth. A more extensive exploration of varied educational settings beyond the limitations of existing literature, might have enriched our understanding of the complexities surrounding ADHD and EFL learning. Moreover, conducting pilot studies or consulting educators directly to gauge the feasibility and suitability of suggested adaptations within the Swedish upper-secondary school system could have provided valuable insights, potentially altering the recommendations and ensuring their practicality in real-world scenarios. Overall, addressing these limitations through a multifaceted and context-specific research approach could have significantly influenced the study's comprehensiveness and applicability, leading to more nuanced insights and actionable recommendations for educators and policymakers in supporting students with ADHD in EFL contexts.

The variability in ADHD diagnoses and severity across studies poses a challenge for applying findings universally. Additionally, the predominant focus on younger populations prompts a need for more research into how adolescents and adults with ADHD experience foreign language learning. Cultural and linguistic differences may influence the use of specific strategies, emphasizing the need for studies that have more diverse student populations. Considering the dynamic nature of ADHD research, staying updated with up-to-date studies becomes essential. Examining the different nuances of ADHD and how they affect foreign language learning can help us understand this issue better. The discussion about finding a

balance between personalized plans for students with ADHD and being inclusive raises essential questions. Giving extra help to some students without making others feel excluded is tricky. Future research could look into strategies to help everyone feel supported in the classroom. Additionally, questions arose concerning the long-term efficacy and retention of benefits from the interventions, prompting questions about the durability of positive outcomes beyond immediate academic settings. Also, explorations into the role of technology in sustaining engagement and motivation among students with ADHD in different subject domains or across diverse age groups could be a focal point. In summary, these studies contribute significantly to our understanding of how ADHD impacts learning. However, it is vital to recognize their limitations and chart a course for future research. By addressing these constraints and exploring new avenues, we can better understand the intricate relationship between ADHD and learning, fostering more significant insights and potential adaptations.

6. Conclusion

This study sought to explore the specific hurdles encountered by Swedish upper secondary students diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) when learning English as a foreign language (EFL). Over the past three years, Sweden has witnessed a remarkable surge of almost 50 percent in ADHD diagnoses among its youth, underscoring the urgency to revamp teaching methodologies and establish an all-encompassing educational atmosphere. Addressing the challenges these students face in language acquisition is important, demanding tailored approaches that accommodate their needs. By acknowledging and mitigating these obstacles, educators can foster a more inclusive and effective learning environment, ensuring equitable opportunities for all students.

ADHD brings a mix of difficulties, including trouble focusing, hyperactivity, and impulsivity, which significantly affect cognitive processes essential for academic success. This study highlights the importance of tailored teaching methods, aligning with Sweden's push for inclusive education. The literature review reveals a variety of challenges faced by students with ADHD, including neurobiological abnormalities, coexistence with other conditions, and motivational deficits. However, it is crucial to recognize the variability in the impact of ADHD on students, as demonstrated by studies challenging the assumption that ADHD necessarily leads to difficulties in language courses.

This study explores various strategies educators employ to address ADHD challenges in EFL classrooms. A range of interventions is highlighted, from structured and flexible teaching approaches to integrating technology, collaborative efforts among teachers, and personalized assistance. Creating a positive and supportive learning environment, acknowledging individual differences, and providing personalized assistance are consistently underscored in the literature.

While this study provides valuable insights, it is important to acknowledge its limitations. Future research with more extensive and diverse samples could offer a more comprehensive understanding of the challenges faced by students with ADHD in EFL classrooms. Building on the identified teaching strategies, a potential next step in research could involve a more thorough study to assess the sustained effectiveness of these methods over an extended

period. This investigation could examine the impact of individualized assistance and collaborative efforts on long-term academic success for students with ADHD in EFL courses.

In conclusion, the findings of this study offer valuable insights to educators, policymakers, and researchers involved in enhancing the experience of EFL learning for students with ADHD. By comprehending the specific challenges these students face and discovering successful strategies to tailor teaching approaches, we can foster classrooms that cater to the diverse needs of all learners, including those with ADHD, thereby bolstering their chances of academic success. This study contributes to the discourse on inclusive education, emphasizing the imperative of acknowledging and accommodating various learning styles to ensure equitable opportunities for everyone. It underscores the necessity of a multifaceted approach to education that embraces diversity and prioritizes creating an environment where every student can thrive regardless of their unique learning requirements.

7. References

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